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**2024-2025 University of Missouri - St. Louis
Bulletin**

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General Information

This Bulletin includes a description of undergraduate and graduate policies and programs at the University of Missouri-St. Louis for 2024-2025. All statements in this publication concerning regulations, fees, curricula, or other matters are subject to change without notice. They are not to be regarded as offers to contract.

The University of Missouri – St. Louis is accredited by the Higher Learning Commission, by the Higher Learning Commission, a historically regional accreditation agency recognized by the U.S. Department of Education.

The policies of the University of Missouri-St. Louis comply with the provisions under those laws that forbid discrimination on the basis of race, color, sex, national origin, religion, age, handicap, or veteran status in any program or activity of the University (CRR 600.010-600.020).

Bulletins for the past thirteen years are posted in the archives section of this site. Older versions are available in campus advising offices and Academic Affairs or in the Institutional Repository Library. Program requirements are also available to students through Degree Audit Reports (DARS), which are available online or from an academic adviser, who will assist in the interpretation of the audit.

The University of Missouri-St. Louis is one of four campuses that constitute the University of Missouri. Established in Columbia in 1839 on the ideals of Thomas Jefferson, the University of Missouri became a land-grant institution upon passage of the Morrill Act by Congress in 1862.

When the University of Missouri System was organized in 1963, the St. Louis campus was the only one that started as an entirely new university. The University of Missouri-St. Louis began as a consequence of the national movement to create public universities in metropolitan centers. UMSL was designed to educate the area's professionals through research, coursework, and hands-on experiences in the region's businesses, schools, hospitals, agencies, and arts organizations.

According to the campus's history, *The Emerging University: The University of Missouri-St. Louis, 1963-1983*, faculty were hired from prestigious universities with a vision of creating a university where graduates would be able to confront urban issues through research, critical thinking, and creativity. More than traditional workforce development, these leaders' vision for UMSL was to educate students for lifelong learning, which would produce good citizens and effective leaders in the region's organizations. That legacy continues because those early leaders created a culture of faculty excellence that persists today.

Since the doors of the old Administration Building opened on a golf course more than 50 years ago, UMSL has grown to encompass 470 acres in St. Louis County and has a mix of modern and historic academic buildings. The campus is now St. Louis's largest university in the number of students and is the third largest in the state.

The campus takes pride in the success of its students, faculty, and staff and highlights of these successes are posted regularly on the UMSL home page. Detailed information about the university is also available on the About UMSL site and the Student Consumer Information site. Student achievement data can be found on the College Portrait.

The University of Missouri St. Louis is the metropolitan, land-grant, research institution serving the most diverse and economically important region in Missouri.

Mission

We transform lives.

Vision

The University of Missouri St. Louis will be a beacon of hope, a force for good, and a leader in the pursuit of excellence in education, impactful research and community service. We boldly assert that education is for everyone who is willing and able to seek it out. We honor the duties inherent in our land-grant beginnings by positioning ourselves as partners in the search for knowledge, progress and positive change for ourselves, our communities, our world.

Faculty Senate and University Assembly

The Faculty Senate has primary responsibility for making educational policy decisions to create a rigorous, innovative, student-oriented environment for learning, research, and community service. The Senate and University Assembly together and through their committees advise the chancellor and other senior administrators on matters related to students, faculty and staff.

The Faculty Senate includes a faculty member from each department and approximately 10 at-large faculty members, as well as two administrators who are non-voting (Chancellor and Provost) and one administrator who is voting (University of Missouri System President). The University Assembly consists of the elected members of the Senate, five administrators, student representatives, and staff members. Non-voting members consist of vice chancellors and vice provosts not already included, deans of all colleges, the dean of libraries, and the president of the Student Government Association. The Faculty Senate meets monthly between September and May and the Assembly meets in alternate months during the year. Information about the Faculty Senate and University Assembly are available on the Senate's web site.

Staff Association

The University of Missouri—St. Louis Staff Association is a body formed to consider, to recommend, and to take such other actions as are properly related to the common concerns and best interest of those personnel at the University of Missouri-St. Louis identified under the classification of membership in the Staff Associations' bylaws.

The purpose of the Staff Association shall be to foster a spirit of unity and cooperation among all employees of the University of Missouri-St. Louis, to consider methods and means by which employment conditions may be improved at the University of Missouri-St. Louis, to receive and consider matters concerning working conditions of membership, to make such recommendations that it deems appropriate, and to provide a means of communicating problems of mutual concern between the Staff Association and the University of Missouri-St. Louis administration. Representatives of the Staff Association serve as voting members of University Assembly committees.

Student Government Association

The Student Government Association (SGA) of the University of Missouri St. Louis, housed in 366 Millennium Student Center, sga@umsl.edu, is the student governance body at UMSL. SGA is comprised of elected student representatives and a general assembly which includes representatives from all recognized student organizations. The purpose of the SGA is to represent student concerns at every level of governance within the university. This is done by ensuring adequate and capable student

representation within the University Assembly, the policymaking and governance body of the university.

2024-2025 Calendar

Fall Semester 2024
Sixteen Week Session

| Date | Weekday | Event |
|--------------|-----------|--|
| August 19 | Monday | Classes Begin 8:00 a.m. |
| August 25 | Sunday | Last day a student may enroll (enter a course for credit). |
| August 25 | Sunday | Last day Registrar's Office will automatically move students from the wait list to open sections |
| September 2 | Monday | Labor Day Holiday |
| September 3 | Tuesday | Classes Resume, 8:00 a.m. |
| September 16 | Monday | Last day to drop a course or withdraw from school without receiving a grade. |
| September 16 | Monday | Last day any student may place a course on Satisfactory/Unsatisfactory basis |
| September 17 | Tuesday | First day all regular session dropped courses and withdrawals from school are assigned an EX grade. |
| October 14 | Monday | Mid Semester |
| October 14 | Monday | Last day to drop a course or withdraw from school without instructor approval. EX grade will be assigned. |
| October 16 | Wednesday | Fall Break begins 11:30 p.m. |
| October 21 | Monday | Classes resume 8:00 a.m. |
| November 11 | Monday | Last day a student may drop a course or withdraw from school. Instructor approval is required. Grades of EX or EX-F will be assigned for each course. |
| November 12 | Tuesday | As of this date, students with exigent circumstances who need to drop a class or withdraw the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F will be assigned. |
| November 23 | Saturday | Thanksgiving Break begins 5:00 p.m. |
| December 2 | Monday | Classes Resume, 8:00 a.m. |
| December 7 | Saturday | Classes End, 5:00 p.m. |
| December 9 | Monday | Final Examinations Begin |
| December 14 | Saturday | Fall Semester Closes, end of day |
| December 14 | Saturday | Fall Commencement |

Fall Semester 2024
Eight Week I Session

| Date | Weekday | Event |
|-----------|----------|--|
| August 19 | Monday | Classes Begin 8:00 a.m. |
| August 22 | Thursday | Last day a student may enroll (enter a course for credit) |
| August 22 | Thursday | Last day Registrar's Office will automatically move students from the wait list to open sections |

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| September 2 | Monday | Labor Day Holiday |
| September 3 | Tuesday | Classes Resume, 8:00 am |
| September 3 | Tuesday | Last day to drop an Eight Week I course or withdraw from school without receiving a grade |
| September 3 | Tuesday | Last day any student may place an Eight Week I course on Satisfactory/Unsatisfactory basis |
| September 4 | Wednesday | First day all Eight Week I dropped courses and withdrawals from school are assigned an EX grade. |
| September 16 | Monday | Last day to drop a course or withdraw from the Eight Week I session without Instructor approval. EX grade will be assigned. |
| September 30 | Monday | Last day to drop or withdraw from an Eight Week I course. Instructor approval is required. EX or EX-F grade will be assigned |
| October 1 | Tuesday | As of this date, students with exigent circumstances who need to drop a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F will be assigned. |
| October 12 | Saturday | Fall Semester Eight Week I closes, end of day |

Final Exams are held during the last class meeting of the Session

Fall Semester 2024
Eight Week II Session

| Date | Weekday | Event |
|-------------|-----------|--|
| October 14 | Monday | Classes begin 8:00 a.m. |
| October 16 | Wednesday | Fall Break Begins at 11:30 p.m. |
| October 17 | Thursday | Last day a student may enroll (enter a course for credit) in an Eight Week II course |
| October 17 | Thursday | Last day Registrar's Office will automatically move students from the wait list into open sections |
| October 21 | Monday | Classes resume 8:00 a.m. |
| October 28 | Monday | Last day to withdraw from an Eight Week II course without receiving a grade |
| October 28 | Monday | Last day to place an Eight Week II course on Satisfactory/Unsatisfactory basis. |
| October 29 | Tuesday | First day all Eight Week II dropped courses and withdrawals from term are assigned an EX grade. |
| November 11 | Monday | Last day to drop a course or withdraw from the Eight Week II session without Instructor approval. EX grade will be assigned. |
| November 23 | Saturday | Thanksgiving Break begins 5:00 p.m. |
| December 2 | Monday | Classes Resume, 8:00 a.m. |
| December 2 | Monday | Last day to drop or withdraw an Eight Week II course. Instructor approval is required. A grade of EX or EX-F will be assigned. |

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| December 3 | Tuesday | As of this date, students with exigent circumstances that need to drop a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F will be assigned. |
| December 14 | Saturday | Fall Semester Eight Week II Closes, end of day |

Final Exams are held during the last class meeting of the Session

Winter Intersession - 2025

| Date | Weekday | Event |
|------------|-----------|---|
| January 6 | Monday | Classes Begin, 8:00 a.m. |
| January 6 | Monday | Last day to add a Winter Intersession course |
| January 8 | Wednesday | Last day to drop a Winter Intersession course without receiving a grade |
| January 8 | Wednesday | Last day to place a Winter Intersession course on Satisfactory/Unsatisfactory basis |
| January 13 | Monday | Last day to drop a course from the Winter Intersession without instructor approval. EX grade will be assigned. |
| January 15 | Wednesday | Last day to drop a Winter Intersession course. Instructor's approval is required. Grade of EX or EX-F will be assigned. |
| January 18 | Saturday | Classes End, 5:00 p.m. |

Spring Semester - 2025

Sixteen Week Session

| Date | Weekday | Event |
|-------------|----------|---|
| January 20 | Monday | Martin Luther King Holiday |
| January 21 | Tuesday | Classes Begin, 8:00 a.m. |
| January 27 | Monday | Last day any student may enroll (enter a course for credit) |
| January 27 | Monday | Last day Registrar's Office will automatically move students from the wait list to open sections |
| February 17 | Monday | Last day to drop a course or withdraw from school without receiving a grade |
| February 17 | Monday | Last day any student may place a course on Satisfactory/Unsatisfactory basis |
| February 18 | Tuesday | First day all regular session dropped courses and withdrawals from school are assigned an EX grade. |
| March 17 | Monday | Mid Semester |
| March 17 | Monday | Last day to drop a course or withdraw from school without instructor approval. EX grade will be assigned. |
| March 18 | Tuesday | First day all regular session dropped courses require instructor approval. EX or EX-F grade will be assigned. |
| March 22 | Saturday | Spring Recess Begins, 5:00 p.m. |
| March 31 | Monday | Classes Resume, 8:00 a.m. |

| | | |
|-----------|-------------------|--|
| April 21 | Monday | Last day student may withdraw from school or drop a course. Instructor's approval is required. A grade of EX or EX-F will be assigned. |
| April 22 | Tuesday | As of this date, students with exigent circumstances who need to withdraw from a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F will be assigned. |
| May 10 | Saturday | Classes End, 5:00 p.m. |
| May 12 | Monday | Final Examinations Begin |
| May 17 | Saturday | Spring Semester Closes end of day |
| May 17-18 | Saturday & Sunday | Spring Commencement |

Spring Semester 2025

8 Week I Session

| Date | Weekday | Event |
|-------------|---------|--|
| January 20 | Monday | Martin Luther King Holiday |
| January 21 | Tuesday | Classes Begin, 8:00 a.m. |
| January 24 | Friday | Last day any student may enroll (enter a course for credit) |
| January 24 | Friday | Last day Registrar's office will automatically move students from the wait list into open sections. |
| February 3 | Monday | Last day to drop an Eight Week I course without receiving a grade |
| February 3 | Monday | Last day any student may place an Eight Week I course on Satisfactory/Unsatisfactory basis |
| February 4 | Tuesday | First day all Eight Week I session dropped courses and withdrawals from school are assigned an EX grade. |
| February 17 | Monday | Last day to drop a course or withdraw from the Eight Week 1 without instructor approval. EX grade will be assigned. |
| February 18 | Tuesday | First day all Eight Week I dropped courses require instructor approval. EX or EX-F grade will be assigned. |
| March 3 | Monday | Last day student may drop an Eight Week I course. Instructor's approval is required. A grade of EX or EX-F will be assigned. |
| March 3 | Monday | Last day a student may withdraw from the Eight Week I session. Instructor approval is required. Grades of EX or EX-F will be assigned for each course. |
| March 4 | Tuesday | As of this date, students with exigent circumstances who need to withdraw from a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F assigned. |

March 15 Saturday Spring Semester 8 Week I Closes, end of day

Final Exams are held during the last class meeting of the Session

Spring Semester 2025

8 Week II Session

| Date | Weekday | Event |
|----------|----------|--|
| March 17 | Monday | Classes Begin, 8:00 a.m. |
| March 20 | Thursday | Last day any student may enroll (enter a course for credit) in an Eight Week II course.. |
| March 20 | Thursday | Last day Registrar's office will automatically move students from the wait list into open sections. |
| March 22 | Saturday | Spring Recess Begins, 5:00 p.m. |
| March 31 | Monday | Classes Resume, 8:00 a.m. |
| April 7 | Monday | Last day to drop an Eight Week II course without receiving a grade |
| April 7 | Monday | Last day any student may place a course on Satisfactory/Unsatisfactory basis |
| April 8 | Tuesday | First day all Eight Week II session dropped courses and withdrawals from school are assigned an EX grade |
| April 21 | Monday | Last day to drop a course or withdraw from an Eight Week II course without instructor approval. EX grade will be assigned. |
| April 22 | Tuesday | First day all Eight Week II session dropped courses and withdrawals will require instructor approval. EX or EX-F grade will be assigned. |
| May 5 | Monday | Last day a student may drop or withdraw from an Eight Week II course. Instructor approval is required. Grades of EX or EX-F will be assigned for each course. |
| May 6 | Tuesday | As of this date, students with exigent circumstances who need to withdraw from a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F assigned. |
| May 17 | Saturday | Spring Semester Eight Week II Closes, end of day |

Final Exams are held during the last class meeting of the Session

Summer Sessions - 2025

Summer Session I (4 Weeks)

| Date | Weekday | Event |
|--------|-----------|---|
| May 19 | Monday | Classes Begin, 8:00 a.m. |
| May 21 | Wednesday | Last day any student may enroll (enter a course for credit) for Session I |

May 21 Wednesday Last day Registrar's Office will move students automatically from the wait list to open sections

| | | |
|---------|-----------|---|
| May 26 | Monday | Memorial Day Holiday |
| May 27 | Tuesday | Classes Resume, 8:00 a.m. |
| May 27 | Tuesday | Last day to drop a Session I course without receiving a grade. |
| May 27 | Tuesday | Last day a student may place a Session I course on Satisfactory/Unsatisfactory basis |
| May 28 | Wednesday | First day all Session I dropped courses and withdrawals from term are assigned an EX grade |
| June 2 | Monday | Last day to drop a Session I course without instructor approval. EX grade will be issued. |
| June 3 | Tuesday | First day all Session I dropped courses require instructor approval. EX or EX-F grade will be assigned. |
| June 9 | Monday | Last day a student may drop or withdraw from a Session I course. Instructor's approval is required. EX or EX-F grade will be issued. |
| June 10 | Tuesday | As of this date, students with exigent circumstances who need to drop a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F will be assigned. |
| June 14 | Saturday | Session I Closes, end of day |

Summer Session II (4 Weeks)

| Date | Weekday | Event |
|---------|-----------|--|
| June 16 | Monday | Classes begin 8:00 a.m. |
| June 18 | Wednesday | Last day any student may enroll (enter a course for credit) for Session II |
| June 18 | Wednesday | Last day Registrar's Office will move students automatically from the wait list to open sections |
| June 19 | Thursday | Juneteenth Holiday |
| June 19 | Thursday | First day all Session II dropped courses and withdrawals from school are assigned an EX grade. |
| June 20 | Friday | Classes Resume |
| June 23 | Monday | Last day to drop a Session II course without receiving a grade |
| June 23 | Monday | Last day a student may place a Session II course on Satisfactory/Unsatisfactory basis |
| June 24 | Tuesday | First day all Session II dropped courses and withdrawals from school are assigned an EX grade |
| June 30 | Monday | Last day to drop a Session II course without instructor approval. EX grade will be issued. |
| July 1 | Tuesday | First day all Session II dropped courses require instructor approval. EX or EX-F grade will be assigned. |
| July 4 | Friday | Independence Day Holiday |
| July 7 | Monday | Classes Resume |

| | | |
|---------|----------|---|
| July 7 | Monday | Last day a student may drop or withdraw from a Session II course. Instructor's approval is required. A grade of EX or EX-F will be assigned. |
| July 8 | Tuesday | As of this date, students with exigent circumstances who need to drop a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F will be assigned. |
| July 12 | Saturday | Session Closes, end of day |

Summer Session III (4 Weeks)

| Date | Weekday | Event |
|----------|-----------|---|
| July 14 | Monday | Classes Begin, 8:00 a.m. |
| July 16 | Wednesday | Last day any student may enroll (enter a course for credit) for Session III |
| July 16 | Wednesday | Last day Registrar's Office will move students automatically from the wait list to open sections |
| July 21 | Monday | Last day to drop a Session III course without receiving a grade |
| July 21 | Monday | Last day a student may place a Session III course on Satisfactory/Unsatisfactory basis |
| July 22 | Tuesday | First day all Session III dropped courses and withdrawals from term are assigned an EX grade. |
| July 28 | Monday | Last day a student may drop or withdraw from a Session III course without instructor approval. EX grade will be issued. |
| July 29 | Tuesday | First day all Session III dropped courses require instructor approval. EX or EX-F grade will be assigned. |
| August 4 | Monday | Last day to drop or withdraw from a Session III course. Instructor's approval is required. EX or EX-F grade will be issued. |
| August 5 | Tuesday | As of this date, students with exigent circumstances who need to drop a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F grade will be assigned. |
| August 9 | Saturday | Session III Closes, end of day |

Final examinations are held during the last class meeting of Summer Sessions I, II, and III.

Summer Session IV (8 Weeks)

| Date | Weekday | Event |
|--------|----------|--|
| May 19 | Monday | Classes Begin, 8:00 a.m. |
| May 22 | Thursday | Last day any student may enroll (enter a course for credit) for Session IV |
| May 22 | Thursday | Last day Registrar's Office will move students automatically from the wait list to open sections |
| May 26 | Monday | Memorial Day Holiday |

| | | |
|---------|-----------|---|
| May 27 | Tuesday | Classes Resume, 8:00 a.m. |
| June 2 | Monday | Last day to drop a Session IV course without receiving a grade |
| June 2 | Monday | Last day a student may place a Session IV course on Satisfactory/Unsatisfactory basis |
| June 3 | Tuesday | First day all Session IV dropped courses and withdrawals from term are assigned an EX grade |
| June 16 | Monday | Last day a student may drop or withdraw from a Session IV course without instructor approval. EX grade will be issued. |
| June 17 | Tuesday | First day all Session IV dropped courses require instructor approval. EX or EX-F grade will be assigned. |
| June 19 | Thursday | Juneteenth Holiday |
| June 20 | Friday | Classes Resume |
| June 30 | Monday | Last day to drop or withdraw from a Session IV course. Instructor's approval is required. EX or EX-F grade will be issued. |
| July 1 | Tuesday | As of this date, students with exigent circumstances who need to drop a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F grade will be assigned. |
| July 4 | Friday | Independence Day Holiday |
| July 7 | Friday | Classes Resume, 8:00 a.m. |
| July 9 | Wednesday | Final Examinations Begin |
| July 12 | Saturday | Session IV Closes, end of day |

Summer Session V (8 Weeks)

| Date | Weekday | Event |
|---------|----------|---|
| June 16 | Monday | Classes Begin, 8:00 a.m. |
| June 19 | Thursday | Juneteenth Holiday |
| June 20 | Friday | Classes Resume |
| June 20 | Thursday | Last day any student may enroll (enter a course for credit) for Session V |
| June 20 | Thursday | Last day Registrar's Office will move students automatically from the wait list to open sections |
| June 30 | Monday | Last day to drop a Session V course without receiving a grade |
| June 30 | Monday | Last day a student may place a Session V course on Satisfactory/Unsatisfactory basis |
| July 1 | Tuesday | First day all Session V dropped courses and withdrawals from term are assigned an EX grade. |
| July 4 | Friday | Independence Day Holiday |
| July 7 | Monday | Classes Resume, 8:00 a.m. |
| July 14 | Monday | Last day to drop a Session V course without instructor approval. EX grade will be assigned. |
| July 15 | Tuesday | First Day all Session V dropped courses require instructor approval. EX or EX-F grade will be assigned. |

| | | |
|----------|-----------|---|
| July 28 | Monday | Last day a student may drop or withdraw from a Session V course. Instructor's approval is required. EX or EX-F will be issued. |
| July 29 | Tuesday | As of this date, students with exigent circumstances who need to drop a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F grade will be assigned. |
| August 6 | Wednesday | Final Examinations Begin |
| August 9 | Saturday | Session V Closes, end of day |

Summer Session VI (12 Weeks)

| Date | Weekday | Event |
|----------|-----------|---|
| May 19 | Monday | Classes Begin, 8:00 a.m. |
| May 23 | Friday | Last day any student may enroll (enter a course for credit) for Session VI |
| May 23 | Friday | Last day Registrar's Office will move students automatically from the wait list to open sections |
| May 26 | Monday | Memorial Day Holiday |
| May 27 | Tuesday | Classes Resume, 8:00 a.m. |
| June 9 | Monday | Last day to drop a Session VI course without receiving a grade |
| June 9 | Monday | Last day a student may place a Session VI course on Satisfactory/Unsatisfactory basis |
| June 10 | Tuesday | First day all Session VI dropped courses and withdrawals from term are assigned an EX grade. |
| June 19 | Thursday | Juneteenth Holiday |
| June 20 | Friday | Classes Resume |
| June 30 | Monday | Last day to drop a Session VI course without instructor approval. EX grade will be issued. |
| July 1 | Tuesday | First day all Session VI dropped courses and withdrawals from term require instructor approval. EX or EX-F grade will be assigned |
| July 4 | Friday | Independence Day Holiday |
| July 7 | Monday | Classes Resume, 8:00 a.m. |
| July 21 | Monday | Last day a student may drop or withdraw from a Session VI course. Instructor's approval is required. EX or EX-F will be issued. |
| July 22 | Tuesday | As of this date, students with exigent circumstances who need to drop a class or withdraw from the term must provide documentation of exigent circumstances and receive approval from both the instructor and the dean. If approved, grades of EX or EX-F grade will be assigned. |
| August 6 | Wednesday | Final Examinations Begin |
| August 9 | Saturday | Session Closes, end of day |

Undergraduate Study

Undergraduate Study

This section describes academic policies and requirements for students enrolled as an undergraduate and University requirements for undergraduate academic programs.

Program Definitions

Major: A primary field of specialized study also referred to as a degree program or academic plan.

Minor: A secondary field of specialized study that does not lead to a degree. A minor will be noted on the transcript but not on the diploma.

Emphasis Area: A sub-area of specialized study within a major that has been formally approved. Emphasis areas are printed on students' transcripts.

Track: An option or other portion of a major that may be required or optional. A separate designation is not made on the transcript or diploma for an option or track.

Certificate: A program of study that can be part of a degree program, may be completed in addition to a degree program, or may be stand-alone. MDHEWD officially approved certificates are listed on transcripts.

Campus Testing Centers

The Testing Center is administratively housed in the Center for Teaching and Learning. The Testing Center manages exams for students and faculty that are paper-based, online, and those requiring a variety of accommodations. Appointments are required for all exams. Institutional exams (e.g., Major Field Test, Math Placement, ACT Residual) are administered through the Testing Center, as well as various standardized exams. The Testing Center main office is located in JC Penney Room 93, with additional computer-based stations in JC Penney Room 94.

Assessment

The University of Missouri has been directed by the Board of Curators to assess the outcomes of your university education. To this end, two types of assessment are required: A test of general educational development given to a sample of incoming freshmen and graduating seniors who represent the university; and a test or project, specified by the major department, given to graduating seniors.

For its continuous quality improvements, the University also conducts periodic surveys of student engagement. As alumni, graduates are encouraged to participate in assessment by completing questionnaires sent to them by the University or major department/college.

Credit Hours

All candidates for baccalaureate degrees must complete a minimum of 120 semester hours. At least 45 of these hours must be courses numbered 2000 or above (or comparable courses transferred). Students must maintain a minimum 2.0 grade point average overall, as well as in their area of specialization. Students seeking two degrees must meet all degree and residency requirements of each degree.

Academic Residence

Students must be in residence for at least 24 of the last 30 hours of graded credit (exclusive of courses graded on a satisfactory/unsatisfactory basis), except under unusual circumstances, to be decided by the dean.

General Education

Students must successfully complete the General Education requirements of the University, the school or college in which they are enrolled, and the specific requirements of their area of specialization. For more information about the University's requirements go to the General Education Program (p. 30) section of the bulletin.

Math and English Proficiency Requirement

Students who have not satisfied the Math and English proficiency requirement by the end of their first semester at UMSL will receive an advising hold and must meet with an Academic Advisor to register in these gateway courses in order for the hold to be removed.

Junior-Level Writing

A Junior-Level writing course with a grade of C- or above is required for all undergraduate degrees. The following courses will meet the requirement:

| | | |
|-------------|---|---|
| ENGL 3090 | Turning the Kaleidoscope: How We Look at Texts | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| ENGL 3110 | Junior-Level Writing for International Students | 3 |
| ENGL 3120 | Business Writing | 3 |
| ENGL 3130 | Technical Writing | 3 |
| ENGL 3160 | Writing in the Sciences | 3 |
| HONORS 3100 | Honors Advanced Composition: Writing The City | 3 |
| HONORS 3120 | Honors Business Writing | 3 |

Cultural Diversity Requirement

To expand cultural awareness, students in some academic units may be required to complete a course that emphasizes Asian, African, Middle Eastern, Latin American, Pacific aboriginal, Native American, or a comparable culture. Courses that satisfy this requirement involve substantial material independent of the cultures' interactions with European cultures. If a course focuses on one facet of a culture, it must treat the topic within the context of the culture as a whole. This requirement may be met by one of the following courses:

| | | |
|-------------|---|---|
| ANTHRO 1011 | Introduction to Cultural Anthropology (MOTR ANTH 201) | 3 |
| ANTHRO 1019 | Introduction to Archaeology | 3 |
| ANTHRO 1021 | The Body in Culture | 3 |
| ANTHRO 1025 | World Cultures | 3 |
| ANTHRO 1033 | World Archaeology | 3 |
| ANTHRO 1034 | Introduction to Ancient Egypt and Its Civilization | 3 |
| ANTHRO 1091 | Introductory Topics in Anthropology | 3 |
| ANTHRO 1271 | Food and Drink: Anthropological Perspective | 3 |
| ANTHRO 2104 | Medicine in Culture and History | 3 |
| ANTHRO 2120 | Native Peoples of North America | 3 |

| | | | | | |
|---------------|--|---|--------------|--|---|
| ANTHRO 2124 | Introduction to Contemporary African Cultures | 3 | M H L T 1170 | Musical Journey through the Far East | 3 |
| ANTHRO 2134 | Archaeology of The Inca, Aztec, and Maya | 3 | M H L T 1180 | Musical Journey Through Africa | 3 |
| ANTHRO 2191 | Special Topics in Non-Western Culture | 3 | M H L T 1190 | Musical Journey of the Native North American | 3 |
| ANTHRO 2420 | Maiko, Maids, and Masako: Women in Japanese Cultural History | 3 | PHIL 1120 | Asian Philosophy | 3 |
| ANTHRO 3218 | Visual and Material Culture of Japan | 3 | PHIL 1125 | Islamic Philosophy | 3 |
| ANTHRO 3235 | Women in Sub-Saharan Africa: A Contemporary Perspective | 3 | POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| ART HS 1120 | Global Art and Visual Culture (MOTR ARTS 101) | 3 | POL SCI 2530 | Political Systems of South America | 3 |
| ART HS 1150 | Introduction to the Art and Visual Cultures of Africa | 3 | POL SCI 2540 | Political Systems of Mexico, Central America and the Caribbean | 3 |
| ART HS 1160 | Introduction to the Art and Visual Cultures of Asia | 3 | POL SCI 2580 | African Politics | 3 |
| FGN LANG 1200 | Languages and Identities | 3 | POL SCI 3810 | The Politics of the Middle East: International and National Dynamics | 3 |
| FGN LANG 2100 | Languages and World View | 3 | SOC WK 4631 | Social Perspectives of Global Migration | 3 |
| GEOG 2001 | Cultural Geography | 3 | | | |
| HIST 1007 | Introduction to African and African American Studies | 3 | | | |
| HIST 1041 | East Asian Civilization | 3 | | | |
| HIST 1043 | Topics in East Asian History and Culture | 3 | | | |
| HIST 1062 | Modern Africa: From Colonies to Nations | 3 | | | |
| HIST 2002 | Introduction to Latinx Studies | 3 | | | |
| HIST 2030 | U.S. Immigration: 1790 to the 21st Century | 3 | | | |
| HIST 2066 | Women and Gender in African History | 3 | | | |
| HIST 2068 | Aiding Africa | 3 | | | |
| HIST 2430 | Ghosts, Goblins, and Godzillas | 3 | | | |
| HIST 3065 | From Ivory to Oil: Mining and Extraction in African History | 3 | | | |
| HIST 3214 | Writing Systems of the World | 3 | | | |
| HONORS 1310 | Non-Western Traditions Series Humanities | 3 | | | |
| HONORS 1330 | Non-Western Traditions Series-Social Sciences | 3 | | | |
| HONORS 2310 | Cultural Diversity in the Humanities | 3 | | | |
| HONORS 2330 | Cultural Diversity in the Social Sciences | 3 | | | |
| INTDSC 1011 | Introduction to Disability Studies | 3 | | | |
| INTDSC 1012 | History of Disability | 3 | | | |
| JAPAN 1011 | Anime Nation: Popular Culture in Japan | 3 | | | |
| JAPAN 2191 | Special Topics in Japanese Culture | 3 | | | |
| JAPAN 3211 | Topics in Japanese Culture | 3 | | | |
| M H L T 1150 | Drumming Cultures of the World (MOTR MUSC 102) | 3 | | | |
| M H L T 1160 | Musical Journey through Latin America | 3 | | | |

Cultural Diversity Requirement Effective Fall 2025

The cultural diversity requirement equips students with knowledge and academic tools to successfully navigate a global world community and diverse American communities. These courses examine cultures outside the United States or marginalized/underrepresented groups within the United States and help students appreciate important differences among cultures of all kinds to enrich the understanding of human interactions.

All undergraduate students are required to complete two courses:

- one that focuses on global populations and the cross-cultural experience
- one course that focuses on marginalized/underrepresented groups in the U.S.

Global Courses

| | | |
|--------------|--|---|
| ANTHRO 1021 | The Body in Culture | 3 |
| ANTHRO 2104 | Medicine in Culture and History | 3 |
| ANTHRO 2106 | Past, Present, and Future of Pandemics | 3 |
| FRENCH 2101 | French Language and Culture III | 3 |
| HIST 1034 | Introduction to Ancient Egypt and Its Civilization | 3 |
| HIST 2425 | Food and Drink in Japan: A Cultural History | 3 |
| POL SCI 4810 | Human Rights | 3 |

U.S. Courses

| | | |
|------------|---|---|
| HIST 2025 | U.S. Foreign Relations and Military History | 3 |
| PSYCH 3850 | Multicultural Psychology and Mental Health | 3 |

Civics Exam Requirement

Per Senate Bill 807 (2018):

Any student entering a public institution of higher education for the first time after July 2019 who is pursuing an associate's or bachelor's

degree from such institution shall successfully pass an examination on the provisions and principles of American civics with a score of seventy percent or greater as a condition of graduation from such institution. The examination shall be known as the "Missouri Higher Education Civics Achievement Examination (MHECAE).

Graduation

To better assist students and confirm graduation eligibility, it is required that students notify their academic unit of their intended graduation date by officially applying to graduate through the self-service student center in MyView. Step by step instructions can be found here:

<http://www.ums1.edu/registration/students/graduation.html>

This will allow the advisors to begin the degree check process and approve the student for graduation.

- The application for graduation process initiates the degree-check process.
- It is recommended that students complete the application for graduation one year in advance to ensure all requirements will be met. (Note: certain colleges may **require** the one year prior completion date – check with your advisor to be sure). The application for graduation process should be completed based on college specific deadlines.
- In order to graduate in any given semester, students must apply prior to the deadline for that semester:
 - Fall term: October 1
 - Spring term: March 1
 - Summer term June 15
- The process to apply will be cut off at that time and if the student has not yet completed the steps to apply for graduation, the diploma will then be awarded the following semester. (In extreme circumstances, a student may appeal their case to the dean's office if the deadlines have passed).

Changes to anticipated graduation date

- Students who need to alter their graduation plans must notify their academic unit and re-submit the application for graduation process through self-service on MyView.
- The semester and other information listed when re-submitting the new application for graduation process will be used to replace the information previously submitted.
- All deadlines for the new semester of graduation apply to applicants who are altering their semester of graduation.

Final Grades

To assure graduating at the end of a specific semester, all work for that semester and any delayed grades from previous semesters must be completed with the grades sent to the Office of the Registrar no later than the official date for submission of final semester grades.

Graduation, commencement, diplomas and honors

- **Graduation** refers to the process of completing a degree and takes place three times per year at UMSL: at the end of each Spring, Summer, and Fall semester.
- **Commencement** refers to the ceremony celebrating graduation and occurs twice per year at the end of the Fall and Spring semesters. (Students graduating in summer may participate in either the following

Fall ceremony or the prior Spring ceremony). Commencement is optional and participating in commencement does not mean that a student has graduated

- **Diplomas** are a ceremonial document indicating the degree a student earned. The transcript is the official academic record.

Declaring a Major

A student's first major, or undeclared major status, is determined by his or her application for admission.

While applying, students are typically not certain about the requirements for a major at UMSL. Students are encouraged to explore majors through professors, advisors, the Career Center, and co-curricular activities during their first semester at UMSL.

Students who have not declared a major at 60 credit hours (junior status) will receive an advising hold and must declare a major with an academic unit before this hold is removed. Transfer students arriving at UMSL with 60 or more credit hours will receive an advising hold preventing them from registering for their second semester until they have declared a major. They can declare a major by following the procedures for a change of major outlined below.

Exploratory Pathways for Undeclared Major Status

Students who apply with Undeclared Major Status are required to choose an Exploratory Pathway. Exploratory Pathways are designed for students to explore different majors while maintaining a plan for graduation.

The following Exploratory Pathways are offered:

Business and Geopolitics

The Business and Geopolitics Pathway focuses on markets, trade, and political issues. Students will be exposed to majors that examine domestic and international economic developments, the role that corporations and politics play in global issues, as well as the impact of non-profit agencies to help bring assistance to those in need.

Creativity and Design

The Creativity and Design Pathway focuses on artistic and innovative perspectives. Students in this pathway tend to be self-starters who plan to create their own path towards a meaningful career in any number of occupations.

Education and Social Change

The Education and Social Change Pathway focuses on improving society at the grassroots-level. Students will be exposed to majors that prepare educators (both in and out of classroom settings), uncover social issues and assist those in need.

The Human Experience

The Human Experience Pathway focuses on components of human society and culture. Students will be exposed to majors that examine historical events and their impact on contemporary issues, study similarities and differences of people from other countries, and/or write creative stories or essays. Students in this pathway can expect to explore how to process and document aspects of being a person in the world today.

The Interconnected World

The Interconnected World Pathway focuses on global issues and concepts. Students will be exposed to majors that examine interconnections between countries and cultures that have developed due to international travel, trade, technological innovations.

Mathematics and Scientific Research

The Mathematics and Scientific Research Pathway exposes students to majors that examine natural sciences and prepare them for research in a variety of scientific fields. Students interested in health sciences may also consider this Pathway.

Technology and Innovation

The Technology and Innovation Pathway focuses on technology and the role it plays in society. Students will be exposed to majors that are directly associated with technology in a variety of capacities including research, application, and business. Those interested in these majors should also be prepared for an emphasis in mathematics.

Change of Major

To change academic majors, students should consult the advising office of the new major to determine their eligibility and which courses they have already completed apply toward the new major. Students must then follow the major change procedures as outlined by the registrar.

Course Schedules

The Schedule of Courses contains the specific courses offered each semester with their meeting times and locations. This schedule is available online.

Course schedules are generally published by mid-February for the fall semester, mid-September for the spring semester, and early December for the summer semester.

The university reserves the right to cancel without notice any course listed in the Bulletin or the Schedule of Courses for any semester or to withdraw any course that does not have adequate enrollment.

Registration

Newly admitted/re-admitted students are eligible to register after the close of the pre-registration period for Fall and Spring semesters. All students enrolling in Summer semesters register during the same registration period. Enrollment dates, Semester Calendars, and courses offerings can be found online at the Registration website.

Registering for Classes: Currently Enrolled Students

Currently enrolled students are given the opportunity to preregister, by appointment, before new or returning students during Fall and Spring semesters. Pre-registration appointment times are sent to students' university email and can also be found by logging into MyView.

Registering for Classes: Former Students

Former UMSL students who have not been enrolled for a year must submit a reenrollment application.

Priority Registration

Student athletes and military-connected students are eligible for priority registration and may enroll on the first day that registration begins. Military-

connected students include veterans, those currently serving in the military, Reserves, or National Guard, and other students that are using a VA or DoD program to fund their education. Student athletes are members of any NCAA intercollegiate sport team at UMSL.

Registration Cancellation

Students who have enrolled but do not wish to attend the university may cancel their registration any time before the first day of the semester. Students must complete a withdrawal survey online. Cancellations may be processed at the Office of the Registrar.

Students may withdraw from school beginning the first day of classes. The refund schedule for withdrawals after class work begins can be found on the Cashier's Office website. Students who are withdrawing must complete a withdrawal survey. Withdrawals may be processed at the Office of the Registrar.

Prerequisites for a Course

Students are expected to review all courses when registering for them to assure that they meet all prerequisites. When the prerequisites include courses, a minimum grade of C- is required to meet the prerequisite. Only the department offering the course with the prerequisite can make an exception to this requirement. A course with an "academic standing" prerequisite--for example, "senior standing"-- requires that students have the class standing stated, in the example, only seniors can take that class.

Prior Learning Assessment

UMSL offers superior students options to enhance or accelerate their academic programs through credit by assessment. Students may earn college credit by demonstrating sufficient knowledge of proficiency in a certain area. The Registrar's Office provides detailed information regarding the specific assessments accepted and scores required. Students may earn up to 30 semester hours of credit through the following options:

Advanced Placement

Advanced Placement (AP) examinations may count for UMSL degree credit if the exams and scores are acceptable. (Note: UMSL awards credit for specific scores on certain Advanced Placement exams that are administered by the College Board, not simply for enrollment in advanced placement courses at the high school level. In order to receive AP credit, students must have official AP score reports sent to UMSL directly from the College Board. Credit cannot be determined from high school or previous college transcripts.)

International Baccalaureate

International Baccalaureate (IB) examinations are tests taken as the culmination of a special high school study program. Several of the Higher Level exams count for credit if the score earned is a 5 or higher.

College Level Examination Program

College Level Examination Program (CLEP) exams are acceptable for credit in certain areas of study. UMSL accepts only the CLEP Subject Exams. Not all subjects are accepted. Credit is not given for any CLEP General examination. No CLEP Subject Exam may be taken in the final 30 hours of coursework leading to a degree.

Credit by Departmental Assessment

Credit by Departmental Assessment may be earned if a student has previous knowledge or proficiency in an area of study and arranges to complete a departmentally administered formal assessment. If a department chooses to offer credit by assessment, the department must provide an assessment that measures the same level of proficiency as is required to earn credit for enrollment in the course. Frequently this is the final exam for the course. Before taking a departmental assessment, students must register in the Registration and Records office and obtain a Credit by Departmental Assessment form.

Fees

Consult the Cashier's website for fee information when attempting credit by departmental assessment.

Eligibility

Eligibility for credit by departmental assessment requires:

1. Enrollment at UMSL in the semester in which the assessment is administered
2. No enrollment in the course that is the subject of the assessment during the last three terms.
3. Achievement of a grade of C or above on the assessment in order to receive credit.

Course Load

A normal fulltime semester course load is 15 semester credit hours. Minimum fulltime enrollment is 12 hours each semester, fall, spring, and summer. Students who have demonstrated the ability to carry more than 18 hours may do so with the approval of their dean.

Adding Courses

Students may add courses during the first week of a sixteen-week semester. Students with specific academic holds may be required to obtain approval from their advisor to change their schedule. Students may not add courses without instructor approval after the first week of class of a sixteen-week semester, the first four days of class of an eight-week session, or the first three days of class of a four-week session. Students are responsible for any content or assignments missed if they add a course after it has already met.

Dropping Courses

Courses may be dropped in MyView, without faculty approval and without receiving a grade, through the fourth week of classes of a sixteen-week semester, the second week of classes of an eight-week session and the first week of classes of a four-week session. Students with specific academic holds may be required to obtain approval from their advisor to change their schedule. Semester and session calendars posted on the registrar's website include specific deadline dates for dropping courses. Students who officially drop any of their classes may have fees reassessed and/or refunded based on the current fee reassessment schedule posted on the cashier's website. Courses dropped during this period will not appear on transcripts.

From the 5th week to the end of the 8th week of a sixteen-week semester, students may continue to drop courses in MyView without instructor approval. A grade of "EX" (excused) will be issued on the transcript. Refer to the calendar posted on the registrar's website for summer or winter session withdrawal deadlines. From the 9th week to the end of the 12th

week dropping courses will require instructor approval. Students receiving approval to drop during this period will be issued either an EX, or "EX-F" (excused but failing) if the student was failing at the time of dropping. The EX and EX-F grades will be posted to transcripts, but neither one will be used in calculating the GPA. Students who wish to withdraw after the end of the 12th week must provide documentation of exigent circumstance and receive both the instructor's permission and approval of the dean.

Dropping or withdrawing from a course may adversely impact scholarships, financial aid, and progress toward graduation. Students are strongly urged to discuss these possibilities with the financial aid office and their academic advisors before dropping or withdrawing.

Students registered in a course in which they fail to meet a minimal level of participation as deemed by the instructor will be issued a grade of "FN" (Failure, Non-participation). The FN grade indicates that the student is not regularly attending class or is making little or no attempts on assignments or activities and may be violating the terms of financial assistance. This grade is equivalent to an F for GPA calculations.

Section Changing

Section changing is normally completed during the first week of a regular semester, the first four days of an eight-week session and the first three days of a four-week session. Approvals may not be necessary during this time. However, after the first week of a regular semester, the first four days of an eight-week session, and the first three days of a four-week session, a section change form must be obtained from the department or dean's office. The signature of both instructors is required. The form is to be submitted to the Registration Office, 269 Millennium Student Center.

Withdrawing from the University after Classes Begin

Students are required to complete the necessary procedures to officially withdraw from the University including completing the withdrawal survey and the drop process for all classes in which they are enrolled. Students may withdraw without receiving grades, through the fourth week of classes of a sixteen-week semester, the second week of classes of an eight-week session and the first week of classes of a four-week session. Students who officially drop any of their classes may have fees reassessed and/or refunded based on the current fee reassessment schedule posted on the cashier's website. Courses of students that withdraw during this period will not appear on transcripts.

From the 5th week to the end of the 8th week of a sixteen-week semester, students that withdraw from the university will be issued a grade of "EX" (excused) for each of their courses on the transcript. From the 9th week to the end of the 12th week withdrawal will require instructor approval for each course. Students receiving approval to withdraw during this period will be issued either an EX, or "EX-F" (excused but failing) if the student was failing at the time of dropping. The EX and EX-F grades will be posted to transcripts, but neither one will be used in calculating the GPA. Students who wish to withdraw after the end of the 12th week must provide documentation of exigent circumstance and receive both the instructor's permission and approval of the dean.

Withdrawing from a course may adversely impact scholarships, financial aid, and progress toward graduation. Students are strongly urged to discuss these possibilities with the financial aid office and their academic advisors before withdrawing.

No partial credit is granted to students who withdraw from school during any semester or otherwise fail to complete the work required for full course

credit. Students who stop attending classes without officially withdrawing from the university are issued an F or an FN grade. Both F and FN grades are counted in computing grade point averages. Fall, spring, and summer session calendars list specific withdrawal dates.

Repeating Courses.

Students may not repeat for grade point average or credit hour purposes courses in which grades of A, A--, B+, B, B--, C+, or C have been earned. Subsequent grades in such a course that is repeated will not be included in the GPA calculations. The course hours will be counted only once in calculating hours toward a degree.

Grade Modification

When the grade received in an initial attempt in an undergraduate course taken at UMSL, or any University of Missouri System institution, is a C-, D+, D, D--, F, or FN, the grade may be replaced in the calculation of the GPA by the grade received in a second or subsequent attempt of the same course at UMSL. All grades received in second and subsequent attempts will be included in GPA calculations. All attempts of a given course will appear on the official transcript with the grade(s) earned. The transcript will have an explanation that states that the GPA is calculated using all grades earned in a course except the initial attempt when a course has been repeated and grade modified.

Note: Grade modification is not automatic. After completing the second or subsequent attempt of the course to be modified, students must process the necessary paperwork with an academic adviser in the academic unit in which the student is currently enrolled.

The University of Missouri-St Louis will also honor undergraduate grade modifications completed on other University of Missouri campuses and officially transferred in. This will be effective for any transcripts received on or after July 1, 2020.

Academic Probation and Suspension

Students whose campus cumulative grade point average falls below 2.0 will be placed on University Academic Probation. Notification of probationary status will be sent to students each fall and spring term from the Office of Academic Affairs. Students placed on academic probation are restricted to a maximum of 12 credits for the following semester and required to meet with an academic advisor. Students placed on academic probation may also be required to participate in programs designed to help them return to good academic standing. Students whose campus cumulative GPA falls under 2.0 after serving two semesters on probation (not necessarily consecutive) will be suspended from the university. Students should consult with their respective dean's office for additional information.

Students who earn a grade point average of 0.0 in their first semester at UMSL will be suspended.

Students who are suspended from the university are not eligible to enroll in courses or receive financial aid at UMSL for at least one full academic calendar year. Students suspended from one school or college within the university shall not be admitted to any other school or college until they are eligible for readmission to the university. In order for suspended students to be considered for readmission to the university they must successfully complete at least one semester at an accredited post-secondary institution.

Attendance

Students are expected to attend class regularly, and, in accordance with the UMSL Bylaws, faculty may establish penalties for excessive absences. Students absent for more than three successive classes may be reported to the dean. Students should tell their dean's office of an extended absence. An absence known in advance should be reported to the instructors of courses that will be missed. Makeup of examinations or work missed is allowed at the instructor's discretion. Students excused from class for valid reasons by their deans shall be permitted, if possible, to make up work missed; the dean must have notified the instructor in writing.

Auditor

Students may enroll as auditors in any course with the prior consent of the instructor and dean of the college in which the auditors desire to be registered. They may be dropped from the course when, in the judgment of the instructor and dean, their record justifies such action. Auditors are charged full fees and receive no academic credit.

Course Numbering

Each course bears a distinguishing number that identifies it within the department or academic unit and indicates, broadly, the expected level of students taking the course. To understand the course level, refer to the following guidelines:

Course Numbers

Explanation

1-999

Courses that do not count toward the minimum requirements for any degree.

Lower Division:

1000-1999

Courses open to undergraduate students, primarily focused toward freshmen; courses count toward the minimum for given degrees.

2000-2999

Courses open to undergraduate students, primarily focused toward sophomores; courses count toward the minimum for given degrees

Upper Division:

3000-3999

Courses open to undergraduate students, primarily focused toward junior; courses count toward the minimum for given degrees.

4000-4999

Courses open to undergraduate and graduate students, primarily focused toward seniors; courses count toward the minimum for given undergraduate degrees; depending on the specific program, courses may count for a given graduate degree.

Graduate:

5000-5999

Graduate courses; also open to post-baccalaureate educator certification candidates and undergraduate seniors with permission from the Dean

of the Graduate School. Courses count toward the minimum for given graduate degrees.

6000-6999

Graduate courses open to master's degree and doctoral students. Courses count toward the minimum for given graduate degrees.

7000-7999

Graduate courses open to doctoral students and master's degree students with special permission. Courses count toward the minimum for specific graduate degrees.

Optometry:

8000-8999

Courses open to optometry degree seeking students.

Credit Hours

The university credit unit is the semester hour, which represents a subject pursued one period weekly for one semester of approximately 16 weeks or for a total of approximately 16 periods for one term. Generally, a course valued at three semester hours meets for three periods weekly for one semester, a twocredit course two periods a week for a semester, and so on. Normally, the lecture or recitation period is 50 minutes long and the laboratory period one hour and 50 minutes.

The number of credit hours is listed as units in the online Schedule of Courses. If the credit is variable (to be determined in consultation with the instructor) it is shown by minimum and maximum units, such as Research 1 – 3 units. In the Bulletin, credit hours are included in parentheses after each course title e.g., Research (2-8).

Examinations

Examinations may be given only at regular class meeting times or as designated by the Senate Committee on Curriculum and Instruction.

Final Examinations.

The period designated for final examinations is an important component of the academic term. It provides faculty with a final opportunity to evaluate student learning and attainment of course objectives. Faculty members are encouraged to meet with students during the final examination period.

A faculty member who gives an in-class final examination may give this examination only on the day and at the time designated in the official final examination schedule. A majority vote of the students to the contrary does not change this policy.

A student may submit a written request for a change in the scheduled time of the final examination for a limited number of documented hardship reasons. These reasons include, but are not limited to, being scheduled to take more than two examinations on the same day, illness, military obligations, and religious practices. Except for emergencies, this request should be presented directly to the instructor at least two weeks before classes conclude. If the request is denied, the student may request additional consideration from the chairperson/area coordinator/program director and, if denied, to the dean of the college sponsoring the course.

Repeating Courses.

Students may not repeat for grade point average or credit hour purposes courses in which grades of A, A-, B+, B, B-, C+, or C have been

earned. Subsequent grades in such a course that is repeated will not be included in the GPA calculations. The course hours will be counted only once in calculating hours toward a degree.

Grading System

The grading system available to all faculty at UMSL consists of:

| Letter Grade | Ranking |
|--------------|---------------------------|
| A | 4.0 |
| A- | 3.7 |
| B+ | 3.3 |
| B | 3.0 |
| B- | 2.7 |
| C+ | 2.3 |
| C | 2.0 |
| C- | 1.7 |
| D+ | 1.3 |
| D | 1.0 |
| D- | 0.7 |
| F | 0 |
| FN | 0 |
| EX | Excused |
| EX-F | Excused but failing |
| DL | Delayed |
| FN | Failure/Non Participation |

Faculty have full discretion in using full-letter grades, plus/minus grades, or any combination of full-letter and plus/minus grades. The student's grade point average is computed by dividing the total quality points (number of credit hours for a course, multiplied by the grade value received) by the number of hours taken (excluding grade modified hours). Students at UMSL may have three separate Grade Point Averages. The first is the Campus GPA, which is computed by dividing the quality points earned from the grades of each course taken through UMSL by the total course hours attempted at UMSL. Students who have attended any of the other three universities within the University of Missouri System will also have a System GPA, which is computed by dividing the quality points earned from every course taken from a campus within the UM System. In addition, transfer students from outside the UM System will also have a transfer GPA, which is computed from all courses the student has taken outside the UMSL campus or the UM System. It is calculated by dividing the quality points of all courses by the hours attempted.

Unless a specific request is made through the Registrar's Office, the University of Missouri System does not distribute grade reports to students via postal mail. Final course grades can be obtained electronically by any of the following methods:

To access grades through the My Gateway system, students must know Single Sign On (SSO) ID and password, available through MyGateway.

Students may also view their grades on MyView, by following this path: Self Service > Student Center > Grade Tab under Academic History; select semester.

Students may request a printed copy of the grade report at no charge. Once requested, the grade report will be mailed to the official address of record. Requests may be made by mail, a University e-mail account, fax, or in person; contact information is available at the Registration website.

Delayed Grade

A student who is unable to complete course work at the end of any semester and who has, in the instructor's judgment, sufficient reasons for not completing the work, (such as serious illness or circumstances beyond the student's control), may with the approval of the instructor, be assigned a Delayed Grade, (DL). A Delayed Grade is appropriate only when enough work in the course has been completed for students to finish the remaining work without re-enrolling in the course, attending additional classes, and no additional instruction is required from the instructor. It is encouraged that the student completes the work as soon as possible, but if the Delayed Grade is not changed by the instructor, the Delayed Grade automatically becomes an F according to the timetable below. (Note: The dean may, in unusual circumstances, extend this time limitation).

Failure/Non participation

When students do not complete any graded assignments but do not officially withdraw from the course or the university, instructors may assign an FN. The F for Non-Participation cannot be changed to a grade and will be treated in GPA calculations as an F.

Satisfactory/Unsatisfactory Option

Undergraduate students may take up to 18 credit hours on a satisfactory/unsatisfactory (S/U) grading basis. This includes courses taken as electives or those that satisfy general education requirements. Most courses required for a specific degree may not be taken on a satisfactory/unsatisfactory basis. Academic departments may designate other courses within their jurisdiction that may not be taken under the option.

A satisfactory grade "S" is recorded when an instructor assigns the grade of A, A-, B+, B, B-, C+, C or C-, and has no numerical value in computing students' cumulative grade point average; however, it does satisfy credit-hour-for graduation requirements. An unsatisfactory grade "U" is recorded when an instructor assigns the grades of D+, D, D-, or F. A course assigned a "U" grade will not satisfy credit hours for graduation. Grades will be recorded on transcripts as S or U

Students register for courses in the normal manner and may exercise the satisfactory/unsatisfactory option before the end of the first four weeks of a regular semester (or the first two weeks of a summer session). Requests for this option are made through the appropriate dean's office. Instructors are not informed of students taking courses on a satisfactory/unsatisfactory basis until submitting course grades.

Audit

Audit has no numerical value in computing students' cumulative grade point average, nor does it satisfy any credit-hour graduation requirements.

Grade Modification

When the grade received in an initial attempt in an undergraduate course taken at UMSL, or any University of Missouri System institution, is a C-, D+, D, D--, F, or FN, the grade may be replaced in the calculation of the GPA by the grade received in a second or subsequent attempt of the same course at UMSL. All grades received in second and subsequent attempts will be included in GPA calculations. All attempts of a given course will appear on the official transcript with the grade(s) earned. The transcript will have an explanation that states that the GPA is calculated using all grades earned in a course except the initial attempt when a course has been repeated and grade modified.

Note: Grade modification is not automatic. After completing the second or subsequent attempt of the course to be modified, students must process the necessary paperwork with an academic adviser in the academic unit in which the student is currently enrolled.

The University of Missouri-St Louis will also honor undergraduate grade modifications completed on other University of Missouri campuses and officially transferred in. This will be effective for any transcripts received on or after July 1, 2020.

Academic Renewal

Academic Renewal allows all courses, credits, and grades during specific term(s) to be excluded from the GPA calculation. The courses will remain on the permanent academic record but the record will be annotated so that it is readily evident that no credits earned during those excluded terms, even if satisfactory, will apply towards units for graduation. If a course in a term requested for Academic Renewal resulted in a grade modification, the course's original grade will be restored on the transcript. Students seeking their first degree who return to UMSL after an absence of at least 12 months may apply for Academic Renewal for semesters completed prior to their absence after re-admission and successful completion of 12 credit hours at a 2.0 GPA or better. Recipients of Academic Renewals are not eligible for Latin Honors or academic awards. Applications for Academic Renewal must be completed with an academic advisor and will require evidence of likelihood of future academic success to receive dean's approval. A student may be granted Academic Renewal only once in their academic career at UMSL.

The implementation of this policy will follow the general procedures listed below. Students must apply for the renewal and demonstrate academic success in twelve credit hours before the renewal is granted.

Non-enrolled students:

1. Students not enrolled will have to discuss Academic Renewal with an academic advisor and may apply for Academic Renewal in the dean's office of the college of students' major or College of Arts & Science for those undeclared.
2. Students should follow normal procedures for re-admission. Students denied re-admission, but eligible for academic renewal, should discuss their case with an enrollment advisor.
3. Students may be accepted for re-admission on probationary status.
4. After earning 12 credit hours in their major or in required classes with at least a 2.0 GPA, students complete the Academic Renewal process by requesting approval of the dean or designee.

Enrolled students:

1. Continuing students may initiate the Academic Renewal process by conferring with their advisor about the impact of the process on their graduation plans.
2. Implications of Academic Renewal on financial aid should also be discussed with Financial Aid office staff.
3. Should continuing students wish to pursue the Academic Renewal process, they may apply in the dean's office of the college of students' major or College of Arts & Science for those undeclared.

Dean's List

At the end of each semester the College of Arts and Sciences, College of Business Administration, College of Education, College of Fine Arts and Communication, and College of Nursing send letters of commendation to undergraduates completing at least nine hours of graded courses with

grade point averages of 3.2 or above for the semester. In addition, each college and school, on an annual basis, sends letters of commendation to parttime undergraduate students who have earned a 3.2 grade point average or above in at least nine but not more than 17 graded hours during the fall and spring semesters combined.

Degree with Distinction in Research, Scholarship or Creativity in the Arts

Guidelines:

A degree with distinction in research, scholarship or creativity in the arts is an honor that recognizes a student for outstanding accomplishments in research and/or other creative endeavors. Students majoring in any undergraduate degree program that have obtained a minimum of 75 credits, have begun research, scholarship or creative endeavors of exceptional quality, have a minimum GPA of 3.5, and have a faculty mentor may apply for candidacy during their final year before graduation. Candidates must produce a novel body of work that includes publication-quality research data from which to generate a senior thesis or a body of artistic accomplishments that can be displayed and/or presented (exhibitions, recitals, software demonstrations, etc.) as part of an exhibition or performance. Candidates may use research or accomplishments obtained through Independent Research or Study courses, fellowships, internships, and voluntary work toward the degree with distinction. Candidates must present and successfully defend their body of original work, project, or senior thesis to a faculty review committee.

The faculty review committee will consist of the faculty mentor and at least two faculty members who work within a relevant field of study and are qualified to examine the candidate's body of work. Mentors will identify at least two faculty members who are an appropriate fit and are willing to serve on the committee. These recommendations should be included on the application for candidacy. Interested students must submit an application for candidacy to their departmental chairperson or program director at least one semester before graduation, and the candidates must successfully defend or present their work no later than six weeks before the end of the semester in which they graduate. The specific criteria for achieving this distinction will be provided by each department or program.

Students awarded the Distinction designation will have such an acknowledgment placed on their transcript and their degree and will be so recognized at graduation.

Sequence for completion:

1. Find an UMSL faculty mentor willing to guide or accommodate you through your specific creative works. For some disciplines, potential mentors may require students to enroll in independent research or independent studies courses.
2. Begin or continue your research or creative works.
3. Apply for candidacy once you have earned 75 credit hours.
4. Fulfill the requirements for your discipline's senior thesis (if required by your discipline).
5. Maintain a GPA of 3.5 or higher.
6. Defend your thesis or body of work and submit the Preliminary Approval for the Degree with Distinction form to your College Dean no later than 6 weeks prior to commencement.
7. Graduate with a Degree With Distinction.

Latin Honors

To graduate with Latin honors, students must have attended UMSL for at least 56 graded hours and must meet the following qualifications based on the college in which a student's major is housed: a GPA in the top 3% for summa cum laude; a GPA in the next top 5% for magna cum laude; a GPA in the next top 12% for cum laude. Ranking of GPAs is based on a five-year rolling average of all GPAs for the College in which the student's major is housed. Qualifying GPAs are determined each academic year based on a five-year rolling average of all GPAs for graduates of the college in which the student's major is housed. Specific Latin honors GPA cutoffs for each college are posted under "General Information" or "Undergraduate Study" in the Bulletin listing for that college. If a student has the necessary GPA at UMSL to qualify for Latin honors but has fewer than 56 graded hours at UMSL, all credit hours and the associated grades earned within the UM System will be included when the total credit hours earned in the UM System are at least 80 graded hours. In determining one's eligibility for Latin honors, all UM System graded hours will be considered, including the original grade in each grade-modified course. No Latin honor higher than that which is consistent with the UMSL grade point average will be awarded. All honors must be recommended by the student's major department. Students who have been found to have committed an act or acts of academic dishonesty as verified by Academic Affairs are not eligible for a Latin Honor.

Each College may add additional qualifications on the awarding of Latin Honors such as community service, capstone course completion (including approved relevant thesis), original research or scholarship, etc. Each College will submit their plans for the qualifications for Latin Honors to the appropriate shared governance body for approval before their plan becomes active.

Office of National Scholarship Information

The mission of the Office of National Scholarship Information (ONSI) at the University of Missouri-St Louis is to provide campus wide access to merit-based scholarship information and opportunities. The most well-known of these merit-based scholarships include the Rhodes, British Marshall, Goldwater, Udall, Truman, and Fulbright, although numerous other prestigious, and often unique, opportunities exist for outstanding students. For further information, contact the Honors College at (314) 516-5243.

Admission

Admission policies and procedures vary according to each applicant's educational goals and prior educational experiences. This section contains information for First-Time Freshmen, Transfer Students, Returning UMSL Students, Visiting Students, Non-Degree Students, and UMSL Express for senior citizens. The Office of Admissions website contains links to applications for all categories of applicants.

At the University of Missouri-St. Louis (UMSL), we are committed to providing a flexible and inclusive admissions process. UMSL is a test-optional institution for the 2024-2025 Academic Year, which means that we do not require standardized test scores (such as the ACT, SAT, BGCSE, or CAPE) for admission for Fall 2024 or Spring 2025. Applicants have the option to submit their test scores if they believe it will strengthen their application, but it is not mandatory.

We reserve the right to review your application with or without standardized test scores. Our holistic review process considers various factors, including academic achievements, extracurricular involvement, personal statements, and letters of recommendation. This approach

ensures that we can evaluate each applicant's potential and suitability for our academic community comprehensively and fairly.

Our goal is to provide opportunities for all students to demonstrate their abilities and achievements in the best possible light. Whether you choose to submit test scores or not, rest assured that your application will receive a thorough and fair evaluation.

Admission for First-Time Freshmen

The University of Missouri System has a uniform policy for admission of freshman students to its four campuses. The procedure for regular admission from high school is based on high school class rank, performance on a standardized college aptitude test, and required high school units.

Application Procedures

Students applying as first-time freshmen (i.e., students applying directly from high school) need to submit the following:

1. A completed Undergraduate Application
 - Application information available from the Office of Admissions website, by phone 314-516-5451, email admissions@umsl.edu, or in person (351 Millennium Student Center). Students may also apply using the Common Application. Search for "University of Missouri-St Louis".
2. High School Transcript and Class Rank.
 - A transcript must be sent directly from your high school to the UMSL Office of Admissions. The transcript should indicate class rank (for schools that rank), all coursework, and, when available, date of graduation. College aptitude test scores are required and may be submitted via this transcript or directly from the testing agency
 - Students from Non-Ranking High Schools: Students applying for Undergraduate Admission who attend high schools that do not rank will be evaluated on a combination of high school grade point average in the required core courses and standardized test scores.
3. College Aptitude Test
 - Freshman admission requires that a test score be submitted from one of the following:
 - American College Testing Program (ACT): The ACT is administered at many locations across the country. Information is available from <http://www.actstudent.org/>, or your high school counselor. The ACT School Code for UMSL is 2383.
 - Scholastic Aptitude Test (SAT): The SAT is administered at many locations across the country. Testing information is available on the Collegeboard website. The SAT School Code for UMSL is **6889**.

When to Apply

Qualified applicants are admitted and notified by letter of their admission in the order that completed applications are received. Applications for the upcoming Fall semester are processed beginning September 1 on the basis of six or more high school semesters.

Admission Requirements

Any high school graduate may be admitted with evidence indicating he or she meets the following requirements:

At least 17 units of credit (One unit=one year in class) as follows:

- English: Four units. Two units emphasizing composition or writing skills. One of the remaining two units may be in speech or debate
- Mathematics: Four units (Algebra 1 and higher)
- Science: Three units not including general science, one of the three units must be a laboratory course
- Social Studies: Three units
- Fine Arts: One unit
- Foreign Language: Two units of a single foreign language
- Math and foreign language units may be accepted from middle/junior high school.

In addition to the 17-unit requirement, each applicant will be evaluated on high school rank and test score (ACT or SAT). Applicants with an ACT composite score of 24 or higher, SAT Total (CR+M) of 1090 or higher, or redesigned SAT of 1160 or higher, will be admitted without regard to class rank.

If the ACT Composite score is between 17 to 23, SAT Total (Critical Reading and Math scores) is between 820 to 1080, or the redesigned SAT Total is between 900 to 1150, the applicant must meet the following high school class rank requirement or core GPA to qualify for admission.

| ACT | Combined SAT Reading & Math (Pre-March 2016) | Redesigned SAT (Post-March 2016) | High School Class Percentile Rank | Core GPA |
|-----|--|----------------------------------|-----------------------------------|----------|
| 23 | 1050-1080 | 1130-1150 | 48 | 2.8 |
| 22 | 1020-1040 | 1100-1120 | 54 | 2.90 |
| 21 | 980-1010 | 1060-1090 | 62 | 3.05 |
| 20 | 940-970 | 1020-1050 | 69 | 3.20 |
| 19 | 900-930 | 980-1010 | 78 | 3.35 |
| 18 | 860-890 | 940-970 | 86 | 3.50 |
| 17 | 820-850 | 900-930 | 94 | 3.65 |

Students who are 24 or older applying for undergraduate admission as first-time college students are not required to provide standardized test scores for the purpose of admission.

Automatic Admission

Applicants who:

1. Rank in the top 10% of the graduating class of a Missouri high school; and
2. Complete the college preparatory curriculum, which includes at least 17 units of credit (four units each of English and math, three units of social studies, two units of a single foreign language, and one unit of fine art); and
3. Submit an ACT/SAT score.

WILL be eligible for automatic admission to any campus of the University of Missouri. **Students with an ACT composite score under 18, a SAT total (CR+M) less than 860, or a redesigned SAT below 940, may be required to participate in the Triton Enrichment Experience Program.*

Admission Appeals

Applicants who do not meet the minimum admissions criteria may still be admitted, depending on evidence of likely success and campus enrollment objectives.

Additional factors considered for admission may include:

- Completion of a rigorous college preparatory curriculum
- Evidence of hardship or unusual circumstances that hindered academic performance
- Significant work experience and/or family responsibilities
- Improvement over time in high school academic record.

Students who fall short of the admission criteria have the option to submit a letter of appeal to address one or more of the factors above. The appeal letter should be addressed to the Admissions Appeals Committee, and additional letters of support are encouraged from teachers, counselors, or principals.

For additional information regarding admission requirements, contact the Office of Admissions at 314-516-5451 or by e-mail at admissions@umsl.edu.

Acceptance

Upon graduation, applicants must submit a final high school transcript indicating their class rank (if available) and graduation date (sent directly from the high school). First-time freshmen are required to take the ALEKS placement assessment in mathematics.

Advanced Standing for Entering Freshmen

UMSL grants credit hours to entering freshmen who, through their performance on College Board Advanced Placement Tests and faculty-administered tests, demonstrate proficiency in certain college-level courses such as biology, chemistry, English, foreign languages, history, mathematics, political science, and physics. For further information and applications, contact College Board Placement AP Services by phone (888) 225-5427 or email apexams@info.collegeboard.org. The score-reporting institution code number for the University of Missouri-St. Louis is 6889. College Board will send the scores directly to the Director of Admissions.

Dual Credit

Accredited programs such as the Advanced Credit Program at the University of Missouri-St. Louis enable qualified high school juniors and seniors the opportunity to earn college credits while completing high school. Further information about the Advanced Credit Program may be obtained online or by calling 314-516-7005.

Dual High School/University Enrollment

Superior high school students may be admitted in a special student category to take one or more university courses on campus during their junior or senior years of high school or during the summers. Students must submit a dual enrollment application and a recommendation from the counselor or principal. Students are admitted on the evidence of academic excellence. Admission is limited and governed by available space, and students must meet the prerequisites for the course or courses selected. After reviewing the Dual Enrollment website, students or counselors may contact the College of Arts and Sciences at 314-516-5501 for more information.

College Level Examination Program

Applicants may earn advanced credit through the College Level Examination Program (CLEP). CLEP offers subject examinations for credit in specific areas. These examinations can be taken any time, provided the student has not taken a college credit course in the test area. Consultation with an UMSL advisor is highly recommended before taking an exam. CLEP tests are given in the Campus Testing Center by appointment only. Contact the Campus Testing Center at 314-516-6396, in person in 93 JCP, or through their website.

Credit for Military Service

Credit may be allowed for service training programs conducted by the various Armed Forces branches. The American Council of Education's recommendations in A Guide to the Evaluation of Educational Experiences in the Armed Services generally serve as a basis for granting such credit. To count toward a degree, the credit granted must be appropriate to the student's curriculum.

For more information, please visit <https://www.umsl.edu/veterans/admissions-checklist/index.html>.

Student Recruitment

The purpose of this section is to clearly articulate the University of Missouri-St. Louis' (UMSL) proactive adherence to the requirements of 34 C.F.R. 688 and the Department of Defense Voluntary Education Partnership Memorandum of Understanding (The DoD MOU and DoDI 1322.25, Voluntary Education Programs, paragraph 1.c.(1)(b)).

UMSL forbids the use of unfair, deceptive, and abusive recruiting practices.

Further, in accordance with relevant laws, MOUs, and policies, UMSL bans inducements, including any gratuity, favor, discount, entertainment, hospitality, loan, transportation, lodging, meals, or other item having a monetary value of more than an insignificant amount to any individual or entity, or its agents including third-party lead generators or marketing firms other than salaries paid to employees or fees paid to contractors in conformity with all applicable laws for the purpose of securing enrollments of Service Members or obtaining access to TA funds. [DoD MOU paragraph 3.j.(1)]

Bans the payment of any commission, bonus, or other incentive payment based directly or indirectly on securing enrollments or federal financial aid (including TA funds) for Service Members to any persons or entities engaged in any student recruiting, admission activities, or making decisions regarding the award of student financial assistance. [DoD MOU paragraph 3.j.(2)]

Refrains from high-pressure recruitment tactics such as making multiple unsolicited contacts (3 or more), including contacts by phone, email, or in-person, and engaging in same-day recruitment and registration for the purpose of securing any enrollments, including Service Member enrollments. [DoD MOU paragraph 3.j.(3)]

Probationary Admission

It may be possible for applicants who do not meet the regular admission standards to be admitted on a trial basis. Applicants who do not meet minimum admission requirements can submit a letter of appeal to request probationary admission. The Admission Appeals Committee reviews each letter of appeal and makes decisions on a case-by-case basis.

High School Equivalency Applicants

Individuals may seek admission on the basis of passing the High School Equivalency (HiSET) test, formerly the General Education Development (GED) test, with a minimum HiSET score of 75 and a minimum of 15 in each of the five subsets; Language Arts-Reading, Language Arts-Writing, Mathematics, Science, and Social Studies or a GED score of 170 or higher in each subset if taken after January 1, 2014 (minimum 2500 for tests taken between January 1, 2002 and January 1, 2014; minimum score of 250 required for tests taken prior to January 1, 2002).

In addition, the following must be submitted:

- A completed Undergraduate Application
- ACT composite score of at least 24 or SAT Composite of at least 1090
- A high school transcript if ACT/SAT scores are included on the transcript.

Home-Schooled Students

UMSL welcomes home-schooled students. To be admitted for undergraduate admission, home-schooled applicants must present the following:

- A completed Undergraduate Application
- ACT Composite score of 17-23 or SAT Composite of 820-1090 or redesigned SAT of 900-1150
- A copy of course of study or transcript reflecting all coursework and grades earned, as well as a statement and date of graduation or completion.

Transfer Students

A student is considered for admission as a transfer student if they completed college credits after high school graduation. UMSL awards credit in transfer for undergraduate courses completed at colleges and universities accredited by regional accrediting associations recognized by the United States Department of Education (USDE).

A transferring student who has completed fewer than 24 transferable credit hours must submit a final high school transcript and official transcripts from all college-level courses attempted at previous institutions that document at least a 2.3 cumulative GPA.

Students transferring from other colleges and universities with at least 24 transferable credit hours must submit the following information:

- A completed online Undergraduate Application
- Official transcripts from all colleges/universities attended.

All credentials submitted for admission become the property of the University.

Suspended and Dismissed Transfer Students

It is the practice of the Office of Admissions at the University of Missouri-St. Louis to uphold any suspension or dismissal decision offered to a student from another institution. Students suspended will be required to sit out for one year from the date of suspension before enrolling in UMSL. In addition, students must still meet the minimum admission requirements of a 2.3 GPA. A student may need to attend another institution in order to increase his/her GPA. Students who have been dismissed from another institution may not enroll at the University.

Students who have been dismissed from a specific college or school within another institution will need to show proof that they are eligible to enroll and/or are back in good standing at the previous institution in order to enroll with UMSL.

Additionally, students who are suspended/dismissed from another UM institution shall not be admissible until after one year from the date of the suspension/dismissal. Even though a student is removed from suspension, the student must still meet the minimum admission requirements of a 2.3 GPA.

Missouri State Transfer Agreement

Although transfer students should be aware that requirements for degrees vary from institution to institution, some transferred credits may not apply to UMSL programs, UMSL has attempted to minimize the loss of credits by adhering to the Missouri Coordinating Board of Higher Education (CBHE) Articulation Agreement. The agreement outlines statewide undergraduate general education requirements that satisfy the general requirements for students transferring into UMSL and students transferring out of UMSL to other public universities in the state.

UMSL requires mathematics and writing proficiency beyond the general requirements in the CBHE Statement. Please refer to the General Education requirements for details.

Transfer Credit

The articulation agreement among public institutions within the state of Missouri governs transfer of credit to UMSL from colleges and universities within the state of Missouri. These guidelines also apply to students transferring to UMSL from schools located outside Missouri. Advanced standing in the form of credit hours may be allowed for work satisfactorily completed in another public or private college or university of recognized standing located in the state of Missouri, as long as the work satisfies the requirements of the student's major.

The transcript at each institution includes all courses attempted. Grades of D or better earned in college-level work at an accredited or approved institution of higher education will receive full credit when transferred to UMSL. The University, however, will treat all grades on courses attempted on the same basis as that of a UMSL student. For example, if a program requires a UMSL student to repeat a specified course having earned a D grade, a transfer student will also be required to repeat the same course if it carries a D grade.

To maximize transfer credits from community colleges, UMSL has transfer guides and articulation agreements with area colleges.

Transfer Course Equivalency

UMSL awards credit in transfer for undergraduate courses completed at colleges and universities accredited by regional accrediting associations recognized by the United States Department of Education. (USDE)

To be accepted, coursework must have been completed at an institution after it received accreditation or during the time it was granted candidacy status for accreditation from one of the USDE recognized accrediting associations.

In addition, transfer credit is:

- only approved for graduate credit from another institution if the graduate course was a) taken by a student with graduate standing

and b) approved by the graduate director of the appropriate academic department at UMSL.

- only awarded for vocational-technical courses based on a transfer agreement or on a case-by-case basis.
- not awarded for remedial courses.
- generally not awarded for courses completed at institutions not accredited by regional accrediting associations unless approved by the head of an UMSL department through which similar courses are offered or by the Provost.

Should transfer students have any question about the transferability of courses, they should contact the appropriate Admission's office prior to taking a course. International students should visit <https://www.umsel.edu/global/admissions/transfercredit.html> for information about transferring credit from institutions outside of the United States.

Advanced Standing

Advanced standing includes credit by examination, examination that may or may not appear on a transfer student's transcripts, including College Board Advanced Placement (AP), the College-Level Examination Program (CLEP), International Baccalaureate (IB), and Defense Activity for Non-Traditional Education Support (DANTES). It also includes credit by portfolio review (Bachelor of Fine Arts only). These lower-division credits may not apply at the senior level. For examination credit, students should submit appropriate verification documents to the Office of Admissions before their first semester at UMSL. Students interested in the portfolio review should contact the Art Department. Early attention to these matters is essential to avoid unnecessary course work or repeats that can lead to loss of credit. If examinations are completed at a later date, verification documents should be submitted as soon as they are available.

Shortly after all official transcripts and other verifications are on file, students' previous academic records are evaluated to determine which courses are applicable, and students receive a written report of the results. Degree checks determining whether courses meet a specific degree requirement and whether courses are accepted as a part of the student's academic major are made in the office of the appropriate dean or advisor. Should there be any question concerning applicability of any courses, students should discuss this with that advisor.

Associate Degree Transfers from Community Colleges

A student admitted to the university and holding an associate degree (2.0 GPA or higher) applicable toward the baccalaureate degree will be accepted in junior standing. Students fulfilling the general education requirements outlined by the Missouri Coordinating Board of Higher Education and certified by the sending institution will have met the lower division general education requirements at UMSL. Students with AA degrees from Missouri institutions that include a CBHE approved general education core may transfer more than 64 credit hours for lower division courses. Any additional lower division course credits above 64 credit hours must be applicable to the baccalaureate degree or must be a prerequisite for an upper division course in the major. However, this does not exempt the student from meeting specialized lower-division degree requirements of specific departments. Courses completed in the associate degree program are evaluated for application to specific degree requirements by the same criteria used for transfer students from other colleges and universities.

Transfers within the University of Missouri System

Students must be in good standing at another campus of the University of Missouri to be eligible for admission. Students not in good standing will not be admissible until after one year from the date of the suspension/dismissal. Students must meet the minimum admission requirements of a 2.3 GPA.

Any course that leads to an undergraduate degree or fulfills a general education requirement on any campus of the University of Missouri shall be accepted in transfer toward the same degree on any campus of the university offering that degree or toward the general education requirements.

When courses transferred from the UM system have no direct equivalent at UMSL, they will be transferred as elective credits at the same level as they are numbered and count toward the 120-credit hour minimum required for graduation as long as a passing grade was received and as long as they are numbered above 1000 (or above 100 for institutions using a three-digit system). All other credit hour and residency requirements still apply. Courses transferred without a direct equivalent course at UMSL will not count toward a major, minor, or certificate unless approved by the respective department or program.

Grades, including D and F grades, and honor points earned in courses from the University of Missouri system will also transfer and will be included in the cumulative grade point averages. Unresolved problems related to transferability of credit may be appealed to the office of the appropriate dean.

Students within the last 30 hours of graduation may take a limited number of courses at another campus in the UM system, provided the last 15 hours are taken at UMSL and the work is approved by their respective dean and department.

I-Transfer General Education Block

Students fulfilling the general education requirements outlined by the Illinois Articulation Initiative (IAI) and certified by the sending institution will have met the lower division general education requirements at UMSL following the completion of the American History and Government course required by the state of Missouri. Courses listed under American History and Government (p. 31) will meet that requirement.

Metropolitan Rate

All undergraduate domestic students who live in the state of Illinois will pay the equivalent to the in-state rate. Undergraduate applications from students who live in Illinois are reviewed for eligibility automatically. No additional application is required.

Graduate applicants who are residents of the state of Illinois. will pay the equivalent to the in-state rate. No additional application is required.

For more information visit <http://www.umsel.edu/admissions/costs/metro.html>.

Midwest Student Exchange

The Midwest Student Exchange Program is an initiative designed by the Midwestern Higher Education Commission to increase interstate educational opportunities for students in its member states. The program enables residents of Illinois, Indiana, Kansas, Minnesota, Missouri, Ohio, Nebraska, North Dakota, and Wisconsin to enroll in the institutions and

specified programs located outside their home state at reduced tuition levels. Contact Admissions for more information.

Gateway Scholarship Program

The Gateway Scholarship Program is available for students residing in the following states: Alabama, Arkansas, Florida, Georgia, Indiana, Illinois, Iowa, Louisiana, Mississippi, Kansas, Kentucky, Michigan, Minnesota, Nebraska, Ohio, Oklahoma, North Carolina, North Dakota, South Carolina, South Dakota, Tennessee, Texas and Wisconsin who are new to UMSL. Under the program, students residing in these states will be eligible for the equivalent of in-state tuition rates.

Admission of International Students

Prospective international students living outside the United States and students currently in the United States on a visa should contact International Admissions for information about applying to the university. Applicants will be expected to supply official original secondary and college/university transcripts from all schools attended as well as other official original documents. International students must also pay a \$40 application fee. International students whose native language is not English are required to submit scores from an internationally accepted standardized English proficiency examination before a decision is made on admission. For more information and a list of accepted exams, please visit the International Admissions website.

Since 1998, all students in F-1 and J-1 status have been required to purchase an insurance policy with coverage for illness and accidents, billed to the student's UMSL account. For details contact:

Office of International Student and Scholar Services

362 Social Sciences Building
One University Boulevard
St. Louis, MO 63121-4400
Phone: 314-516-5229
Email: intadmission@umsl.edu
global.umsl.edu/admissions

* Students holding F, J and M visas are not eligible for Missouri in-state tuition. As of July 30, 2017 new rules as the changes may allow students on other visa types to be considered a Missouri resident for fee purposes. Please visit the Office of the Registrar website for more information.

Returning UMSL Students

Students wishing to return to the University will be required to complete a returning student application and provide official transcripts from other colleges and universities attended since last enrolled as a UMSL student. Students returning must have a minimum 2.0 cumulative GPA. Students who have below a 2.0 GPA from UMSL will be required to work with the Office of Student Retention Services.

Admission for Students Not Seeking an UMSL Degree

Visiting Students

A visiting student is one who has completed at least one semester at another institution and plans to return to that college or university after attending UMSL. To qualify as a visiting student, applicants must be an actively enrolled student at another college or university. Transcripts are not required for visiting students. At the end of the session, students must request that their grades be reported by transcript to their respective

schools. Financial aid is not available for visiting students. No application fee is required.

Non-Degree-Seeking Students

A non-degree-seeking student is someone interested in taking classes but not wanting a degree from UMSL. Often these are students who have degrees but want to take additional undergraduate classes for personal or professional development. To become a non-degree-seeking student, applicants complete the application for admission and mark "non-degree-seeking." No application fee is required.

Students wishing to become degree-seeking must meet the minimum transfer student requirements of 24 transferable, college-credit hours at a 2.3 GPA. Students may not switch from non-degree to degree-seeking after the first four weeks of the semester.

Financial aid is not available for non-degree seeking students.

UMSL Express

UMSL Express provides Missouri's senior citizens (65 and older) easy access to undergraduate courses without limit on an audit (not for credit) space-available basis. Graduate courses are not available through this program. Students are subject to: non-refundable \$25 registration fee, a parking fee, and course-related fees. Former UMSL Express students who reapply for the program must again pay the registration fee. UMSL Express applicants may obtain a registration form on-line, in person at 269 Millennium Student Center, or by calling 314-516-5545. Students should complete and return the form with proof of age to the Office of the Registrar on the day before classes are scheduled to begin.

General Education Requirements

required by the state of Missouri. Courses listed under American History and Government (p. 31) will meet that requirement.

At the University of Missouri-St. Louis, General Education affords both freshmen and transfer students the opportunity to develop and apply intellectual tools and to acquire a breadth of knowledge necessary to succeed in a rapidly changing, technology-driven, and diverse world. The UMSL Core and Explore curriculum challenges students to investigate various disciplines as potential majors and prepares them for success in major fields of study. It provides foundational knowledge in the basic competencies of Valuing, Managing Information, Communicating, and Higher-Order Thinking.

UMSL CORE & EXPLORE

- Native students (those with less than 11 hours of college credit from another institution, excluding any dual enrollment credit earned in HS)
- Students who plan to complete their degree at UMSL
- Transfer students in professional degree programs:
 - BS, Actuarial Science
 - BS, Accounting
 - BS, Education
 - BS, Nursing
 - BS, Engineering
 - BSW, Social Work
- General transfer students may opt in to this program

MISSOURI CORE 42

The core transfer curriculum, known as CORE 42, is a state-wide framework for general education that was implemented in the 2018-2019 academic year by all public two- and four-year institutions of higher education in the State of Missouri. CORE 42 provides a common framework that allows transfer students to fulfill general education requirements at any participating institution by completing courses with MOTR designations. Except for transfer students pursuing professional degrees, those who complete all CORE 42 requirements will have satisfied the general education requirements of UMSL. Students who partially completed CORE 42 at another institution may finish the remaining requirements to satisfy the general education requirements of UMSL.

- Transfer students (those with 11+ hours of college credit from another institution, excluding any dual enrollment credit earned in HS)
 - Students who plan to transfer and complete their studies at an institution other than UMSL
 - Students with transcribed MOTR courses not seeking a professional degree
 - Native students may not opt in to this program

I-Transfer

Students fulfilling the general education requirements outlined by the Illinois Articulation Initiative (IAI) and certified by the sending institution will have met the lower division general education requirements at UMSL following the completion of the American History and Government course

UMSL Core and Explore

General Education Program

Students must successfully complete the requirements of the University, the school or college in which they are enrolled, and the specific requirements of their area of specialization. Described below are the General Education requirements for all degrees. Students may consult the University Bulletin or their degree audit (DARS) report for recommended general education courses in their major.

At the University of Missouri-St. Louis, General Education affords both freshmen and transfer students the opportunity to develop and apply intellectual tools and to acquire a breadth of knowledge necessary in our challenging, technological, and diverse world. This curriculum also challenges students to investigate various disciplines as potential majors, and it prepares them for success in major fields of study. The program complies fully with the Missouri Coordinating Board of Higher Education Guidelines on Transfer and Articulation (June 2000).

Application of Policy to Freshmen

All students in Missouri public universities must complete the requirements of a General Education Plan totaling 42 credit hours in order to earn a baccalaureate degree.

Application of Policy to Transfer Students

Transfer policies describe which courses may apply to UMSL's General Education requirements. In general, students who transfer to UMSL with an Associate of Arts (AA) degree from an accredited Missouri institution and other approved institutions are considered to have completed all General Education requirements.

Students transferring with fewer than 42 hours or from a non-participating institution and not participating in the Missouri Transfer CORE 42 program will have their transcripts evaluated on a course-by-course basis. All students must earn a C- or higher in their First Year Writing and Math Proficiency coursework to be eligible to graduate from UMSL. Additionally, UMSL has a Junior-Level Writing requirement beyond the General Education requirement and the school or college in which they are enrolled may also have a Cultural Diversity requirement.

Transfer courses that meet the requirements of the Core courses or courses that are designated as General Education courses in the Humanities and Fine Arts, the Social Sciences, and the Math and Life/Natural Sciences areas at peer institutions and institutions with whom UMSL has an articulation agreement are considered transferable to UMSL's General Education requirements.

Credit associated with developmental/remedial coursework are not considered transferable to UMSL's General Education requirements.

Application of Policy to Students Who Started Prior to Fall 2015

Students who earned 24 or more semester hours of credit* at any accredited post-secondary institutions(s) before the start of the fall 2015 semester may meet the General Education requirements stipulated in the UMSL 2014-2015 Bulletin or elect to complete the current General Education Plan described below. Students who earned 24 or more semester hours of credit* at any accredited post-secondary institutions(s)

before the start of the fall 2002 semester may also meet the General Education requirements stipulated in the UMSL 2001-2002 Bulletin.

*Only credit that is transferable to UMSL is applicable

General Education Requirements

General Education at UMSL is comprised of 1000-2000 level courses that provide foundational knowledge in a broad range of subjects critical to the future success of our students. It is divided into two categories: General Education Core courses, which are applicable in all disciplines, and General Education Explore courses, which emphasize breadth of study. The following definitions clarify what is required for a course to be considered for listing as either a core or explore option in the General Education curriculum.

Core Areas:

First Year Writing
Math Proficiency
Communication Proficiency
Information Literacy
American History or Government

Explore Areas:

Humanities and Fine Arts
Social Sciences
Math and Life/Natural Sciences

Core Area Descriptions

First Year Writing (3 hours)

Value Statement/Area Definition

First Year Writing courses develop college-level rhetorical knowledge and critical thinking, reading, and writing skills, including process skills and knowledge of conventions. Helping students gain access to rhetorical practices begins a process of sharing and making knowledge within the classroom and applying the foundations of effective writing leads to college and career success.

Student Outcomes

After successfully completing the First-Year Writing requirement, students will be able to:

- analyze contexts and audiences and then act on that analysis in comprehending and creating texts
- analyze, synthesize, interpret, and evaluate ideas, information, situations, and texts
- use multiple strategies, or composing processes, to conceptualize, develop, and finalize projects
- analyze and negotiate conventions (usage, spelling, citation as well as organizational frameworks, content, document design, and style) for purpose, audience, and genre, understanding that genres evolve in response to changes in material conditions and composing technologies and attending carefully to emergent conventions

Requirements

The First Year Writing requirement must be satisfied before the student completes 24 hours of course work. Students should be able to write with

thoughtfulness, clarity, coherence, and persuasiveness (CBHE General Education, June 2000). Proficiency can be met through earning a C- or higher in one of the following courses:

| | | |
|---------------|--|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| ENGL 1110 | First-Year Writing for International Students | 3 |
| FGN LANG 1111 | Reacting to the Past: Language, Immigration, and Social Change | 4 |
| HONORS 1100 | Honors First-Year Writing | 3 |

Mathematics (3 hours)

Value Statement/Area Definition

Mathematics Core courses develop an understanding of fundamental mathematical concepts and their applications. A solid foundation in mathematics is very useful in appreciating the role that mathematics plays in disparate contexts such as securing financial transactions (credit card encryption) to a description of more ethereal things such as music and the structure of the universe.

A solid foundation in mathematics is necessary for numeric and financial literacy and mathematical reasoning. Mathematics as a symbolic quantitative language appears in a broad variety of disciplines.

Student Outcomes

After successful completion of the Mathematics requirement, students will be able to:

- discuss the ways in which mathematics occurs broadly in various fields (e.g., art, architecture, botany and music).
- evaluate in an informed manner various mathematical aspects of everyday life (e.g., financial matters, consumerism, quantitative literacy)
- organize, analyze and interpret data arising in multiple formats (e.g., graphs, charts, diagrams as they arise within various contexts).
- make judgments and draw appropriate conclusions checking for logical consistency, while recognizing the limits of this analysis.

Requirements

Proficiency in the basic mathematical skills area must be satisfied before the student completes 24 hours of course work. Proficiency can be obtained by completing, with a grade of C- or higher, a college degree credit mathematics course, or by earning a score of at least 67% on the **proctored College Algebra** placement test. Students who fulfill their math proficiency requirement in this manner must take an additional General Education course in order to have a total of 42 credit hours of General Education courses.

Mathematics courses that the University offers that satisfy mathematics proficiency are courses at the 1000 level or above. Proficiency can be met through earning a C- or better in one of the following (or higher level) courses:

| | | |
|----------------|--|---|
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| MATH/PHIL 1021 | Choice and Chance | 3 |
| MATH 1025 | Geometry in the Real World | 3 |

| | | |
|-----------|---------------------------------|---|
| MATH 1026 | The Music of Math | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1045 | PreCalculus (MOTR MATH 150) | 5 |

Math courses at the 1000 level below MATH 1030 are designed as terminal mathematics courses for students who do not plan to take calculus.

MATH 1030 or MATH 1045 is required for all students who want to go on to calculus. (Note: MATH 1035 is also required for students who take MATH 1030 and want to take MATH 1800.)

UMSL Math Placement Test scores used to satisfy prerequisites are valid for one year. Placement test scores that are used to satisfy prerequisites for courses MATH 1045 as well as MATH 1030 and below do not need to be obtained in a proctored environment.

Information about the UMSL Math Placement Test is available on the University's homepage at <https://www.umsel.edu/~campustesting/mathplacement.html>.

Communication (3 hours)

Value Statement/Area Definition

Communication Core courses develop effective use of the spoken English language essential to academic success. A solid foundation in verbal communication promotes the ability to speak and listen to others fostering the ability to secure a job, maintain healthy relationships, and promote healthy self expression.

Student Outcomes

After successful completion of the Communication requirement students will be able to:

- analyze and evaluate their own and others' oral expression
- create and clearly deliver oral presentations to targeted audiences employing effective syntax, vocabulary, grammar, and mechanics
- tailor messaging to diverse audiences to achieve a given purpose
- communicate effectively in groups by listening, reflecting, and responding appropriately and in context

The Communication Proficiency requirement may be met through one of the following courses:

| | | |
|-------------|--|---|
| COMM 1030 | Interpersonal Communication I (MOTR COMM 120) | 3 |
| COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | 3 |
| COMM 2230 | Small Group Communication (MOTR COMM 125) | 3 |
| COMM 2240 | Persuasive Communication | 3 |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| HONORS 2001 | Topics in Communication Proficiency | 3 |
| HONORS 2010 | Inquiries in The Humanities (Public Speaking or Storytelling: The Oral Tradition only) | 3 |
| NURSE 1050 | Communication for the Healthcare Professional | 3 |

Additional courses that may meet this requirement:

1. A Course designated as a Verbal Communication course in transfer
2. Future courses, or specific sections of future topics courses, as approved by the General Education Committee

Information Literacy (3 hours)

Value Statement/Area Definition

Information Literacy Core courses consider what it means for information to be accurate and used appropriately. Courses in this area center around access and analysis of written, oral, visual, or numerical information. Students analyze their own and others' biases and carefully evaluate contextual factors surrounding information. These foundational courses prepare students to further their use of information literacy as participants within our interconnected global community.

Student Outcomes

After successfully completing the Information Literacy requirement, students will be able to:

- effectively define the scope and purpose of a project
- use appropriate tools and contemporary technologies to access information through effective, well-designed search strategies
- identify relevant, reliable sources of information
- critically analyze and evaluate the accuracy, validity and potential bias of information
- organize, synthesize and communicate information from a variety of sources with clarity and depth

The Information Literacy requirement may be met through one of the following courses:

| | | |
|--------------|---|---|
| ATM SCI 1002 | Earth Climate Studies | 3 |
| CMP SCI 1012 | Learning to Program Using Virtual Worlds | 3 |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CHEM 2223 | Quantitative Analysis in Chemistry | 4 |
| CRIMIN 2210 | Research Methods in Criminology and Criminal Justice | 3 |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice | 4 |
| ED TECH 2230 | Information Literacy | 3 |
| EDUC 2002 | Social Entrepreneurship | 3 |
| ENGL 2110 | Information Literacy | 3 |
| HIST 2199 | Real History and Fake News | 3 |
| HONORS 1130 | Western Traditions: Social and Behavioral Sciences (Science Vs Pseudo-science in Archaeology only) | 3 |
| HONORS 2002 | Topics in Information Literacy | 3 |
| HONORS 2010 | Inquiries in The Humanities (Media Literacy only) | 3 |
| HONORS 2030 | Inquiries in the Social and Behavioral Sciences (Evaluating the Media: A Theoretical Approach only) | 3 |
| INFSYS 1800 | Computers and Information Systems | 3 |

¹

| | | |
|---------------|---|---|
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| MATH 1105 | Basic Probability and Statistics | 3 |
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| MEDIA ST 1065 | Internet Media | 3 |
| PHIL 2280 | Minds, Brains, and Machines | 3 |
| PSYCH 2201 | Psychological Statistics | 4 |
| PSYCH 2219 | Research Methods in Psychological Science | 3 |
| SOC 2280 | Technology and Society | 3 |

- ¹ Proficiency may be earned through placement test. Students who fulfill their information literacy through a placement test must take an additional General Education course in order to have a total of 42 credit hours of General Education courses.

Additional courses that may meet this requirement:

1. A course designated as an Information Literacy course in Transfer
2. Future courses, or specific sections of future topics courses, as approved by the General Education Committee

American History and Government (3 hours)

Value Statement

American History and Government courses delve into the foundational aspects of American society. The United States offers a multitude of diverse aspects to study. The further comprehension of the roots of current society enlighten and enhance understanding of events in today's world.

Courses offered here fulfill Section 170.011.1 of the Missouri Revised Statutes, 2015, which states that all candidates for a degree issued by a college or university in the state of Missouri must have "satisfactorily passed an examination on the provisions and principles of the Constitution of the United States and of the state of Missouri, and in American history and American institutions."

Outcomes

After successfully completing the American History and Government requirement, students will be able to:

- describe how the underlying principles of the Constitutions of the United States and the state of Missouri shape American society
- identify the various structures of American government
- examine events and social movements and the ways they impact interpretation of American history

The American History and Government Requirement may be met through one of the following courses:

| | | |
|-------------|--|---|
| CRIMIN 1100 | Introduction to Criminology and Criminal Justice | 3 |
| ECON 2800 | History of American Economic Development | 3 |
| HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | 3 |

| | | |
|--------------|--|---|
| HIST 1002 | American Civilization 1865 to Present (MOTR HIST 102) | 3 |
| HIST 1003 | African American History | 3 |
| HIST 2004 | The Civil War Era: Slavery, Emancipation, and the Greater Reconstruction | 3 |
| HIST 2800 | History of American Economic Development | 3 |
| HONORS 1230 | American Traditions: Social and Behavioral Sciences | 3 |
| HONORS 2003 | Topics in American History and Government | 3 |
| PHIL 1030 | Present Moral Problems | 3 |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 2260 | Law, Politics and Society | 3 |
| POL SCI 2280 | Judicial Politics | 3 |
| POL SCI 2290 | Gender and the Law | 3 |
| POL SCI 2300 | State Politics | 3 |
| POL SCI 2320 | African Americans and the Political System | 3 |

Explore Area Descriptions

Courses used to fulfill core area requirements may not be applied to the explore area requirements.

Humanities and Fine Arts (9 hours)

Value Statement/Area Definition

Critical thinking in humanities and arts disciplines often goes beyond the purely pragmatic and involves encountering and actively participating in the complexity of the human condition. Creative, expressive and evaluative ways of thinking and design lead to meaningful understanding of the past, present and future of the world in which we live.

Student Outcomes

Upon completion of the required credit hours in this category, students will be able to:

- explain the ways in which humanistic and/or creative expression throughout the ages reflect the culture and values of its time and place
- analyze the ways in which both change and continuity have affected human experience
- identify the relationships among ideas, text, and/or creative works and their cultural and historical contexts
- frame a comparative context to critically assess the ideas, forces, and values that have created the modern world

Requirements

This requirement is satisfied by completing 9 hours of coursework at the 1000 or 2000 level selected from at least two of the following areas: Art, Art History, English, Foreign Languages (FGN LANG), History, Music (EN PER and M H L T), Philosophy, Theater; and Entrepreneurship, Interdisciplinary, Gender Studies and Honors courses with the Humanities or Fine Arts designation; and transfer courses designated as Humanities

and Fine Arts general education courses at peer institutions and institutions with whom UMSL has an articulation agreement.

Social Sciences (9 hours)

Value Statement/Area Definition

Using scientific methods and evidence-based approaches to focus on individual, social, and cultural aspects of behavior, social and behavioral science courses examine and explain human beings and their varied behaviors.

Student Outcomes

Upon completion of the required credit hours in this category, students will be able to:

- critically analyze how individuals are influenced by social institutions, structures, and processes and how these may contribute to diverse perspectives
- identify theory and qualitative or quantitative evidence to examine individual, social, and/or cultural phenomena
- identify and critique ethical positions or arguments based on research in the social and behavioral sciences

Requirements

This requirement is satisfied by completing 9 hours of coursework at the 1000 or 2000 level selected from at least two of the following areas: Accounting, Anthropology, Business Administration, Communication, Criminology and Criminal Justice, Economics, Educational Psychology, Entrepreneurship, Finance, Geography, Media Studies, Political Science, Psychology, Social Work, Sociology, Sport Management; and Interdisciplinary, Gender Studies, and Honors courses with the Social Sciences designation; and transfer courses designated as Social Sciences general education courses at peer institutions and institutions with whom UMSL has an articulation agreement.

Mathematics and Life/Natural Sciences (9 hours)

Value Statement/Area Definition:

Courses in this area will inform and engage students in the practice of the scientific and computational approaches needed in order to appreciate and interpret the physical, natural and quantitative world around them. These approaches will enable students to grasp basic aspects of the workings of the universe, of nature and living systems, and/or of the quantitative and abstract reasoning needed to discuss and evaluate from a rational perspective many of the issues and phenomena they will encounter throughout their lives.

Student Outcomes

Upon completion of the required credit hours in this category, students will be able to:

- analyze and evaluate a scientific hypothesis or technical process
- use basic scientific language and processes and be able to distinguish between scientific and non-scientific explanations
- use mathematical concepts and/or symbolic representations together with scientific methods to understand the physical or natural world
- solve problems using mathematical, statistical, computational or symbolic methods

This requirement is satisfied by completing 9 hours of coursework at the 1000 or 2000 level selected from at least two of the following areas: Astronomy, Atmospheric Science, Biology, Chemistry, Computer Science, Geology, Information Systems and Technology, Mathematics, Physics; and Interdisciplinary and Honors courses with the Mathematics and Life/Natural Sciences designation; and transfer courses designated as Mathematics and Life/Natural Sciences general education courses at peer institutions and institutions with whom UMSL has an articulation agreement. ANTHRO 1005 and BUS AD 1107 may also fulfill this requirement.

Learning Outcomes

CORE

First Year Writing

After successfully completing the First-Year Writing requirement, students will be able to:

- analyze contexts and audiences and then act on that analysis in comprehending and creating texts
- analyze, synthesize, interpret, and evaluate ideas, information, situations, and texts
- use multiple strategies, or composing processes, to conceptualize, develop, and finalize projects
- analyze and negotiate conventions (usage, spelling, citation as well as organizational frameworks, content, document design, and style) for purpose, audience, and genre, understanding that genres evolve in response to changes in material conditions and composing technologies and attending carefully to emergent conventions

Mathematics Proficiency

After successfully completing the Mathematics requirement, students will be able to:

- discuss the ways in which mathematics occurs broadly in various fields (e.g., art, architecture, botany and music).
- evaluate in an informed manner various mathematical aspects of everyday life (e.g., financial matters, consumerism, quantitative literacy).
- organize, analyze and interpret data arising in multiple formats (e.g., graphs, charts, diagrams as they arise within various contexts).
- make judgments and draw appropriate conclusions checking for logical consistency, while recognizing the limits of this analysis.

Communication Proficiency

After successfully completing the Communication requirement students will be able to:

- analyze and evaluate their own and others' oral expression
- create and clearly deliver oral presentations to targeted audiences employing effective syntax, vocabulary, grammar, and mechanics
- tailor messaging to diverse audiences to achieve a given purpose
- communicate effectively in groups by listening, reflecting, and responding appropriately and in context

Information Literacy

After successfully completing the Information Literacy requirement, students will be able to:

- effectively define the scope and purpose of a project
- use appropriate tools and contemporary technologies to access information through effective, well-designed search strategies
- identify relevant, reliable sources of information
- critically analyze and evaluate the accuracy, validity and potential bias of information
- organize, synthesize and communicate information from a variety of sources with clarity and depth

American History and Government

After successfully completing the American History and Government requirement, students will be able to:

- describe how the underlying principles of the Constitutions of the United States and the state of Missouri shape American society
- identify the various structures of American government
- examine events and social movements and the ways they impact interpretation of American history

EXPLORE

Fine Arts and Humanities

Upon completion of the required credit hours in this category, students will be able to:

- explain the ways in which humanistic and/or creative expression throughout the ages reflect the culture and values of its time and place
- analyze the ways in which both change and continuity have affected human experience
- identify the relationships among ideas, text, and/or creative works and their cultural and historical contexts
- frame a comparative context to critically assess the ideas, forces, and values that have created the modern world

Social Sciences

Upon completion of the required credit hours in this category, students will be able to:

- critically analyze how individuals are influenced by social institutions, structures, and processes and how these may contribute to diverse perspectives
- identify theory and qualitative or quantitative evidence to examine individual, social, and/or cultural phenomena
- identify and critique ethical positions or arguments based on research in the social and behavioral sciences

Mathematics and Life/Natural Sciences

Upon completion of the required credit hours in this category, students will be able to:

- analyze and evaluate a scientific hypothesis or technical process
- use basic scientific language and processes and be able to distinguish between scientific and non-scientific explanations
- use mathematical concepts and/or symbolic representations together with scientific methods to understand the physical or natural world
- solve problems using mathematical, statistical, computational or symbolic methods

Missouri Core 42

CORE 42 Transfer Curriculum

The CORE 42 Transfer Curriculum is a block of at least 42 credit hours that will transfer as equivalent credit at all Missouri public colleges and universities.

Students who complete the CORE 42 curriculum will meet the general education requirements for most liberal arts and sciences degrees at all public higher education institutions in the state. General education requirements for some degrees – including education, engineering and nursing – differ due to professional licensing and other requirements.

To complete the curriculum, students must earn a minimum number of credit hours in five knowledge areas:

- Mathematical sciences – three credit hours
- Natural sciences – seven credit hours, including a course with a lab
- Humanities and fine arts – nine credit hours from at least two disciplines
- Social and behavioral sciences – nine credit hours from at least two disciplines, including a civics course
- Written and oral communications – nine credit hours (six in written communications and three in oral communications)

Credits earned beyond the minimum in each knowledge area count toward the 42-hour minimum.

MOTR Course Equivalencies

Courses designated with a Missouri Transfer (MOTR) course number, guarantees the one-to-one transfer of these courses among all Missouri public institutions of higher education. UMSL courses can be found on the knowledge area tabs above.

For more information about CORE 42 and MOTR Course Equivalencies, visit <https://dhe.mo.gov/core42.php>.

Mathematical Sciences

| MOTR COURSE NUMBER | MOTR COURSE NAME | UMSL COURSE NUMBER | UMSL COURSE NAME |
|--------------------|-----------------------------------|-----------------------|--|
| MOTR MATH 120 | Mathematical Reasoning & Modeling | MATH 1020 | Contemporary Math |
| MOTR MATH 130 | Pre-Calculus Algebra | MATH 1030 | College Algebra |
| MOTR MATH 150 | Pre-Calculus | MATH 1045 | Pre-Calculus |
| MOTR MATH 150 | Pre-Calculus | MATH 1030 + MATH 1035 | College Algebra (1030) and Trigonometry (1035) |

Natural Sciences

| MOTR COURSE NUMBER | MOTR COURSE NAME | UMSL COURSE NUMBER | UMSL COURSE NAME |
|--------------------|--------------------------------|--------------------------|---|
| MOTR ASTR 100 | Astronomy | ASTRON 1001 | Cosmic Evolution Introductory Astronomy |
| MOTR ASTR 100 | Astronomy | ASTRON 1001A | Cosmic Evolution/Introduction Astronomy |
| MOTR ASTR 1000 | Astronomy | ASTRON 1050 | Introductory to Astronomy I |
| MOTR BIOL 100 | Essentials in Biology | BIOL 1012 | General Biology |
| MOTR BIOL 100L | Essentials in Biology with Lab | BIOL 1012 and BIOL 1013 | General Biology, General Biology Laboratory |
| MOTR BIOL 150L | Biology with Lab | BIOL 1831 | Introductory Biology: From Molecules to Organisms |
| MOTR BIOL 150LEC | Biology with Lab | BIOL 1821 | Introductory Biology: Organisms and the Environment |
| MOTR BIOL 150L | Biology with Lab | BIOL 1831 | Introductory Biology: Organisms and the Environment |
| MOTR CHEM 100HP | Essentials in Chemistry | CHEM 1052 | Chemistry for the Health Professions |
| MOTR CHEM 150L | Chemistry I with Lab | CHEM 1111 | Introductory Chemistry I |
| MOTR GEOL 100L | Geology with Lab | GEOL 1001 and GEOL 1001L | General Geology, General Geology Lab |
| MOTR LIFS 150 | Human Biology | BIOL 1102 | Human Biology |
| MOTR PHYS 100 | Essentials in Physics | PHYSICS 1001 | How Things Work |
| MOTR PHYS 110 | Essential in Physical Sciences | GEOL 1053 | Oceanography |
| MOTR PHYS 150L | Physics I with Lab | PHYSICS 1011 | Basic Physics I |
| MOTR PHYS 200L | Advanced Physics I with Lab | PHYSICS 2111 | Physics: Mechanics and Heat |

Humanities and Fine Arts

| MOTR COURSE NUMBER | MOTR COURSE NAME | UMSL COURSE NUMBER | UMSL COURSE NAME |
|--------------------|------------------|--------------------|-----------------------------|
| MOTR ARTS 100 | Art Appreciation | ART HS 1100 | Introduction To Western Art |
| MOTR ARTS 101 | Art History I | ART HS 1120 | Global Art History |
| MOTR LANG 101 | French I | FRENCH 1001 | French Language & Culture I |

| | | | |
|-----------------|------------------------------------|--------------|--|
| MOTR LANG 102 | French II | FRENCH 1002 | French Language and Culture II |
| MOTR LANG 103 | Spanish I | SPANISH 1001 | Spanish Language and Culture I |
| MOTR LANG 104 | Spanish II | SPANISH 1002 | Spanish Language and Culture II |
| MOTR LITR 100 | Introduction to Literature | ENGL 1120 | Introduction to Literature |
| MOTR MUSC 100 | Music Appreciation | M H L T 1001 | Intro to Music |
| MOTR MUSC 100J | Music Appreciation-Jazz | M H L T 1070 | Introduction to Jazz |
| MOTR MUSC 100RP | Music Appreciation-Rock/Pop | M H L T 1003 | History of Rock Music |
| MOTR MUSC 102 | World Music | M H L T 1150 | Drumming Cultures of the World |
| MOTR MUSC 103 | Music History I | M H L T 2010 | History of Western Music I |
| MOTR MUSC 104 | Music History II | M H L T 2020 | History of Western Music II |
| MOTR PERF 102B | Music Performance-Band | EN PER 1520 | Symphonic Band |
| MOTR PERF 102C | Music Performance-Choir | EN PER 1400 | University Chorus |
| MOTR PERF 102C | Music Performance-Choir | EN PER 1410 | The University Singers |
| MOTR PERF 102O | Music Performance-Orchestra | EN PER 1500 | University Orchestra |
| MOTR PERF 105D | Studio Art-Introduction to Drawing | ST ART 1140 | Drawing I |
| MOTR PHIL 100 | Introduction to Philosophy | PHIL 1150 | Introduction to Philosophy |
| MOTR PHIL 101 | Introduction to Logic | PHIL 1160 | Critical Thinking |
| MOTR PHIL 102 | Introduction to Ethics | PHIL 1130 | Approaches to Ethics |
| MOTR THEA 100A | Theatre Appreciation | THEATR 1800 | Introduction to Theatre |
| MOTR WCIV 101 | Western Civilization I | HIST 1031 | Topics in European Civilization: Emergence of Western Europe to 1715 |
| MOTR WCIV 102 | Western Civilization II | HIST 1032 | Topics in European Civilization: 1715 to the Present |

Social and Behavioral Sciences

| MOTR COURSE NUMBER | MOTR COURSE NAME | UMSL COURSE NUMBER | UMSL COURSE NAME |
|--------------------|--------------------------------------|--------------------|--|
| MOTR ANTH 201 | Cultural Anthropology | ANTHRO 1011 | Introduction to Cultural Anthropology |
| MOTR CRIS 101 | Introduction to Criminal Justice | CRIMIN 1100 | Introduction to Criminology and Criminal Justice |
| MOTR ECON 100 | Introduction to Economics | ECON 1000 | Economics in Everyday Life |
| MOTR ECON 101 | Introduction to Macroeconomics | ECON 1002 | Principles of Macroeconomics |
| MOTR ECON 102 | Introduction to Microeconomics | ECON 1001 | Principles of Microeconomics |
| MOTR GEOG 101 | World Regional Geography | GEOG 1001 | Introduction to Geography |
| MOTR GEOG 101 | World Regional Geography | GEOG 1002 | World Regions |
| MOTR HIST 101 | American History I | HIST 1001 | American Civilization to 1865 |
| MOTR HIST 102 | American History II | HIST 1002 | American Civilization 1865-Present |
| MOTR POSC 101 | American Government | POL SCI 1100 | American Politics |
| MOTR POSC 201 | International Relations | POL SCI 1800 | World Politics |
| MOTR POSC 202 | Introduction to Comparative Politics | POL SCI 1500 | Introduction to Comparative Politics |
| MOTR PSYC 100 | General Psychology | PSYCH 1003 | General Psychology |
| MOTR PSYC 200 | Life Span Human Development | PSYCH 2268 | Human Growth and Development |
| MOTR SOCI 101 | General Sociology | SOC 1010 | Introduction to Sociology |
| MOTR SOCI 203 | Introduction to Gender Studies | GS 2102 | Introduction to Gender Studies |

Oral and Written Communication

| MOTR COURSE NUMBER | MOTR COURSE NAME | UMSL COURSE NUMBER | UMSL COURSE NAME |
|--------------------|---------------------------------|--------------------|---------------------------------|
| MOTR COMM 110 | Fundamentals of Public Speaking | COMM 1040 | Introduction to Public Speaking |
| MOTR COMM 120 | Interpersonal Communication | COMM 1030 | Interpersonal Communication I |
| MOTR COMM 125 | Small Group Communication | COMM 2230 | Small Group Communication |
| MOTR ENGL 110 | Technical Writing | ENGL 2125 | Technical Writing |
| MOTR ENGL 200 | Composition II | ENGL 1100 | First-Year Writing |

4 Year Plan of Study

By graduating in four years, students can reduce tuition costs and accelerate entry into the job market or advanced education compared to students who take longer to graduate.

To assist students in creating their own personal four-year academic plan, templates are provided for all BA, BFA, BM, BS, BSN, and BSW programs on the tabs above.

Through careful planning with an academic advisor, students can complement their undergraduate degree with minors or certificates and experiences such as study abroad, internships, and service learning.

Sample Four Year Plans

Actuarial Science

- Bachelor of Science (p. 392)

Anthropology

- Bachelor of Arts (p. 399)

Applied Psychology of Child Advocacy Studies

- Bachelor of Arts (p. 402)

Biochemistry & Biotechnology

- Bachelor of Science (p. 405)

Biology

- Bachelor of Arts (p. 413)
- Bachelor of Science (p. 414)

Chemistry

- Bachelor of Arts (p. 461)
 - Biochemistry Emphasis (p. 462)
- Bachelor of Science
 - Biochemistry Concentration (p. 464)
 - Chemistry Concentration (p. 464)

Communication

- Bachelor of Arts (p. 477)
 - Applied Visual Communication Emphasis (p. 477)
 - Interpersonal Communication Emphasis (p. 479)
 - Mass Communication Emphasis (p. 480)
 - Strategic Communication Emphasis (p. 481)

Computer Science

- Bachelor of Science (p. 487)

Computing Technology

- Bachelor of Science (p. 490)

Criminology and Criminal Justice

- Bachelor of Science (p. 497)

Cybersecurity, Computer Science Emphasis

- Bachelor of Science (p. 501)

Data Science

- Bachelor of Science
 - Economics Emphasis (p. 512)

Economics

- Bachelor of Arts (p. 525)
- Bachelor of Science (p. 526)

English

- Bachelor of Arts (p. 569)

History

- Bachelor of Arts (p. 583)

International Relations

- Bachelor of Arts (p. 600)

Mathematics

- Bachelor of Arts (p. 615)
- Bachelor of Science (p. 616)
 - Data Science Emphasis (p. 619)
 - Fiscal Mathematics Emphasis (p. 619)

Modern Languages

- Bachelor of Arts
 - French Emphasis (p. 630)
 - Japanese Emphasis (p. 634)
 - Spanish Emphasis (p. 636)
 - Dual Language Professional Emphasis (p. 628)

Music

- Bachelor of Arts (p. 639)
- Bachelor of Music
 - Jazz Studies (p. 643)
 - Music Education, Vocal (p. 648)
 - Music Education, Instrumental (p. 648)
 - Performance, Instrumental (p. 652)
 - Performance, Keyboard (p. 652)
 - Performance, Voice (p. 652)
 - Composition (p. 643)
 - Theory (p. 650)
 - Elective Studies in Business (p. 641)

Philosophy

- Bachelor of Arts (p. 682)

Physics and Astronomy

- Bachelor of Arts (p. 687)
- Bachelor of Science

- Astrophysics Emphasis (p. 689)
- Biophysics Emphasis (p. 689)
- Engineering Physics Emphasis (p. 691)
- General Physics Emphasis (p. 693)

Political Science

- Bachelor of Arts (p. 696)

Psychology

- Bachelor of Arts (p. 703)
- Bachelor of Science (p. 705)

Public Policy and Administration

- Bachelor of Science (p. 711)
 - Public Administration Emphasis (p. 714)
 - Public Policy Emphasis (p. 714)

Sociology

- Bachelor of Arts (p. 703)
- Bachelor of Science (p. 747)

Studio Art

- Bachelor of Fine Arts
 - Graphic Design Emphasis (p. 755)
 - Art Education Emphasis (p. 755)
 - Studio Practice Emphasis (p. 756)

Sample Four Year Plans

BS Accounting (p. 388)

BS Business Administration

- General (p. 429)
- Entrepreneurship Emphasis (p. 429)
- Finance Emphasis (p. 432)
- Information Systems and Technology Emphasis (p. 434)
- International Business Emphasis (p. 435)
- Management Emphasis (p. 437)
- Marketing Emphasis (p. 438)
- Supply Chain Management Emphasis (p. 440)

BS Cybersecurity, Information Systems Emphasis (p. 503)

BS Information Systems and Technology (p. 592)

Sample Four Year Plans

Early Childhood Education BSEd

- Special Education Emphasis (p. 523)

Educational Studies BES

- Early Childhood Emphasis (p. 549)
- Exercise Science and Wellness Emphasis (p. 550)
- Park and Museum Programs Emphasis (p. 551)

- Social Entrepreneurship Emphasis (p. 552)
- Youth and Adult Development Emphasis (p. 553)

Elementary Education BSEd

- Middle School Education Emphasis (p. 557)
- Special Education Emphasis (p. 563)
- Special Education and TESOL Emphasis (p. 561)
- TESOL Emphasis (p. 564)

Physical Education BSEd

PK-12 Emphasis (p. 685)

Secondary Education BSEd

- English Emphasis (p. 727)
- Mathematics Emphasis (p. 729)
- Modern Foreign Language-French Emphasis (p. 731)
- Modern Foreign Language-Spanish Emphasis (p. 733)
- Science-Biology Emphasis (p. 735)
- Science-Chemistry Emphasis (p. 737)
- Science-Physics Emphasis (p. 739)
- Social Studies Emphasis (p. 741)

Sport Management BS (p. 752)

Sample Four Year Plans

BS Electrical Engineering (p. 556)

BS Civil Engineering (p. 474)

BS Mechanical Engineering (p. 623)

Sample Degree Completion Plans

BSN Traditional (p. 657)

BSN Accelerated (p. 659)

RN to BSN (p. 659)

Sample Four Year Plan

Bachelor of Social Work (p. 743)

Learning Outcomes

Learning outcomes are statements that describe the knowledge, skills, and attitudes that graduates will achieve after successfully completing a learning experience or program.

UMSL's fundamental purpose is to educate and graduate diverse students as they seek different and better lives. Our academic programs emphasize student growth through research, internship opportunities, and one-on-one attention. Our award-winning faculty propels many of our academic programs to be ranked among the best in the nation.

This web page links you to the expected student learning outcomes for each academic program at UMSL. To see the expected learning outcomes for any academic program, select the college and then the department and program and the institutional outcomes are below.

UMSL Institutional Outcomes

Critical Thinking

Engagement, Inclusion, Innovation, Success, Trust

UMSL Graduates will integrate multiple perspectives when using reason, evidence, and context to formulate questions, increase knowledge and reason effectively and ethically.

Creative Thinking

Engagement, Inclusion, Innovation, Success

UMSL graduates will create new and worthwhile ideas, work creatively with others, and demonstrate originality and inventiveness in creative work and research.

Communication

Engagement, Inclusion, Innovation, Success

Graduates will be able to communicate effectively and engage with others constructively across contexts in oral, written, visual and electronic formats.

Diversity

Access, Engagement, Inclusion, Innovation, Success

UMSL Graduates will understand and have the ability to view individual and social behavior/society from a variety of perspectives, recognize and respect difference, and conceptualize and critically articulate the complexities of difference and experience.

Information Literacy

Engagement, Inclusion, Innovation, Success

UMSL Graduates will be able to access, critically examine, and responsibly use written, oral, visual, and numerical information to be informed citizens in the interconnected global community.

Integrative Thinking

Engagement, Inclusion, Innovation, Success, Trust

UMSL Graduates will promote community engagement or civic action to benefit the public good and integrate relevant experience, breadth of study, and focused disciplinary expertise to strengthen personal and professional growth.

Quantitative Analysis

Engagement, Inclusion, Innovation, Success

UMSL Graduates will demonstrate critical thinking and quantitative reasoning skills and the use of symbolic systems to understand aspects of the properties and relationships of relevant quantifiable concepts of academic disciplines and everyday life.

Learning Outcomes, College of Arts & Sciences

Actuarial Science

- Bachelor of Science (p. 392)

Actuarial Studies

- Undergraduate Certificate (p. 394)

African American and African Diaspora Studies

- Undergraduate Certificate (p. 395)

Anthropology

- Bachelor of Science (p. 398)

Biochemistry & Biotechnology

- Bachelor of Science (p. 405)

Biology

- Bachelor of Arts (p. 412)
- Bachelor of Science (p. 416)
- Biology Minor (p. 418)
- Environmental Studies Minor (p. 573)

Chemistry

- Bachelor of Arts (p. 460)
- Bachelor of Science (p. 463)
- Chemistry Minor (p.)
- Master of Science (p. 466)
- Biochemistry Graduate Certificate (p. 410)

Communication

- Bachelor of Arts (p. 477)
 - (p. 477)Applied Visual Communication Emphasis (p. 478)
 - Interpersonal Communication Emphasis (p. 479)
 - Mass Communication Emphasis (p. 480)
 - Strategic Communication Emphasis (p. 482)
- Heath Communication Certificate (p. 581)

- Media Production Certificate (p. 625)
- Public Relations Certificate (p. 724)

Computer Science

- Bachelor of Science (p. 487)
- Computer Science Minor (p. 488)
- Cybersecurity Undergraduate Certificate (p. 509)
- Cybersecurity Graduate Certificate (p. 504)
- Data Science Undergraduate Certificate (p. 517)
- Internet and Web Undergraduate Certificate (p. 602)
- Mobile Apps and Computing Undergraduate Certificate (p. 626)

Computing Technology

- Bachelor of Science (p. 490)

Criminology and Criminal Justice

- Bachelor of Science (p. 497)
- Master of Arts (p. 498)
- Doctor of Philosophy (p. 500)
- Criminology and Criminal Justice Minor (p. 499)

Cybersecurity

- Bachelor of Science
 - Computer Science Emphasis (p. 501)
- Cybersecurity Certificate (p. 509)

Data Science

- Bachelor of Science
 - Biology Emphasis (p. 511)
 - Computer Science Emphasis (p. 512)
 - Economics Emphasis (p. 513)
 - Mathematics Emphasis (p. 513)
 - Social Science Emphasis (p. 514)
 - Supply Chain Analytics Emphasis (p. 515)

Economics

- Bachelor of Arts (p. 524)
- Bachelor of Science (p. 525)
- Master of Arts (p. 527)
 - Business Economics Emphasis (p. 528)
- Economics Minor (p. 529)
- Applied Econometrics and Data Analysis Certificate (p. 401)

English

- Bachelor of Arts (p. 568)
- English Minor (p. 570)
- Creative Writing Certificate (p. 495)
- Professional Writing Certificate (p. 701)

Gender Studies

- Graduate Certificate (p. 576)

Gerontology

- Gerontology Minor (p. 579)

Gerontological Studies

- Undergraduate Certificate (p. 578)

History

- Bachelor of Arts (p. 583)
- Master of Arts (p. 587)
 - Museums Heritage and Public History Emphasis (p. 589)
- African American and African Diaspora Studies Undergraduate Certificate (p. 395)
- LatinX Studies Minor (p. 604)

Interdisciplinary Programs

- Bachelor of Interdisciplinary Studies (p. 598)
- Entrepreneurship Certificate (p. 572)
- Child Advocacy Studies Minor (p. 472)
- Child Advocacy Studies Certificate (p. 472)
- Labor Studies Certificate (p. 604)

International Relations

- Bachelor of Arts (p. 600)

Mathematics

- Bachelor of Arts (p. 614)
- Bachelor of Science (p. 617)
 - Data Science Emphasis (p. 619)
 - Fiscal Mathematics Emphasis (p. 620)
- Mathematics Minor (p. 623)
- Statistics Minor (p. 753)

Modern Languages

- Bachelor of Arts
 - French Emphasis (p. 630)
 - Japanese Emphasis (p. 633)
 - Spanish Emphasis (p. 635)
- French Minor (p.)
- Japanese Minor (p. 603)
- Spanish Minor (p. 748)

Music

- Bachelor of Arts (p. 639)
- Bachelor of Music
 - Elective Studies in Business Emphasis (p. 641)
 - Jazz Studies Emphasis (p. 641)
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Cybersecurity

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Entrepreneurship

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Finance

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Management

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- Management Minor (p. 608)

Marketing

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- Marketing Minor (p. 609)
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Supply Chain and Analytics

- Supply Chain Management Minor (p. 760)
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Educational Studies

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Secondary Education

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Special Education

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Sport Management

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Graduate Study

The Graduate Faculty sets Graduate School policies in the Bulletin. Students should be aware that their programs might have rules and policies that are above these minimum university-wide requirements.

Program Definitions

Major: A primary field of specialized study also referred to as a degree program or academic plan.

Minor: A secondary field of specialized study that does not lead to a degree. A minor will be noted on the transcript but not on the diploma.

Emphasis Area: A sub-area of specialized study within a major that has been formally approved. Emphasis areas are printed on students' transcripts.

Track: An option or other portion of a major that may be required or optional. A separate designation is not made on the transcript or diploma for an option or track.

Certificate: A program of study that can be part of a degree program, may be completed in addition to a degree program, or may be stand-alone. MDHEWD officially approved certificates are listed on transcripts.

Course Schedules

The Schedule of Courses contains the specific courses offered each semester with their meeting times and locations. This schedule is available online.

Course schedules are generally published in mid-February for the fall semester, mid-September for the spring semester, and early December for the summer semester.

The university reserves the right to cancel without notice any course listed in the Bulletin or the Schedule of Courses for any semester or to withdraw any course that does not have adequate enrollment.

Registration

Newly admitted/re-admitted students are eligible to register after the close of the pre-registration period. Enrollment dates, Semester Calendars, and courses offerings can be found online at the Registration website.

Registering for Classes: Currently Enrolled Students

Currently enrolled students are given the opportunity to preregister, by appointment, before new or returning students. Pre-registration appointment times are sent to students' university email and can also be found by logging into MyView.

Registering for Classes: Former Students

Former UMSL students who have not been enrolled for a year must submit a reenrollment application.

Registration Cancellation

Students who have enrolled but do not wish to attend the university may cancel their registration any time before the first day of the semester. Students must complete a withdrawal survey online. Cancellations may be processed at the Office of the Registrar.

Students may withdraw from school beginning the first day of classes. The refund schedule for withdrawals after class work begins can be found on the Cashier's Office website. Students who are withdrawing must complete a withdrawal survey. Withdrawals may be processed at the Office of the Registrar.

Prerequisites for a Course

Students are expected to review all courses when registering for them to assure that they meet all prerequisites. When the prerequisites include courses, a minimum grade of B- is required to meet the prerequisite. Only the department offering the course with the prerequisite can make an exception to this requirement. A course with an "academic standing" prerequisite--for example, "senior standing"-- requires that students have the class standing stated, in the example, only seniors can take that class.

Section Changing

Section changing is normally completed during the first week of a regular semester, the first four days of an eight-week session and the first three days of a four-week session. Approvals may not be necessary during this time. However, after the first week of a regular semester, the first four days of an eight-week session, and the first three days of a four-week session, a section change form must be obtained from the department or dean's office. The signature of both instructors is required. The form is to be submitted to the Registration Office, 269 Millennium Student Center.

Attendance

Students are expected to attend class regularly, and, in accordance with the UMSL Bylaws, faculty may establish penalties for excessive absences. Students absent for more than three successive classes may be reported to the dean. Students should tell their dean's office of an extended absence. An absence known in advance should be reported to the instructors of courses that will be missed. Makeup of examinations or work missed is allowed at the instructor's discretion. Students excused from class for valid reasons by their deans shall be permitted, if possible, to make up work missed; the dean must have notified the instructor in writing.

Auditor

Students may enroll as auditors in any course with the prior consent of the instructor and dean of the college in which the auditors desire to be registered. They may be dropped from the course when, in the judgment of the instructor and dean, their record justifies such action. Auditors are charged full fees and receive no academic credit.

Admissions

The University of Missouri-St. Louis admits qualified individuals to study for graduate degrees and certificates. Students with a bachelor's degree or the equivalent from an accredited college or university may apply for admission to the Graduate School. Applicants may be denied admission if:

1. they do not meet admission standards,
2. there are no available openings, or
3. applications are incomplete at the time of the decision.

Application procedures are described on the Graduate School's Web site.

To receive graduate credit at the University of Missouri-St. Louis, students must have been admitted to the Graduate School as a Degree-seeking,

Graduate Certificate, or Non-Degree seeking (or Lifelong Learner) student before registering for classes.

Degree-Seeking or Graduate Certificate Students

Applicants for a degree or graduate certificate program at the University of Missouri-St. Louis submit an application, official transcript documenting the baccalaureate degree and all other prior coursework, scores from examinations required by the program, and other evidence of academic and professional preparation required by the program. Such evidence may include standardized test results, letters of recommendation, transcripts of all academic work attempted, and writing samples.

When there are openings for new students, applicants are normally admitted given official evidence of:

1. a baccalaureate or advanced degree from an accredited institution of higher education,
2. an undergraduate grade point average (GPA) and major field GPA of at least 2.75,
3. an acceptable score on each requisite examination, and
4. satisfactory additional materials required by the particular program.

The dean of the Graduate School makes the final decision on applications, based on recommendations from the program.

Non-Degree-Seeking Student

Applicants may seek status as Non-Degree-seeking graduate students if they are visiting students, they do not intend to pursue a degree, or they want to participate in graduate workshops or institutes. Applicants must provide an official transcript showing completion of a baccalaureate or higher degree, with a GPA of at least 2.5.

The dean of the Graduate School admits Non-Degree-seeking students only upon recommendation of the program.

A Non-Degree student must maintain a GPA of at least 3.00.

Course work completed by Non-Degree students is not regarded as work toward a degree program. Therefore, Non-Degree students are not eligible for federal financial aid. Should a Non-Degree student apply for Degree-Seeking status and be admitted to the program the maximum hours of Non-Degree status work that can be applied to a degree program is nine semester hours. A Non-Degree student wishing to take more than nine hours may be allowed to do so contingent upon departmental recommendation. No credits taken as Non-Degree status may count as part of the residence requirement for a degree.

Non-Degree Education Certification students are exempt from the nine-hour limitation on non-degree courses because they take courses for State Department of Education certification. However, all other conditions regarding admission and registration that apply to Non-Degree students apply to Education Certification students.

Students wishing to change from Non-Degree to Degree-seeking must submit a new graduate application for review and approval by the program and the dean of the Graduate School.

Graduate Study for Lifelong Learning

Lifelong learners often want to take graduate courses without enrolling in a specific program. They may want to prepare for admission to a graduate

degree program at UMSL or elsewhere, explore a new discipline, take courses, workshops, or institutes for career advancement, or simply undertake personal enrichment experiences. Status as a Non-Degree Graduate Lifelong Learner, or graduate post-baccalaureate, allows students such flexibility. A Non-Degree Graduate Lifelong Learner has access not only to some graduate and undergraduate classes but also UMSL's libraries, laboratories, recreational facilities, etc.

Since graduate programs may limit the availability of their courses to students without full admission to their program, prospective Non-Degree Graduate Lifelong Learner should check the Bulletin for course prerequisites. The graduate program director in which they wish to take courses can give prospective students more information. Programs and directors are listed online.

The Non-Degree Graduate Lifelong Learner program is administered by the Graduate School, which normally seeks approval from the unit before admitting students.

If a Non-Degree Graduate Lifelong Learner is later accepted to a graduate program, up to 12 hours of credit taken as a non-degree graduate student may be applied to a graduate degree or certificate program upon approval of faculty in that program. Again, communication with the program director is critical.

Applicants who submit a transcript documenting a baccalaureate degree or its equivalent from a U.S. university or a university in which instruction is in the English language may be admitted to UMSL as Non-Degree Graduate Lifelong Learner.

International students residing in the United States who do not satisfy the above requirement and are seeking admission as a Non-Degree Graduate Lifelong Learner must provide the transcript and the same evidence of proficiency in English as required for international graduate admissions.

Non-Degree Graduate Lifelong Learners pay graduate educational tuition and fees regardless of whether they take graduate or undergraduate courses.

Non-degree graduate students are not eligible to receive veteran's benefits or to hold campus-sponsored assistantships. Federal financial aid may be available to some non-degree students for preparatory coursework such as teacher certification; information is available in the financial aid office.

Like all graduate students, Non-Degree Graduate Lifelong Learner must maintain a 3.0 GPA. If the cumulative GPA is less than 3.0, the student will be given one automatic probationary semester. If, after one semester of probation, the student's cumulative GPA does not reach 3.0, the student may be granted a second probationary semester only upon approval of the Dean of the Graduate School. (Summer sessions are not counted as probationary semesters.) If the student fails to achieve a cumulative GPA of 3.0 following the second probationary semester, the student will be made ineligible to enroll as a non-degree or degree-seeking graduate student.

If at any time a student's term or cumulative GPA falls below 2.0, the Non-Degree Graduate Lifelong Learner will be ineligible to enroll as a non-degree or degree-seeking graduate student.

Inter-University Graduate Exchange Students

Inter-University Graduate Exchange students are Washington University and St. Louis University students who enroll on their home campus for UMSL courses not offered on their own campus.

Degree-seeking graduate students at UMSL may also participate in these programs if their advisors and the Graduate School approve their requests. Certain restrictions apply.

Unclassified Students

Students who are not qualified for admission to the Graduate School may be considered for undergraduate admission to UMSL as Unclassified Students by applying as an undergraduate non-degree student. Unclassified Students are considered Post-baccalaureate undergraduates, are not admitted to the Graduate School, may not take graduate-level courses, and do not receive graduate credit. Credits earned by an Unclassified Student may not later be considered as graduate credits should the student subsequently be admitted to the Graduate School.

Enrollment in Off-Campus and Continuing Education Courses

Students who have been admitted to the Graduate School may enroll in off-campus graduate courses without further application.

Students with a baccalaureate degree who have not been admitted to the Graduate School must be approved for admission as a Non-Degree graduate student to take Continuing Education courses for graduate credit.

Admission of International Students

International students must meet all requirements for admission to the Graduate School. In addition, international students whose native language is not English and who have spent less than two of the last three years in an English-speaking country are required to submit scores from an internationally accepted standardized examination before a decision is made on admission. International Admissions information is available from the Office of International Student and Scholar Services. Phone 314-516-5229; Fax 314-516-5636; e-mail: iss@umsl.edu.

Teaching assistantships will be awarded only to students with demonstrated oral English proficiency. Normally international teaching assistants may not teach during their first semester on campus.

When it is not possible for a student to take the required examination for reasons beyond personal convenience, the program to which the student has applied may develop alternate ways for that particular student to demonstrate English language competence prior to admission. The admitting department and Graduate School must approve such alternative metrics.

Some programs may require applicants from other countries shall to provide a course by course report from a professional evaluation organizations in the United States. All students shall provide a statement of their financial situation and of the anticipated form of support for the period of graduate study.

All students in F-1 and J-1 status are required to purchase an insurance policy with coverage for illness and accidents, billed to the student's UMSL account. For details contact:

International Admissions
362 Social Sciences Building
One University Boulevard
St. Louis, MO 63121-4400
Phone: 1+314-516-5229
Email: intadmission@umsl.edu
<http://global.umsl.edu/admissions>

Students holding F, J and M visas are not eligible for Missouri in-state tuition. As of July 30, 2017 new rules as the changes may allow students on other visa types to be considered a Missouri resident for fee purposes. Please visit the Office of the Registrar website for more information.

Student Recruitment

The purpose of this section is to clearly articulate the University of Missouri-St. Louis' (UMSL) proactive adherence to the requirements of 34 C.F.R. 688 and the Department of Defense Voluntary Education Partnership Memorandum of Understanding (The DoD MOU and DoDI 1322.25, Voluntary Education Programs, paragraph 1.c.(1)(b).

UMSL forbids the use unfair, deceptive, and abusive recruiting practices.

Further, in accordance with relevant laws, MOUs, and policies, UMSL bans inducements, including any gratuity, favor, discount, entertainment, hospitality, loan, transportation, lodging, meals, or other item having a monetary value of more than an insignificant amount to any individual or entity, or its agents including third-party lead generators or marketing firms other than salaries paid to employees or fees paid to contractors in conformity with all applicable laws for the purpose of securing enrollments of Service Members or obtaining access to TA funds. [DoD MOU paragraph 3.j.(1)]

Bans the payment of any commission, bonus, or other incentive payment based directly or indirectly on securing enrollments or federal financial aid (including TA funds) for Service Members to any persons or entities engaged in any student recruiting, admission activities, or making decisions regarding the award of student financial assistance. [DoD MOU paragraph 3.j.(2)]

Refrains from high-pressure recruitment tactics such as making multiple unsolicited contacts (3 or more), including contacts by phone, email, or in-person, and engaging in same-day recruitment and registration for the purpose of securing any enrollments, including Service Member enrollments. [DoD MOU paragraph 3.j.(3)]

Enrollment

Students who have been admitted to the Graduate School may enroll in classes in any term within one calendar year after admission. New students are strongly urged to seek advising before registering. If an advisor is not assigned, then the graduate director in the program should be the student's first contact in the department. A current list of graduate program directors is found on the Programs page of the Graduate School website.

To remain in good standing, most students must enroll for at least one term each calendar year. Students not meeting this enrollment requirement will become inactive and be required to reapply. Information on re-enrollment requirements is on the Graduate School Website. If students reapply and are readmitted, then they will be subject to all regulations in effect at the time of readmission.

Doctoral study is an exception to the normal enrollment requirement. After they achieve candidacy, doctoral students must enroll each fall and spring semester until the degree is completed.

International students on student visas must enroll fulltime for each fall and spring semester.

Final Semester Graduate Exam Fee

Graduate students pursuing a research-based thesis or dissertation must enroll in the semester in which they graduate, typically in research credit.

If they have completed required course work, thesis, or dissertation credits, then they must enroll in the Graduate Exam. Non-thesis Master's students are not required to be enrolled in coursework or in the Graduate Exam in the semester in which they graduate if they have previously completed all required course work.

Fulltime Study

The minimal fulltime course load is nine credit hours for a regular semester and/or the eight-week summer session.

Graduate Equivalent Hours

In calculating credit hours for full-time enrollment, students may seek approval for the following semester hour equivalents:

1. Three equivalency hours for holding a 0.5 FTE Graduate Teaching Assistantship or Graduate Research Assistantship; up to two equivalency hours for appointments between 0.25 and 0.49 FTE.
2. Three equivalency hours in the semester the student is preparing for comprehensive examinations. This semester hour equivalency is allowed for a maximum of two semesters.
3. Master's Students- Up to eight equivalency hours for thesis master's students in their final term if (a) all required coursework is either completed or in progress and (b) they are enrolled in at least one hour of thesis research. Should the student fail to graduate, they may receive equivalency credits for one additional term with the approval of their thesis advisor, the Graduate Program Director, and the Dean. No master's student may receive thesis equivalency credits for more than two terms, including summer.
4. Ph.D Students - Eight equivalency hours after achieving candidacy. This semester-hour equivalency is allowed until the eight-year time limit has expired.
5. Professional Doctorate - DBA/DNP/EdD students are eligible until the 8-year time limit for completing the doctoral degree expires. A student will be awarded up to 8 equivalency hours.
6. Participation in approved required out-of-class experiences in specific programs. Please see Procedures for a current list.

Overloads

During the regular semester, students may not enroll in more than 12 hours. Normally no more than three credit hours may be taken in any four-week period.

Heavier than normal loads may be permitted by the graduate dean, upon recommendation by the program director, for a) students whose cumulative UMSL GPA is substantially above the program average; and b) students in good academic standing for whom an overload of one course will permit them to graduate during the term in which the overload is taken. Students are normally not allowed to take an overload in their first semester in Graduate School.

Degree Program Plans

It is expected that graduate students will consult regularly with their advisors to plan a course of study that ensures timely completion of the requirements.

At least one-half of the credits for master's, educational specialist, and doctoral degree plans must be from 5000-level courses and above.

Within the major department, students normally may not take a 3000-level course for graduate credit. However, outside the department, a 3000-level course may be taken for graduate credit with the approval of students' advisors. Advisors must seek approval from the instructor, who may assign additional work commensurate with graduate status.

Courses numbered from 0 to 2999 may not be taken for graduate credit. No course applied to an undergraduate degree may be allowed in that student's graduate degree.

Credit for Courses Taken Prior to Enrolling in a Graduate Program at UMSL

Transfer credit shall be granted only for approved graduate courses for which a grade of at least B-, or equivalent, was achieved from an accredited institution.

Degree credit may be allowed for up to three credit hours for institutes, workshops, clinics, and Continuing Education courses only if offered by an appropriately accredited institution of higher education. Only such courses that award a letter grade may be applied to a graduate degree.

Students may transfer up to 18 hours of work on a Graduate Certificate Program Plan to a Master's or Doctoral Program Plan, if the program offering the degree approves the transfer.

Credit for Courses Taken at Other Universities After Enrolling in a Graduate Program at UMSL

Graduate students admitted to UMSL must petition in advance to take courses at another institution and apply the credit toward a graduate degree at UMSL.

With prior approval, regularly admitted graduate students are permitted to take a course not offered by UMSL at Washington University, St. Louis University, or Southern Illinois University-Edwardsville.

Time Limitation

The maximum time allowed for completion of a master's or educational specialist degree is six years after the first course enrollment. Graduate work completed outside these time periods may not be included in the degree program except under extraordinary circumstances and then only after recommendation from the graduate program for approval by the dean of the Graduate School. An exception to the time limitation may be approved in advance with an authorized leave of absence.

Leave of Absence

Graduate students who are forced to interrupt their studies for a period of one or more years should request a leave of absence from the university. In consultation with their advisors, students shall define the program modifications that the leave of absence requires. Requests must indicate the reason for leaving and the expected date of return to the university. Approval of the dean of the Graduate School is required.

The leave of absence is designed to suspend the requirement for continuous enrollment. It does not affect the maximum time limitation set for a degree program unless a specific exception is approved.

Undergraduate Enrollment in 5000-Level Courses

Under special circumstances undergraduate students in good standing at UMSL may enroll in 5000-level courses for undergraduate credit. Approvals from the advisor, department chairperson, academic dean, and dean of the Graduate School are required. In rare cases, students subsequently admitted to the Graduate School may petition for graduate credit for 5000-level courses that they took as undergraduates, as long as those courses were not applied to their undergraduate degrees.

Dual Enrollment for Senior Undergraduates

With the approval of the divisional and graduate deans, seniors who have a 3.0 cumulative g.p.a. and are within 15 hours of completing graduation requirements for the first bachelor's degree may dually enroll as an undergraduate and a non-degree graduate student and earn up to six semester hours of graduate credit. For students in education, the 15 hours to complete graduation requirements do not include the hours required to complete undergraduate student teaching.

Courses taken while dually enrolled may not be counted for both undergraduate and graduate degree requirements. Consult with divisional deans for additional requirements. 2+3 students are not eligible for dual enrollment.

Dual enrollment forms must be completed and approved by the Graduate School prior to registering for the graduate level courses. Dually enrolled students are required to register for the graduate level courses using the graduate career in MyView.

Class Attendance

Only students who have previously paid fees may attend a class. Instructors are not authorized to allow students to attend classes if fees have not been paid. Students may not register and pay fees after the prescribed dates.

Preregistration

Enrolled students may preregister for the next term during regular preregistration periods. Registration is not complete until all university fees are paid.

Petitioning Into or Out of a Course

Students must receive the approval of their adviser and the course instructor to enroll in or withdraw from a course after registration.

Entering a Course in Progress

Students wishing to enter a course in progress must have the approval of the instructor and their adviser. Only under exceptional circumstances may students enter courses after the first week of the semester.

Dropping a Course

Courses may be dropped in MyView, without faculty approval and without receiving a grade, through the fourth week of classes of a sixteen-week semester, the second week of classes of an eight-week session and the first week of classes of a four-week session. Students with specific academic holds may be required to obtain approval from their advisor

to change their schedule. Semester and session calendars posted on the registrar's website include specific deadline dates for dropping courses. Students who officially drop any of their classes may have fees reassessed and/or refunded based on the current fee reassessment schedule posted on the cashier's website. Courses dropped during this period will not appear on transcripts.

From the 5th week to the end of the 8th week of a sixteen-week semester, students may continue to drop courses in MyView without instructor approval. A grade of "EX" (excused) will be issued on the transcript. Refer to the calendar posted on the registrar's website for summer or winter session withdrawal deadlines. From the 9th week to the end of the 12th week dropping courses will require instructor approval. Students receiving approval to drop during this period will be issued either an EX, or "EX-F" (excused but failing) if the student was failing at the time of dropping. The EX and EX-F grades will be posted to transcripts, but neither one will be used in calculating the GPA. Students who wish to withdraw after the end of the 12th week must provide documentation of exigent circumstance and receive both the instructor's permission and approval of the dean.

Dropping or withdrawing from a course may adversely impact scholarships, financial aid, and progress toward graduation. Students are strongly urged to discuss these possibilities with the financial aid office and their academic advisors before dropping or withdrawing.

Students registered in a course in which they fail to meet a minimal level of participation as deemed by the instructor will be issued a grade of "FN" (Failure, Non-participation). The FN grade indicates that the student is not regularly attending class or is making little or no attempts on assignments or activities and may be violating the terms of financial assistance. This grade is equivalent to an F for GPA calculations.

Transcripts

The registrar will furnish transcripts of credits to a student upon written request. Transcripts are furnished to students' parents or guardians or other parties or institutions only if students have filed written consent with the registrar. There is a charge per transcript. UMSL students or alumni transferring to another University of Missouri campus may ask the UMSL Director of Admissions to furnish a transcript to the appropriate Office of Graduate Admissions.

Requests for transcripts by organizations either financially supporting a student or with fee compensation programs are not honored unless the student has filed a consent form with the registrar, authorizing the release of such records.

Transcripts are not issued to or for students who have financial obligations to the university until those obligations are paid in full.

Probation

Failure to make adequate progress jeopardizes students' potential to complete the degree as well as their financial aid. To provide students notice of inadequate progress at the end of each semester, graduate students with a cumulative GPA below 3.0 will be placed on probation. A program may also place a student on probation if faculty regard the student's progress as unsatisfactory. The Graduate School will inform students of their probation, with copies sent to the graduate director of the program, the Graduate Admissions Office, and the Financial Aid Office.

If at the end of the probationary semester the cumulative GPA is at least 3.0 and the student is making adequate progress toward the degree, then the probationary status is removed.

Dismissal

Upon recommendation of the program director, the Graduate School may dismiss any graduate student who does not make adequate progress. A student who is on probation for more than two semesters during his/her program of study will be dismissed, unless the dean of the Graduate School approves an exception request for continuation from the program director. The Graduate School is responsible for notifying students, with copies sent to the graduate director of the program, the Graduate Admissions office, and the Financial Aid Office.

Course Policies

Course Numbering

Each course bears a distinguishing number that identifies it within the department or academic unit and indicates, broadly, the expected level of students taking the course. To understand the course level, refer to the following guidelines:

Course Numbers

Explanation

1-999

Courses that do not count toward the minimum requirements for any degree.

Lower Division:

1000-1999

Courses open to undergraduate students, primarily focused toward freshmen; courses count toward the minimum for given degrees.

2000-2999

Courses open to undergraduate students, primarily focused toward sophomores; courses count toward the minimum for given degrees

Upper Division:

3000-3999

Courses open to undergraduate students, primarily focused toward junior; courses count toward the minimum for given degrees.

4000-4999

Courses open to undergraduate and graduate students, primarily focused toward seniors; courses count toward the minimum for given undergraduate degrees; depending on the specific program, courses may count for a given graduate degree.

Graduate:

5000-5999

Graduate courses; also open to post-baccalaureate educator certification candidates and undergraduate seniors with permission from the Dean of the Graduate School. Courses count toward the minimum for given graduate degrees.

6000-6999

Graduate courses open to master's degree and doctoral students. Courses count toward the minimum for given graduate degrees.

7000-7999

Graduate courses open to doctoral students and master's degree students with special permission. Courses count toward the minimum for specific graduate degrees.

Optometry:

8000-8999

Courses open to optometry degree seeking students.

Credit Hours

The university credit unit is the semester hour, which represents a subject pursued one period weekly for one semester of approximately 16 weeks or for a total of approximately 16 periods for one term. Generally, a course valued at three semester hours meets for three periods weekly for one semester, a twocredit course two periods a week for a semester, and so on. Normally, the lecture or recitation period is 50 minutes long and the laboratory period one hour and 50 minutes.

The number of credit hours is listed as units in the online Schedule of Courses. If the credit is variable (to be determined in consultation with the instructor) it is shown by minimum and maximum units, such as Research 1 – 3 units. In the Bulletin, credit hours are included in parentheses after each course title e.g., Research (2-8).

Examinations

Examinations may be given only at regular class meeting times or as designated by the Senate Committee on Curriculum and Instruction.

Final Examinations.

The period designated for final examinations is an important component of the academic term. It provides faculty with a final opportunity to evaluate student learning and attainment of course objectives. Faculty members are encouraged to meet with students during the final examination period.

A faculty member who gives an in-class final examination may give this examination only on the day and at the time designated in the official final examination schedule. A majority vote of the students to the contrary does not change this policy.

A student may submit a written request for a change in the scheduled time of the final examination for a limited number of documented hardship reasons. These reasons include, but are not limited to, being scheduled to take more than two examinations on the same day, illness, military obligations, and religious practices. Except for emergencies, this request should be presented directly to the instructor at least two weeks before classes conclude. If the request is denied, the student may request additional consideration from the chairperson/area coordinator/program director and, if denied, to the dean of the college sponsoring the course.

Repeating Courses.

Students may not repeat for grade point average or credit hour purposes courses in which grades of A, A--, B+, B, B--, C+, or C have been earned. Subsequent grades in such a course that is repeated will not be included in the GPA calculations. The course hours will be counted only once in calculating hours toward a degree.

Academic Policies

Grades

Faculty teaching graduate courses have complete discretion in assigning grades.

Point assignments for grades are as follows;

- A = 4.0
- A- = 3.7
- B+ = 3.3
- B = 3.0
- B- = 2.7
- C+ = 2.3
- C = 2.0
- C- = 1.7
- F = 0
- FN = 0
- EX = Excused
- F-EX = Excused but failing
- DL = Delayed
- S/U = A or B equivalent

The satisfactory/unsatisfactory (S/U) option is not normally available in courses for graduate credit. S/U grades may be given only for internship, practica, project, and research courses as requested by a school or college, with prior approval from the Graduate Council. Courses on the S/U grading system will carry no points toward calculation of the grade point average. A Satisfactory grade is defined as a grade of at least B-.

Students who stop attending classes without officially dropping courses receive grades of F or FN, depending on the amount of work completed.

Students may enter courses as auditors but may not change from audit to credit or credit to audit after the first week of class. Auditors are charged full fees and receive no academic credit.

Delayed Grade

A student who is unable to complete course work at the end of any semester and who has, in the instructor's judgment, sufficient reasons for not completing the work, (such as serious illness or circumstances beyond the student's control), may with the approval of the instructor, be assigned a Delayed Grade, (DL). A Delayed Grade is appropriate only when enough work in the course has been completed for students to finish the remaining work without re-enrolling in the course, attending additional classes, and no additional instruction is required from the instructor. It is encouraged that the student completes the work as soon as possible, but if the Delayed Grade is not changed by the instructor, the Delayed Grade automatically becomes an F according to the timetable below. (Note: The dean may, in unusual circumstances, extend this time limitation).

Failure/Non participation

When students do not complete any graded assignments but do not officially withdraw from the course or the university, instructors may assign an FN. The F for Non-Participation cannot be changed to a grade and will be treated in GPA calculations as an F.

Graduate Grade Appeals

In case of disputes regarding grades, graduate students shall follow the university Grade Appeal Process by first contacting the Department Chair. The policy is available on the Academic Affairs' Website.

Grade Point Average (GPA)

UMSL calculates three types of GPA. At the end of each semester, the Term GPA is calculated on the courses attempted that semester. The Cumulative GPA on the transcript comprises all courses taken at UMSL for graduate credit, including courses that may not be a part of the degree program or certificate. The degree program or certificate GPA includes only the grades of those used to meet degree/certificate requirements for that program. The cumulative and degree or certificate program GPA must be at least 3.0 for a student to receive a graduate degree or certificate.

Any course work transferred from other universities, including other UM campuses, will not be included in any GPA calculation.

Course Replacement

A student who fails to earn a cumulative GPA of 3.0 may request a recalculation of the cumulative GPA by substituting additional appropriate course work for courses in which a 3.0 was not earned. A maximum of two courses may be replaced during the entire graduate career at the University of Missouri-St. Louis, and all courses and grades remain on the student's record. The dean may approve the substitution if recommended by the graduate director of the student's program.

Once a student has completed a master's degree or certificate of advanced study, a final average for that degree or certificate is computed and cannot be modified. For that reason, courses for any graduate degree or certificate awarded may not be repeated, and no final GPA is affected by any subsequent coursework completed at UMSL.

Repeating courses may affect financial aid; applicants for Course Replacement are advised to contact the Financial Aid Office prior to applying for the replacement.

Course Replacement is not available for admission considerations or during a probationary or restricted admission period.

Master's Degree Requirements

Admission

Faculty in each master's degree program determine any eligibility standards beyond the minimum for admission to the Graduate School.

Enrollment

All master's degree students shall be enrolled for credit for access to university resources, including advisement, data gathering, or examinations.

Full-time status for all graduate students is defined as at least nine credit hours of course work. Individual programs may require higher enrollments.

Credit Requirements

A minimum of 30 semester hours of graduate credit is required for all master's degree programs. Specific programs may require a greater number of hours.

Residence Requirement

The final two-thirds of the courses in a master's degree program must be completed at UMSL.

Time Limitation

All courses included in a master's degree program, whether taken at UMSL or at another institution, shall have been completed within six years after enrollment in the first course.

Credit from a Certificate Program

Students who have completed course credits in certificate programs may transfer those credits into a master's degree program with the program's consent, as long as the credits fall within the time limitation set for master's degrees. If the master's degree is in a different program from that awarding the certificate, then no more than one-third of the credits from the certificate program may apply to the master's degree. Multi-disciplinary programs may seek programmatic exceptions to this limit when the program undergoes the approval process.

2+3 Programs

Students who are granted formal admission to a recognized 2+3 program at UMSL are admitted to the Graduate School prior to the completion of their UMSL undergraduate program. These students must complete all the normal requirements for their master's degree. All the coursework used to satisfy the requirements for the master's degree must be taken while in graduate status.

Provisional 2+3 students who are still undergraduates can petition to take up to 6 hours of 4000/5000/6000 level courses for graduate credit, and these credits may be used to satisfy master's degree requirements. The petition must be filed at the beginning of the term. Students may not petition retroactively to use courses already completed as an undergraduate to meet the requirements of the master's degree.

The number of graduate credit hours that may be applied to the undergraduate degree of a 2+3 student shall be determined by the undergraduate department.

The bachelor's and master's degrees must be awarded simultaneously at the end of the 2+3 program. Graduate students who formally withdraw from the 2+3 program may apply for their bachelor's degree. However, the advantage of dual credit is forfeited. No course applied to the bachelor's degree may be included in any future graduate degree program.

Accelerated Master's Programs

Accelerated master's programs allow students to make a smooth transition from a participating UMSL undergraduate program into a master's program and to complete both degrees with fewer total credit hours than would be required if they completed the two degrees separately. These programs represent a cooperative agreement between the Graduate School and the student's undergraduate college.

Provisional Admission

Admission to an accelerated master's program occurs in two stages. Students with a cumulative GPA of 3.0 or higher may apply for provisional admission after earning 60 credit hours (i.e., in the first semester of the junior year) by applying to the accelerated master's program. The application process requires the approval of both the undergraduate college and the Graduate School. Once accepted, the provisional accelerated master's students continue to take the undergraduate courses

required for the bachelor's degree, but they need additional advising to plan and schedule the courses that will be counted towards both degrees. Students must maintain a 3.0 GPA while under provisional status. There is no required minimum number of semesters a student must be in provisional status.

Formal Admission

The transition from provisional to formal status is not automatic. Every semester, each provisional accelerated master's student should be evaluated by the department to determine whether the student is ready to make the transition to a graduate student. In addition to requiring a minimum GPA of 3.0, the program should determine whether the student has taken the foundational courses necessary to be successful at the graduate level. At the appropriate time, a provisional accelerated master's student will be recommended by their graduate program director for formal admission to the Graduate School. The application for formal admission as a graduate student must be approved by both the undergraduate college and the Graduate School.

Upon formal admission, the student will be classified as a graduate student, will pay graduate tuition for all enrolled courses, and must continue taking courses with graduate status until completion of the master's degree. A student admitted and classified as a graduate student cannot revert to undergraduate status.

Graduate students who become inactive in the accelerated master's program by failing to enroll for classes for one calendar year may apply to be readmitted to the graduate degree program. However, the advantage of dual credit is forfeited. No course applied to the bachelor's degree may be included in any future graduate degree program.

Graduate School Requirements

Once admitted to the Graduate School, the student must meet all of the requirements for the master's degree. No graduate degree requirements are waived for accelerated master's students. Only courses taken with "graduate status" may be used to meet the requirements for the master's degree.

Graduate courses completed by undergraduate students who have been provisionally admitted to accelerated master's program will be charged at the undergraduate tuition rate; however, these courses will have "graduate status" and will count toward the master's degree to which the student was admitted in the accelerated master's program. Note that these "graduate status" courses taken as an undergraduate cannot count towards any other future graduate degree program outside of the specific accelerated master's program to which the student has been admitted. These courses must be approved before the semester starts.

The maximum number of graduate credits taken as a provisionally admitted undergraduate student that will count towards a master's degree is 12. Programs may allow fewer credits. The master's degree will be awarded based on the normal degree requirements.

Graduate Courses Used for the Bachelor's Degree

The undergraduate academic unit determines which of the courses taken with "graduate status" taken for graduate credit will count towards the 120 credit hours required for the bachelor's degree. Generally, appropriate 5000/6000 level courses in the discipline are used to replace some 4000-level courses in the regular undergraduate curriculum.

Awarding of the Degrees

The bachelor's degree is awarded when the student has met all the requirements for the undergraduate degree. The undergraduate advisor and college approve the degree and coordinate with Registration to confer the bachelor's degree.

The master's degree is awarded when the student has met all the requirements for the master's degree. The graduate advisor, graduate program director, and Graduate School approve the degree and coordinate with Registration to confer the master's degree.

Dual Master's Degrees

With approval of the program and the Graduate School, students who have completed one master's degree may transfer appropriate credits to a second master's degree program. The number of transferable credits may not exceed one-third of the credit hours required by the second program. Subsequent transfers of the same courses to a third degree are not permitted.

With approval of the programs involved and the Graduate School, students may simultaneously pursue two master's degrees under the following conditions:

1. No more than one-third of the credit hours required by either program may be applied to both programs;
2. Students must obtain approval of both programs before completing 12 hours in either program.

Multi-disciplinary programs may seek programmatic exceptions to the one-third limit when the program undergoes the approval process by addressing specific allowable transfers between those two degree programs.

Master's Degree for Doctoral Students

Doctoral students may receive a master's degree in their program for work they have completed toward to a doctoral degree. The program establishes the requirements for such a master's degree. However, the requirements should, in principle, be similar to those for master's degrees offered by the program.

Doctoral and educational specialist students may also receive a master's degree for work they have completed toward to a doctoral or Ed.S. degree in another program provided:

1. they apply no more than two-thirds of the master's degree courses to their doctoral degree program;
2. they have been admitted to the master's degree program; and
3. they have obtained the approval of the advisors from both programs and from the Graduate School.

Credit from the master's degree must constitute less than half the total credits required for the doctorate.

Multi-disciplinary programs may seek programmatic exceptions to these limits when the program undergoes the approval process.

The Master's Degree Program

Master's degree students must meet with an advisor within the first semester of the program to design a program plan that meets program requirements and the students' interests.

To receive the master's degree, students who have met all degree requirements shall apply for graduation by filing an M-4 graduation application, which will include the student's degree program, no later than the graduation deadline in the semester in which they plan to graduate.

Comprehensive Examination, Scholarly Paper, or Exit Project

Each unit requiring a comprehensive examination for the master's degree informs the Graduate School of (a) the number of times the unit will allow its students to take a comprehensive examination, and (b) the period of time that the unit will allow between the first and final attempt to pass the examination.

Units recommend graduate faculty members to serve on committees for capstone projects. The graduate dean shall review and may appoint the committee.

Graduate program directors recommend at least two graduate faculty members to serve on committees for capstone projects and examinations. The graduate dean shall review and appoint the committee.

Programs that offer alternatives or requirements for capstone projects or examinations are expected to post procedures that have been approved by the department. Graduate program directors shall inform the Graduate School when the department initiates or changes their procedures.

The chairperson of the capstone committee is responsible for verifying that the final project or examination is acceptable to the committee and the graduate dean by submitting current Graduate School forms for documenting those approvals. It is the responsibility of the committee chair to grade the project/examination.

Master's Thesis

The master's thesis committee shall consist of at least three members of the graduate faculty who can contribute their expertise to the thesis study. The committee chair and at least one other member shall be faculty in the department offering the degree. The graduate dean shall review and approve the committee membership and any changes in membership.

The thesis must be written on a subject approved by the candidate's thesis committee and must be the candidate's own work. The reuse of text from previous papers authored or co-authored by the student shall be evaluated by the committee prior to the thesis defense. In the thesis, the student must clearly and explicitly identify all reused text and the original source(s) of that text. If the source documents involve co-authors other than the student and the faculty advisor, the thesis must include a description of the individual contributions of each co-author of the original study. A copy of the source documents must be provided to thesis committee members and the Graduate School. Departments may choose to adopt a uniform policy on the acceptability of reused text for a specific degree program.

Regardless of the extent of any reuse of text, the thesis must maintain a uniform and consistent formatting style throughout. In matters of style and documentation, the custom of the discipline shall be followed. The student must document permission to reuse any copyrighted material.

The final defense of the thesis is normally open to the public unless the thesis chair requests that the dean of the Graduate School permit a closed meeting on the basis of an embargoed study. Deliberations among committee members may be closed at the discretion of the chair. After deliberating on the defense of the thesis, the master's thesis committee shall vote on whether the defense was successful. The defense shall be deemed unsuccessful if there are two negative votes, even if outnumbered

by positive votes. An abstention will be considered a negative vote. A student failing the defense shall have the opportunity for one additional presentation before the same committee. The master's thesis committee shall determine the timing and format of the subsequent defense. The master's thesis committee makes the final decision on the defense, whether pass or fail, and reports the results to the graduate program director, who informs the Graduate School no later than two days after the defense.

Master's degree students shall disseminate the thesis according to current Graduate School procedures. The final copy of the thesis must be typed according to current Graduate School requirements. To be accepted by the Graduate School, the copy must be legible, neat, and paginated correctly. An abstract is required. Students must submit to the dean of the Graduate School one copy of the thesis by the posted university deadline, normally six weeks before the end of the term in which graduation is sought. The chairperson of the thesis committee is responsible for verifying that the final draft of the thesis is acceptable to the thesis committee and the graduate dean by following current Graduate School procedures for documenting those approvals. The chair of the thesis committee shall determine the grade for the thesis.

Educational Specialist Degree Requirements

Admission

Each educational specialist degree program shall determine any eligibility standards beyond the minimum for admission to Graduate School.

Enrollment

All educational specialist degree students shall be enrolled for credit for access to university resources, including advisement, data gathering, or examinations.

Full-time status for all graduate students is defined as at least nine credit hours of course work. Individual units may require higher enrollments.

Credit Requirements

A minimum of 60 semester hours of graduate credit is required for all educational specialist degree programs. Individual programs may require a greater number of hours.

Residence Requirement

Normally, at least one half of the courses in an educational specialist degree program must be completed at UMSL.

Time Limitation

All courses included in an educational specialist degree program, whether taken at UMSL or at another institution, shall have been completed within six years after enrollment in the first course.

When educational specialist students have earned a master's degree at any institution, appropriate credits may be applied toward meeting the requirement for the specialist degree, subject to program approval. Such credits shall constitute less than half of the total credits required for the educational specialist degree. Credit for courses taken for a master's degree is exempt from the six-year time limitation.

Filing the Degree Program Plan

An educational specialist degree student enrolled shall file an approved program plan with the Graduate School. The S-4 must be filed by the posted deadline of the final semester in the program. Students may petition the dean of the Graduate School to change the degree program after it has been filed.

Comprehensive Examination, Scholarly Paper, or Exit Project

Each program requiring a comprehensive examination for the specialist degree informs the Graduate School of:

1. the number of times the program will allow its students to take a comprehensive examination, and
2. the period of time that the program will allow between the first and final attempt to pass the examination.

Programs recommend Graduate Faculty members to serve on committees for capstone projects. The graduate dean shall review and may appoint the committee.

Thesis

Programs recommend Graduate Faculty members to serve on committees for capstone projects. The graduate dean shall review and may appoint the committee.

Educational Specialist degree students who write a thesis must submit to the dean of the Graduate School one copy of the thesis by the posted university deadline, normally six weeks before the end of the term in which graduation is sought. The chairperson of the thesis committee is responsible for verifying that the final draft of the thesis is acceptable to the graduate dean and the thesis committee. Students shall disseminate the thesis according to current Graduate School procedure.

Doctoral Degree Requirements

Admission

Each doctoral degree program may determine eligibility standards beyond the minimum for admission to the Graduate School.

Credit Requirements

A minimum of 60 semester hours of graduate credit is required in every doctoral degree program. Programs may require a greater number of hours for their programs, and individual students may be required to take additional hours.

Enrollment

Full-time status is defined as nine credit hours per semester. Programs may require higher enrollments than this. After students achieve candidacy and complete the residence requirement, they must remain enrolled during fall and spring semesters until they complete the degree. Failure to register in any regular semester will result in termination from the Graduate School. If students so terminated decide to reapply and if they are readmitted, then they will be subject to all regulations in effect at the time of readmission, and will be required to enroll for at least one credit hour for each semester since their last enrollment.

When doctoral students are enrolled for research credit, the credit amount may vary, but the student must register for all work required, and the credit total may exceed the minimum requirements.

Classification of Doctoral Students

There are two stages in doctoral degree work:

- A pre-candidate is a student who has requirements to fulfill in addition to the dissertation, including course work, and/or comprehensive examinations.
- A candidate is a student who has met all degree requirements except the completion of the dissertation.

Time Limitation

The maximum amount of time allowed for completion of a doctoral degree is eight years after the first course enrollment.

The maximum of 12 hours of graduate credit completed as a post-master's degree student prior to admission to a doctoral program may apply toward a doctoral degree. Inclusion of such course work is subject to program approval and must have been completed within eight years of the time the doctoral degree is awarded. Exceptions to this regulation must be justified on academically defensible grounds and approved by the graduate dean prior to filing the program plan.

When doctoral students have earned a master's degree at any institution, appropriate credits may be applied toward meeting the requirement for the doctoral degree, subject to program approval. Such credits shall constitute less than half of the total credits required for the doctorate. For example, for a doctoral degree requiring 90 hours of work beyond the bachelor's degree, no more than 44 credits from a master's degree may apply to the doctoral degree. Credit for courses taken for a master's degree is exempt from the doctoral program's eight-year time limitation.

Residence Requirement

The majority of credits used to satisfy requirements for a doctoral degree must be completed at UMSL. The residence requirement may be satisfied with dissertation credit hours, graduate institutes, and credit courses taken through Continuing Education, as well as regular courses.

Students who enter the Ed.D. or Ph.D. in Education degree programs with an Education Specialist (Ed.S.) degree from an accredited university, or with an Advanced Certificate approved by the Missouri Department of Elementary and Secondary Education, may satisfy the residence requirement by completing one-third of the required credits at UMSL.

Residency normally requires that doctoral students successfully complete a minimum of 15 hours over two consecutive terms, which may include summer. The dean of the Graduate School may grant exceptions upon recommendation by the program.

Comprehensive Examinations

Each program will determine the number of times a comprehensive examination may be taken by a student. The department or college must file with the Graduate School a statement specifying:

1. the number of times the program will allow its students to take a comprehensive examination, and

2. the maximum and/or minimum period of time the program will allow between the first and final attempt to pass the comprehensive examination.

The Comprehensive Examination Committee consists of no fewer than three members of the UMSL graduate faculty appointed by the graduate dean upon recommendation of the program.

An oral examination may not substitute for the standard written portion.

Advisors

Upon entering the program, each doctoral student will have an assigned program advisor who is a member of the Graduate Faculty [D2]. As early as possible in a doctoral student's program, but no later than when the student achieves candidacy, the program will recommend, in consultation with the student, a doctoral dissertation advisor.

Application for Candidacy

Doctoral students may apply for candidacy [D3] after passing all required comprehensive and language examinations, written or oral, and successfully completing all course work. The program director approves the application and forwards it to the dean of the Graduate School for final approval.

Doctoral Dissertation Committee

The Doctoral Dissertation Committee shall consist of at least four members of the Graduate Faculty who can contribute their expertise to the dissertation study. The committee chair and at least one other member of the committee must be faculty in the Department offering the degree. A recognized scholar from outside the university may serve as a member upon the recommendation of the unit and approval of the Graduate Dean, but the external scholar may not chair the committee. The Graduate Dean shall approve the committee membership and changes in the committee membership [D4].

Doctoral Dissertation

All doctoral degrees require a dissertation as a final component of the program. The dissertation must be written on a subject approved by the candidate's doctoral dissertation committee, must embody the results of original and significant research and must be the candidate's own work.

Text Reuse

The reuse of text will be evaluated by the members of the faculty committee that approves the document. Each committee member, as part of the decision to approve or disapprove the document, will decide whether the reuse presented in the document is acceptable. Departments may choose to adopt a uniform policy on the acceptability of reused text for a specific degree program. In the document, the student must clearly and explicitly identify all reused text and the original source(s) of that text. A copy of the source documents must be provided to the committee members and the Graduate School. Reuse is strictly limited to text from papers authored or co-authored by the student. The student must document permission to reuse any copyrighted material. If the source documents involve co-authors other than the student and the faculty advisor, the document must include a description of the individual contributions of each coauthor of the original study. Regardless of the extent of any reuse of text, the dissertation must maintain a uniform and consistent formatting style throughout.

Dissertation Proposal

Before a student may conduct substantial research for the dissertation the committee must approve a proposal after a formal defense. The student submits the approved proposal for review and approval by the dean of the Graduate School [D5].

An approved dissertation proposal in no way implies a contract between the university and the student. Depending on the outcome of the research, the dissertation may require substantially more work than anticipated when the proposal was approved. The termination of a line of research and the adoption of a substantially new dissertation project requires the preparation, formal defense, and acceptance by the Graduate School of a new dissertation proposal.

Preliminary Approval

One copy of the dissertation, certified as complete and provisionally acceptable to the committee, shall be submitted to the graduate dean at least six weeks prior to commencement - [D6] and [D9]. The Dean of the Graduate School may seek advice and make suggestions to the committee about content and style before approving the dissertation.

Defense of Dissertation

Normally the approved Doctoral Dissertation Committee serves as the Oral Defense of Dissertation Committee. The graduate dean may appoint one additional qualified voting member to the Defense of Dissertation Committee from the Graduate Faculty within the University of Missouri System.

After deliberating on the oral defense of the dissertation, the Defense of Dissertation Committee votes on whether the defense was successful. The defense shall be deemed unsuccessful if there are two negative votes, even if outnumbered by positive votes. An abstention will be considered a negative vote. A student failing an oral defense shall have the opportunity for one additional defense before the same committee. The Defense of Dissertation Committee shall determine the timing and format of the subsequent defense.

Final examinations are open to the public. The decision of the Defense of Dissertation Committee is final. The report of the final examination is due to the Graduate School no later than two days after the examination.

Dissertation Abstracts

Two different abstracts are required. The publishing company requires an abstract of a maximum of 350 words that is published with the announcement of the dissertation defense. The abstract forming the second page of the dissertation should be no more than 600 words.

Dissertation Format

Original copies of the dissertation must be typed on good quality paper, and they must be legible and neat in order to be accepted by the Graduate School. Only high quality copies are acceptable with the following margins throughout: left margin, 1 1/2 inches; top, bottom, and right margins, 1 inch

In matter of style and documentation, the custom of the discipline shall be followed.

Official Copies of Dissertation

The chairperson of the dissertation committee is responsible for verifying that all the changes suggested by the graduate dean and the dissertation

committee have been incorporated in the final draft of the dissertation or have been discussed further with the graduate dean or the committee.

Students disseminate the dissertation according to current Graduate School procedures.

Professional Doctorates

At the University of Missouri-St. Louis, professional doctoral degrees are rigorous and practice oriented. Professional doctorate students' academic work focuses on scholarly responses to societal needs within professional contexts. Faculty advisors in professional doctorate programs may be scholar-practitioners who are approved as Professional/Special Appointment Graduate Faculty as well as regular UMSL Graduate Faculty.

Both types of graduate faculty may assume all graduate faculty roles throughout the professional doctoral program.

Admission to the Professional Doctorate

Each professional doctoral degree program may determine eligibility standards beyond the minimum for admission to the Graduate School with the exception that professional doctoral programs may admit exceptional undergraduate students before their baccalaureate is awarded.

Professional Doctorate Credit Requirements

Each professional doctoral degree program may determine the minimum hours of graduate credit required for the degree program based on professional and/or accreditation/licensing standards.

Professional Doctorate Enrollment

Full-time status is defined as nine credit hours per semester. Units may require higher enrollments than this.

After students achieve candidacy and complete the residence requirement, they must remain enrolled during fall and spring semesters until the degree is completed. Failure to register in any regular semester will normally result in termination from the Graduate School. If students so terminated decide to reapply, and if they are readmitted, they will be subject to all regulations in effect at the time of readmission and will be required to enroll for at least one credit hour in each semester since their last enrollment.

When professional doctoral students are enrolled for capstone credit, the credit amount may vary, but the student must register for all work required, and the credit total may exceed the minimum requirements.

Classification of Doctoral Students

There are two stages in a student's doctoral degree work:

(1) A pre-candidate is a student who has requirements to fulfill in addition to the capstone project, including course work, clinical experiences, and/or threshold examinations.

(2) A candidate is a student who has met all degree requirements except the completion of the capstone project and any clinical or fieldwork required as a part of the capstone project.

Professional Doctorate Time Limitation

The maximum amount of time allowed to complete a doctoral degree is eight years after enrollment in the first course. Professional doctoral students who enter with any previous graduate degree or certificate may apply appropriate credits toward the professional doctoral degree, subject

to program approval. Credit for courses taken for an advanced degree or post-master's graduate certificate is exempt from the eight-year time limit.

Professional Doctorate Residency Requirement

Residency normally requires that doctoral students successfully complete a minimum of 15 hours at UMSL over three consecutive terms, which may include summer. The Dean of the Graduate School may grant exceptions upon recommendation by the program.

Students who enter the EdD degree program with an Education Specialist (Ed.S.) degree from an accredited university, or with an Advanced Certificate approved by the Missouri Department of Elementary and Secondary Education, may satisfy the residence requirement by completing one-third of the required credits at UMSL.

Students who enter the DNP degree programs with an MSN degree from an accredited university may satisfy the residence requirement by completing 33 graduate credits in Nursing as part of the DNP degree. Residency normally requires that doctoral students successfully complete a minimum of 15 hours over three consecutive terms, which may include summer. The Dean of the Graduate School may grant exceptions upon recommendation by the program.

Professional Doctorate Threshold Examinations

Each program will determine the type of comprehensive, qualifying, or other threshold examination that is appropriate for the discipline. Units also specify the number of times a student may take a threshold examination and the maximum and/or minimum period of time allowed between the first and final attempt to pass the examination. The program must file information about the requirements with the Graduate School. An oral examination may not substitute for the standard written portion.

The Examination Committee will consist of no fewer than three members of the Graduate Faculty, including Professional/Special Appointment Graduate Faculty appointed by the Graduate Dean upon recommendation by the unit.

Advisors for the Professional Doctorate

Upon entering the program, each doctoral student shall have an assigned advisor who is a member of the Graduate Faculty, including Professional/Special Appointment Graduate Faculty. As early as possible in a doctoral student's program, but no later than when the student achieves candidacy, the unit shall recommend, in consultation with the student, an advisor for the capstone project.

Application for Candidacy

Doctoral students may apply for candidacy after passing all threshold requirements and successfully completing all course work.

Committee for the Capstone Project

The Committee for the Capstone Project will consist of at least three members of the Graduate Faculty, including Professional/Special Appointment Graduate Faculty, who can contribute their expertise to the study. A recognized practitioner from outside the university may serve as one of those members upon the recommendation of the unit and approval of the Graduate School Director, and this member may serve as co-chair of the committee with a full-time graduate faculty member at UMSL also serving as co-chair. The external co-chair is recognized on

the dissertation for their co-chair role on the IRL website. However, for internal processes, including all graduate school forms, the full-time faculty member co-chair must be listed as the chair and must sign the approval. The Graduate School Director will approve the committee membership and changes in committee membership upon recommendation from the program. All members of the Committee for the Capstone Project are involved intimately and participate actively in the activities of the doctoral student at all the stages of the student's career at UMSL. This committee normally also serves as the Oral Defense Committee.

Capstone Project

At the University of Missouri-St. Louis, all professional doctoral degrees require a capstone project. The project must address a subject approved by the candidate's committee; have a significant grounding in clinical, translational, or engaged scholarship; and be the candidate's own work.

Programs may permit collaborative capstone projects, but students must be able to document their original contributions to collaborative projects.

Programs must submit to the Graduate School and make available for students information about the capstone project (e.g., scholarly paper, dissertation-in-practice, etc.) and all requirements expected for the project to be judged successful.

Text Reuse: The reuse of text will be evaluated by the members of the faculty committee that approves the document. Each committee member, as part of the decision to approve or disapprove the document, will decide whether the reuse presented in the document is acceptable. Departments may choose to adopt a uniform policy on the acceptability of reused text for a specific degree program. In the document, the student must clearly and explicitly identify all reused text and the original source(s) of that text. A copy of the source documents must be provided to the committee members and the Graduate School. Reuse is strictly limited to text from papers authored or co-authored by the student. The student must document permission to reuse any copyrighted material. If the source documents involve co-authors other than the student and the faculty advisor, the document must include a description of the individual contributions of each coauthor of the original study. Regardless of the extent of any reuse of text, the dissertation must maintain a uniform and consistent formatting style throughout.

Professional Doctorate Capstone Project Proposal

Before students may begin substantial work on the capstone project, the committee must have approved a proposal after a formal defense. To schedule the defense, students must have approval from appropriate compliance committees (e.g., Human Subjects, etc.). Students submit the approved proposal to the Graduate School for review and approval by the Dean of the Graduate School.

An approved proposal does not imply a contract between the university and the student. For example, the project may require substantially more work than anticipated when the proposal was approved. The termination of a line of inquiry and the adoption of a substantially new capstone project requires the preparation, formal defense, and acceptance by the Graduate School of a new proposal.

Preliminary Approval of the Capstone Project

One copy of the final capstone project, certified as complete and provisionally acceptable to the committee, shall be submitted to the Graduate Dean at least six weeks prior to commencement. The Dean

of the Graduate School may seek advice and make suggestions to the committee about content and style before approving the project.

Oral Defense of the Capstone Project

After deliberating on the oral defense of the project, the Committee for the Capstone Project votes on whether the defense was successful. The defense shall be deemed unsuccessful if there are two negative votes, even if outnumbered by positive votes. An abstention will be considered a negative vote. A student failing an oral defense shall have the opportunity for one additional defense before the same committee. The committee shall determine the timing and format of a subsequent defense.

Capstone examinations are open to the public, although committee deliberations normally take place privately. The decision of the Committee for the Capstone Project is final. The report of the final examination is due to the Graduate School no later than two days after the examination.

Capstone Project Abstracts

Capstone Projects are normally disseminated as PhD dissertations and require two different abstracts. The abstract forming the second page of the Capstone Project report should be no more than 600 words. UMSL's partner for publishing scholarly projects (currently Proquest) requires an abstract of a maximum of 350 words, which is included with the campus announcement of the defense of the Capstone Project.

Upon recommendation by the program, the Graduate Dean may approve exceptions to this method of dissemination.

Format of the Capstone Project

In matters of style and documentation, the custom of the discipline shall be followed. The final copy of the Capstone Project must be legible and appropriate for publication when submitted to the Graduate School. Only high quality electronic submissions are acceptable with the following margins throughout: left margin, 1 1/2 inches; top, bottom, and right margins, 1 inch. Upon recommendation by the unit, the Graduate Dean may approve exceptions to this method of dissemination.

Official Copies of the Capstone Project

The chair of the Committee for the Capstone Project is responsible for verifying that all the changes suggested by the committee and the Graduate Dean have either been incorporated in the final draft of the project or have been discussed further with the Graduate Dean or the committee.

Students shall disseminate the Capstone Project according to current Graduate School procedures for theses and dissertations unless an exception is approved.

Graduate Certificate Program Requirements

Admission

Each graduate certificate program may determine eligibility standards beyond the minimum for admission to and enrollment in the Graduate School.

Credit Requirements

The requirements, including the minimum number of credit hours, for certificates vary among graduate certificate programs. Please visit the web site or contact the program director for more information for the certificate program of interest. All graduate credit earned at UMSL for a graduate

certificate that also fulfills the requirements for a MS or doctorate degree may be applied to that degree upon approval of the program director. At least two-thirds of the credit hours for the certificate must be completed in residence at UMSL.

Filing the Program Plan

A graduate student enrolled in a certificate program is required to file a certificate program plan with the Graduate School before completing the first two-thirds of the number of hours required in the program. Changes made in a certificate program plan after it has been filed must be submitted to the Graduate School.

College of Arts and Sciences

General Information

The College of Arts and Sciences consists of the following departments, each offering work in specific undergraduate degree programs: Art and Design, Biology, Chemistry and Biochemistry, Communication and Media, Computer Science, Criminology and Criminal Justice, Economics, English, History, Language and Cultural Studies, Mathematics, Physics, Astronomy and Statistics, Music, Philosophy, Political Science, Psychological Sciences, and Sociology.

Graduate study degree programs, administered through the Graduate School, are also offered in the following departments of the College of Arts and Sciences: Biochemistry and Biotechnology, Biology, Chemistry, Criminology and Criminal Justice, Computer Science, Economics, English, History, Mathematics, Physics, Astronomy and Statistics, Philosophy, Political Science, and Psychological Sciences.

The College offers a wide range of courses, accredited baccalaureate, master's and doctoral degrees and multi-disciplinary certificates. Details about each degree may be found in the programs section of this bulletin.

- Actuarial Science (p. 392)
- Anthropology (selected courses only)
- Art History (selected courses only)
- Biochemistry & Biotechnology (p. 69)
- Biology (p. 75)
- Chemistry and Biochemistry (p. 85)
- Child Advocacy Studies (p. 185)
- Communication (p. 91)
- Computer Science (p. 97) (p. 97)
- Computing Technology (p. 97)
- Criminology and Criminal Justice (p. 105)
- Cybersecurity (p. 97)
- Data Science
- Economics (p. 109)
- English (p. 114)
- Gender Studies (p. 198)
- Geographic Information Systems (p. 577)
- History (p. 123)
- Interdisciplinary Studies (p. 135)
- International Relations (p. 174)
- Liberal Studies (p. 135)
- Mathematics (p. 146)
- Media Studies (selected courses only) (p. 146)
- Modern Languages (p. 137)
- Music (p. 157)
- Organizational Leadership (p. 198)
- Philosophy (p. 168)
- Physics and Astronomy (p. 146)
- Political Science (p. 174)
- Public Policy and Administration (p. 174)
- Psychology (p. 185)

- Sociology (p. 198)
- Studio Art (p. 62)

Requirements for Undergraduate Study

All majors in the College of Arts and Sciences, including Bachelor of Liberal Studies, must meet the following requirements:

- Requirements of their chosen baccalaureate degree (i.e., B.A., B.S., etc.) in accordance with the policies of the College of Arts and Sciences, explained below.
- Requirements of the department for their selected major or interdisciplinary program.
- Requirements for the University's general education (p. 30) & university requirements.
- Completion of INTDSC 1003 University Studies for all students admitted to UMSL with fewer than 24 academic credit hours.

Detailed information concerning all degree requirements can be found by visiting the Marcus Allen Advising Center.

Academic Policies

Grade Requirements

To graduate, all majors in the college must satisfy one of the following grade point options:

- Have a minimum UMSL campus grade point average of 2.0 and have met all other grade point restrictions for the degree or program.

Cultural Diversity Requirement

To expand cultural awareness, students in some academic units may be required to complete a course that emphasizes Asian, African, Middle Eastern, Latin American, Pacific aboriginal, Native American, or a comparable culture. Courses that satisfy this requirement involve substantial material independent of the cultures' interactions with European cultures. If a course focuses on one facet of a culture, it must treat the topic within the context of the culture as a whole. A list of courses which satisfy this requirement can be found in the Undergraduate Study Graduation Requirements (p. 16) section of this Bulletin.

Residency Requirements

Transfer students must complete at least 30 of the last 36 hours of their degree program in residence at the University of Missouri-St. Louis.

Unless otherwise specified, a transfer student must complete 12 hours of graded work at UMSL at the 2000 level or above within the minimum number of hours required for each major.

Unless otherwise specified, a transfer student must complete at least six hours of graded work at UMSL at the 2000 level or above within the minimum number of hours required for each minor. Students should consult the minor department for specific residency and grade requirements.

Specific Baccalaureate Degree Requirements

Course Requirements

After fulfilling the general education and specific major degree requirements, students are to take the remaining hours required to

complete the bachelor's degree from courses (which the appropriate department has evaluated as being of university-level quality) from one or more of the following areas or their university-quality equivalents at other institutions: Anthropology/Archaeology, Art (appreciation, history, studio), Astronomy, Biology, Chemistry, Communication, Criminology and Criminal Justice, Economics, English, Geology, History, Mathematics/Computer Science, Media Studies, Modern Languages (French, Japanese, Spanish), Music (appreciation, history, performance), Philosophy, Physics, Political Science, Psychology, Social Work, Sociology, Theatre, Business, Education, Engineering, or Interdisciplinary. Other areas or courses not listed require approval by the chair of the student's department.

Bachelor of Arts (B.A.)

All B.A. degree candidates must successfully complete a curriculum which includes a departmental major or an approved interdisciplinary field. A major must include at least 30 credit hours but no more than 45 hours. The College offers the B.A. degree in anthropology, biology, chemistry, economics, English, history, mathematics, modern languages, philosophy, physics, political science, psychology, and sociology.

Foreign Language Requirement

Candidates for the B.A. degree are required to complete 13 credit hours or the equivalent in proficiency in one foreign language. Foreign language guidelines are as follows:

1. Students entering with no high school language units must enroll in Language 1 or may enroll in the 2115 series (see section 4).
2. Students with the degree of proficiency equivalent to 13 hours of college-level work in French, German or Spanish may obtain exemption by passing the department's placement exam. The specific dates for the exam are posted on-line or may be obtained from Languages and Cultures at 314-516-6240.
3. Native speakers of language other than English may meet the foreign language requirement by presenting a transcript from a university or secondary school of their native country. The department will certify native speakers of those languages which are taught at the university. Those who are proficient in other languages must submit certification of competence to the college.
4. Language 2115 A, B, C (Intensive) will satisfy the foreign language requirement. Aptitude testing is required prior to enrollment. For more information, call the Department of Languages and Cultures at 314-516-6240
5. Students may not repeat, for either credit or quality points, an elementary course if they have already completed a higher-level course for which the elementary course, or its equivalent, is a prerequisite.

Applied Music and Studio Art

Students not majoring in music may count no more than eight hours in music ensemble performance (EN PER 1400, EN PER 1410, EN PER 1500, EN PER 1520, etc). Students in the college not majoring in studio art may count any number of studio art hours toward a degree in the college. This includes transfer credit.

Bachelor of Science (B.S.)

The College offers the B.S. degree in mathematics, biochemistry and biotechnology, biology, chemistry, biochemistry, computer science, criminology and criminal justice, economics, physics (with emphasis in applied physics, astrophysics, engineering physics, or optical biophysics),

and sociology. The requirements are generally the same as for the B.A. degree with the following exceptions:

1. More credit hours in the major discipline may be counted toward satisfying the 120 hours needed for graduation. See departmental degree requirements for information.
2. Not all departments require foreign language proficiency. See departmental degree requirements for information.

Bachelor of Liberal Studies (BLS)

(See Interdisciplinary Programs (p. 135) for complete description)

Bachelor of Interdisciplinary Studies (BIS)

(See Interdisciplinary Programs (p. 135) for complete description)

Bachelor of Science in Public Policy and Administration (B.S.P.A.)

The B.S.P.A. degree program is administered through the Political Science Department and offers two emphasis areas. Public Administration emphasizes management in the public and nonprofit sectors. Public Policy allows focus on a particular policy area with attention to analytic training and research skills.

Bachelor of Fine Arts (B.F.A.)

The College offers the B.F.A. degree in studio art. A foreign language is not required. Students choosing an emphasis in drawing, graphic design, painting, photography, printmaking or general fine arts must take at least 75 credit hours in studio art (including 30 hours in the foundation art program). Students seeking K-12 art teacher certification take a minimum of 50 credit hours in studio art (including 30 hours in the foundation art program) and must fulfill the General Education Requirements in both the College of Education and the College of Arts and Sciences.

Bachelor of Music (B.M.)

The College offers the B.M. degree in music education, performance and with elective studies in business. The requirements are the same as for the B.A. degree with the addition of music education courses for music majors seeking state teacher certification. Although foreign language proficiency is not required, foreign language study is required for applied voice students.

Minors

A number of minors is available at UMSL. Some are offered by individual departments, while others are interdisciplinary in nature and involve several departments. The requirements for the various minors are listed in either the departmental or interdisciplinary sections of this Bulletin.

Special Programs

Certificate Programs

Graduate and undergraduate certificate programs are offered in Child Advocacy Studies, Cybersecurity, Data Science, Entrepreneurship, Gender Studies, Health Communication, Internet and Web, Media Production, Mobile and Ubiquitous Computing, and Technical Writing.

International Studies Certificate

In cooperation with International Studies and Programs and other Colleges, the College offers certificate programs in African, East Asian,

European, International, and Latin American studies. The College also cooperates in offering the International Business Certificate.

Departmental Honors

Majors in the following departments may pursue departmental honors: biology, chemistry, economics, English, history, modern languages, and political science. Majors in criminology and criminal justice may pursue placement on the chair's list.

Cooperative Education and Internship Programs

Cooperative education and internship programs are available for students seeking career-related employment while enrolled in school. These programs afford Arts and Sciences students an opportunity to gain practical experience. Co-ops and internships are administered through Career Services, 278 Millennium Student Center.

College of Arts and Sciences Extension

Credit courses are offered at off-campus locations through the College of Arts and Sciences. These courses are open to UMSL students and qualify for regular academic credit toward degrees in the college.

Latin Honors Requirements

In accordance with the University's Latin Honors policy (p. 23), candidates graduating from the College of Arts and Sciences in the 2024-2025 Academic Year must meet the following GPA qualifications:

| | |
|-----------------|-------|
| Summa Cum Laude | 3.984 |
| Magna Cum Laude | 3.923 |
| Cum Laude | 3.76 |

Art and Design

General Information

Degrees and Areas of Concentration

The department offers course work leading toward the Bachelor of Fine Arts in Studio Art with emphases in Studio Practice, Graphic Design and Art Education.

The B.F.A. in Studio Art consists of a foundation art program and an emphasis area in the following: art education, graphic design, and studio practice. UMSL has transfer agreements with many local and regional community colleges. For information regarding our agreements, please contact the Office of Transfer Services at transferservices@umsl.edu or 314-516-5162.

To support its teaching and research objectives, the department maintains an extensive and expanding collection of digital images. The collection includes examples of painting, sculpture, architecture, photography and decorative arts, and is under the supervision of a professional visual resource curator, who is available for special assistance to staff and students.

Art history courses can be applied toward minors in Anthropology, American Studies, Philosophy, and Urban Studies, or a certificate in Gender Studies.

Gallery 210 @FAB

Gallery 210 offers visual arts programming of regional, national, and international importance. The gallery's exhibitions and related arts programming have enjoyed a long and distinguished history of service to the university and to the St. Louis community.

Gallery FAB

Located in the Fine Arts Building, Gallery FAB exhibits a range of work by artists of regional and national significance. The exhibitions are curated by members of the Studio Art Faculty and complement the teaching emphases of the Fine Arts program.

Scholarships/Internships

Several departmental scholarships are available on a competitive basis and the department also sponsors a variety of internships with local arts institutions, including the Saint Louis Art Museum, Contemporary Art Museum St. Louis, Purina, and Laumeier Sculpture Park.

Ferring Travel Study Program

Each year, student majors in their junior and senior year may apply for the competitive Ferring Travel Study Program, which supports the Arts Life Onsite Program, and allows students to travel for free to major art centers in the US, including New York, Chicago, and Los Angeles.

Career Outlook

Students with degrees in art and design find careers in teaching, advertising, public relations, graphic design, illustration, animation, game design, film and video production, arts administration, art restoration, product and industrial design, framing, and commercial photography. Art graduates with a humanities interest have found career opportunities in teaching, museums, galleries, libraries, historical societies, sales and auction houses, the legal professions, and historic preservation.

With over 300 teaching positions in the field in the greater St. Louis region alone, there is a demand for art teachers statewide each year.

Students in each major receive professional practice development with a new attention paid to entrepreneurial skills.

Faculty Overview

The Department of Art and Design has a diverse faculty actively engaged in the production of art, its historical and critical evaluation, and the training of art educators. The department prides itself on its commitments to high standards of teaching and sound research achievements. Individual faculty have been cited for their teaching excellence. Art history faculty members have written books, articles, and critical reviews, and regularly participate in national and international conferences. Art and Design Faculty exhibit nationally and internationally in group and solo shows as well as juried and invited exhibitions; they also curate exhibitions and maintain a high level of professional practice.

Programs

Degrees

Studio Art, Bachelor of Fine Arts

Emphasis Areas:

- Graphic Design (p. 755)
- Art Education (p. 753)
- Studio Practice (p. 756)

Minors

History of Art and Visual Culture (p. 589)

Studio Art (p. 758)

Art Education Courses

ART ED 2179 Visual Art Activities for Elementary School: 3 semester hours

Students will explore the purpose of visual arts in school settings and will encounter various media and materials through hands-on art experiences. Discussion of social, cultural, and historical influences on creative works will be encountered. Course content highlights the integration of visual art in teaching elementary subjects and emphasizes the role of art-making and imaginative experiences in child development. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ART ED 3328 Art Education: Theory to Practice: 3 semester hours

Prerequisites: Completion of Level I requirements and Foundation Art Program; concurrent enrollment in ART ED 4260 is required. Development and application of concepts related to comprehensive art education and standards-based curriculum in art education, with an examination of current theories, trends, publications, and on-line resources in the field.

ART ED 4260 Art Museum as Teaching Resource: 3 semester hours

Prerequisites: Completion of Level I requirements, 9 hours of ART HS, and completion of Foundation Art Program; concurrent enrollment in ART ED 3328 is required. Students will learn how to strengthen K-12 Art Education by utilizing the collections and resources of the St. Louis Art Museum. A variety of teaching approaches and learning activities for galleries and classrooms will be employed, focusing on art from around the world and throughout history.

ART ED 4273 Curriculum and Methods of Teaching Art: 3 semester hours

Prerequisites: ART ED 3328 and completion of, or concurrent enrollment in, TCH ED 3312, SPEC ED 3318, or TCH ED 4391. A study of the scope and sequence of art education in the school curriculum, with emphasis on the preparation, selection, organization and application of materials and methods of instruction and assessment. Attention is also given to learning the research tools of the scholar in the field of art education. Not available for graduate credit.

ART ED 4290 Special Study in Art Education: 1-6 semester hours

Prerequisites: Junior, senior, or graduate standing and consent of instructor. Independent study through readings, reports, field research, or special projects. May be repeated for credit, up to a maximum of 6 credit hours.

ART ED 5228 Foundation and Classroom Application of Art Education: 2 semester hours

Prerequisites: Graduate standing, admission to the Teacher Education Program, a passing score on the Missouri Content Exam (MoCA) in Art on file, and consent of instructor; concurrent enrollment in ART ED 5260 is required. Development, application, and research of concepts related to comprehensive art education and standards-based curriculum in art education, with an in-depth examination of current theories, trends, publications, and on-line resources in the field.

ART ED 5260 Museum Collections in the K-12 Curriculum: 2 semester hours

Prerequisites: Graduate standing. Students will research the value and application of utilizing the collections and resources of the St. Louis Art Museum to strengthen K-12 education. A variety of research-based teaching strategies and learning activities for galleries and classrooms will be employed; a broad cultural perspective and historical understanding of art will be used.

ART ED 5273 Advanced Methods and Curriculum Development of Teaching Art: 2 semester hours

Prerequisites: ART ED 5260 and ART ED 5228. An in-depth study of the scope and sequence of art education in the school curriculum, highlighting the preparation, selection, organization and application of materials and methods of instruction and assessment. Emphasis is placed on learning the research tools of the scholar in the field of art education and the role of the teacher as researcher on curriculum development.

ART ED 5334 Topics in Contemporary Art Education: 3 semester hours

Prerequisites: Graduate standing or permission of instructor. Intensive study for advanced students and art teachers, emphasizing specialized techniques and innovative concepts. Topics to be announced. May be repeated for credit, up to a maximum of 12 credit hours.

ART ED 5590 Special Study in Art Education: 1-6 semester hours

Prerequisite: Graduate standing and consent of instructor. Independent study through readings, reports, field research, or special projects. May be repeated for credit.

Art History Courses

ART HS 1100 Introduction to Western Art (MOTR ARTS 100): 3 semester hours

An introduction to major historical movements in Western art.

ART HS 1120 Global Art and Visual Culture (MOTR ARTS 101): 3 semester hours

This course explores transcultural perspectives in Art History. Students will be introduced to creative visual traditions from across the globe. The course examines themes such as death and the afterlife, religious practice, visual persuasion, and design aesthetic in historical Europe, Africa, Asia, the Indigenous Americas and Oceania. This course satisfies the Cultural Diversity requirement.

ART HS 1150 Introduction to the Art and Visual Cultures of Africa: 3 semester hours

This course surveys major art forms of Africa and the African Diaspora. It addresses traditional media, such as architecture, masquerade, regalia, sculpture, metalwork, ceramics, and textiles, as well as contemporary sculpture, painting, photography, and performance. This course satisfies the Cultural Diversity requirement.

ART HS 1160 Introduction to the Art and Visual Cultures of Asia: 3 semester hours

This course surveys major achievements in architecture, sculpture, and painting of India, China, Japan, and Southeast Asia, with an emphasis on religious, historical, and social context of the arts. This course satisfies the Cultural Diversity requirement.

ART HS 1190 Ideas in the History of Art and Visual Culture: 3 semester hours

Prerequisites: ART HS 1100 or consent of instructor. This course studies selected works of art, with attention to the social and cultural factors surrounding their creation.

ART HS 2211 Art and Archaeology of The Ancient World: 3 semester hours

Prerequisite: ART HS 1100. A survey of art in Egypt, the ancient Near East, Greece, and Rome, beginning in the Neolithic era (8000-4000 BC) and ending with the Barbarian invasions of Italy in the fifth century A.D. The major highlights of architecture and city planning, sculpture, painting, pottery, and the minor arts will be covered.

ART HS 2212 Greek Myths and Monuments: 3 semester hours

Same as ANTHRO 2212 and HIST 2212. This course provides an overview of Greek myths and legends, as well as their reception in architecture, the visual arts, and literature. Particular emphasis will be given to: 1) the theology and the creation myths of the Greeks and how these relate to the Bible; 2) heroic myths from the Trojan War to Atlantis, and their historicity; 3) famous monuments, works of art, and texts from Greek and world literature, that advance our understanding of Greek myths and the culture that created them.

ART HS 2225 Medieval Art: 3 semester hours

A survey of the art and architecture of the Mediterranean World and northern Europe from late antiquity to the late Gothic period (300-1300 A.D.). Focus on new styles and subject matter in painting, sculpture and architecture.

ART HS 2235 Renaissance and Baroque Art: 3 semester hours

Prerequisites: ART HS 1100 or consent of instructor. This course is an introduction to art and architecture in Europe from the fifteenth through the seventeenth centuries.

ART HS 2260 History of Design: 3 semester hours

Prerequisites: ART HS 1100 or consent of instructor. This course is a survey of the history of design and may include topics such as book arts, graphic design, furniture, and architecture.

ART HS 2261 History of Graphic Design: 3 semester hours

This course examines the rapport of word, image, artist, client, and viewer that is unique to the genres of book arts and graphic design as studied in their historical and contemporary contexts.

ART HS 2265 History of Photography: 3 semester hours

Prerequisite: ART HS 1100 or consent of instructor. A study of photography: its historical development, an examination of it as an art medium, and its influence on the development of modern art.

ART HS 2270 Art of the United States: 3 semester hours

Prerequisites: ART HS 1100 or consent of instructor. This course is an overview of art and architecture in the United States from the colonial era through the twentieth century.

ART HS 2275 History of Illustration: 3 semester hours

Prerequisites: ART HS 1100 or consent of instructor. This course will analyze the work of artists who specialized in illustration for prints, books, newspapers, magazines, and advertisements, emphasizing the 19th and 20th centuries in the United States. The course will cover topics such as idealizations of the American West and changing roles of women in society, as well as iconic characters and images that continue to inspire artists today.

ART HS 2276 History of Comics and Cartoons: 3 semester hours

Prerequisites: ART HS 1100 or consent of the instructor. In this course, students investigate the artistic and historical context of cartoons and comics from the 19th century through today's graphic novels, webtoons and zines.

ART HS 2280 Modern to Contemporary Art: 3 semester hours

Prerequisite: ART HS 1100 or consent of the instructor. This course presents an overview of avant-garde modern art in Europe and the United States from the mid-nineteenth century to the contemporary era. It explores traditional media such as painting and sculpture as well as newer forms such as performance and installation art in the context of changing ideas about art's traditions, social functions, and philosophical concerns.

ART HS 2291 Issues and Ideas in the History of Art and Visual Culture: 3 semester hours

Prerequisites: ART HS 1100 or permission of instructor. This course is an intensive studies of a few selected works from various eras and cultures, with special attention to the particular social and cultural factors surrounding their creation. This course may be repeated for credit with the permission of an advisor as long as the topic different.

ART HS 3350 Studies in Design: 3 semester hours

Prerequisites: Minimum of one 2000-level course in Art History and ENGL 3100, or consent of instructor. The course examines selected topics in the history of design, and may include genres such as architecture, material culture, or graphic design. May be repeated for credit with a different topic, for a maximum of 6 credit hours.

ART HS 3387 Professional Internship: 1-6 semester hours

Prerequisites: Minimum of two 2000-level courses in Art History and ENGL 3100 and consent of instructor. The internship provides experience in museums, historical societies, galleries, design firms, or visual resource collections. Students will assist in the diverse duties associated with the day-to-day functions of the institution, under the joint direction of a faculty advisor and a supervisor at the institution. Course requirements may include readings, research assignments, and/or a paper. This course may be counted for art history or studio art credit with the department's consent.

ART HS 3390 Special Study: 1-4 semester hours

Prerequisite: Junior or senior standing. Consent of instructor and Art History advisor. Independent study through readings, reports or field research. May be repeated one time with consent of Art History advisor. May not be used for internship credit.

ART HS 3395 Selected Themes in the History of Art and Visual Culture: 3 semester hours

Prerequisites: Two 2000-level courses in Art History or consent of instructor. This course is a study of a selected topic in visual culture. It may be repeated for credit with a different topic.

ART HS 4400 Topics in the History of Art and Visual Culture: 3 semester hours

Prerequisites: One 3000-level course in Art History or consent of instructor. This course is the study of a selected topic in the history of art and visual culture. It may be repeated for credit with a different topic.

ART HS 4455 Topics in Modern Art: 3 semester hours

Prerequisites: ART HS 2280 and ENGL 3100, or one 3000-level course in Art History, or consent of instructor. Intensive study of selected topics in art of the nineteenth and/or twentieth centuries. May be repeated for credit with permission of instructor and advisor.

ART HS 4490 Special Study: 1-4 semester hours

Prerequisite: Junior or senior standing, consent of instructor and Art History advisor. Independent study through readings, reports, or field research. May be repeated one time with consent of Art History advisor. May not be used for internship credit.

ART HS 5590 Special Study in Art History: 1-6 semester hours

Prerequisites: Graduate standing and consent of instructor. Independent study through readings, reports, discussions, and/or special projects. May be repeated for credit with consent of instructor.

ART HS 5593 Museum Management and Curatorial Practice: 3 semester hours

Prerequisites: Consent of the instructor and graduate standing. Museum Management and Curatorial Practice is designed to give students overlapping theoretical and practical experience that will be useful after entry into the museum profession. While exhibitions are at the core of the museum mission, it takes a broad range of skills from different team members to bring shows to fruition. The course provides students with grounded knowledge on how to curate an exhibition for their museum and understand all the elements that serve the mission-driven goals for that institution, and the obligation to uphold best practices as established by the American Alliance of Museums [AAM] and the Association of Art Museum Directors [AAMD] that provide guidance for the field. Students will become familiar with the different types of roles and functions that make museums run (although staffing levels will vary based on the size and budget of the organization), including: executive management, advancement, marketing, curatorial, collections management, education, and others (e.g., archivist, librarian, security, maintenance, groundskeeping, restaurant staff, parking).

Studio Art Courses

ST ART 1020 Expanded Artforms: 3 semester hours

This course introduces students to contemporary art theories in practice that include exercises in research, content, material, and form. Projects may include multimedia, performance, installation, and other new genres. Basic computer lab equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 1140 Drawing I (MOTR PERF 105D): 3 semester hours

This course introduces students to observational and technical skills, such as mark making, value scale, line, and shapes that produce the illusion of volumes in space. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 1150 2D Design: Surface: 3 semester hours

This course uses tactile and digital methods to introduce students to imaging in black and white, color, and principles of 2D pictorial space. Using a variety of media, students will explore and understand the foundations of visual thinking. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 1151 3D Design: Space: 3 semester hours

Prerequisites: ST ART 1150 or consent of instructor. This course introduces students to the fundamentals and technical principles of working three dimensionally. Students will experiment with a number of construction methods and materials used to create, represent, respond to, and reflect on form and space. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2000 Entrepreneurship and the Arts: 3 semester hours

This course will help students interested in the fine and performing arts to develop an idea for an arts organization or product and turn it into a functioning, sustainable enterprise. The course will focus on identifying and defining mission, community relevance, product or event development, services and public programs and organizational management.

ST ART 2010 Design Thinking for the Creative Professional: 3 semester hours

This course is intended for students interested in the socio-cultural and professional implications of artistic creativity and design. Students will investigate the design process, visual analysis, design theories and the global impact of design thinking. Students will learn to critically assess the processes, outcomes and effects of design engagement. Students will explore the concepts of design thinking through hands-on opportunities and small-group design projects.

ST ART 2020 Making Games: Design and Theory: 3 semester hours

This course introduces students to the primary concepts, theory, and practice of game design. Students will encounter the history, systems, and practical process of creating games for play, gamification, and game-based learning/serious games. Students will design, iterate and playtest the mechanics, aesthetics and rules behind different types of games.

ST ART 2074 Special Topics in Studio Art: 3 semester hours

This course addresses selected topics in studio art studies. Basic studio equipment will be arranged for and provided for on-campus delivery or distance delivery as available, though students may need to supply some personal equipment and supplies. It may be repeated for credit with a change of topic.

ST ART 2205 Graphic Design I: 3 semester hours

This course introduces students to graphic design with an emphasis on fundamentals of space, emotion, shape, form, and concept. Projects in design, layout and typography will be addressed. The course is recommended to be taken concurrently with ST ART 1150, Design I. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 2210 Typography: 3 semester hours

Prerequisites: ST ART 3305 or consent of instructor. Course intends to instill a sense of responsibility relative to typographic and production design, while developing the student's capacity for critical thinking and general typographic rules, visual hierarchy of typographic elements, classical typographic tradition, book design, awareness of typographic aesthetic.

ST ART 2211 Typography II: 3 semester hours

Prerequisites: ST ART 2210, ST ART 2221, ST ART 3311. This course teaches advanced typographic skills for the graphic designer, including moving type.

ST ART 2220 Computer Design I: 3 semester hours

Prerequisites: ST ART 1150 and ST ART 2205, concurrent enrollment in ST ART 3305 recommended. This course introduces students to the use of computer graphics for the creation of artwork applicable to the graphic design industry. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 2221 Computer Design II: 3 semester hours

Prerequisite: ST ART 2220. Designed to familiarize students with the methods processes, software, and computer functions used in graphic design and illustration. The course is recommended to be taken concurrently with ST ART 3310, Graphic Design III. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2225 3D Printing: 3 semester hours

Prerequisites: ST ART 1151 or consent of instructor. This course introduces students to the basics of working in a 3D digital/machine-based environment, including scanning, editing and printing 3D objects. Through lectures, demonstrations and hands-on studio practice, students will learn how 3D printers function and about their many applications. Students will learn the fundamentals of thinking and making in three dimensions and apply the learned concepts in engaging hands-on exercises. This course is appropriate for all students, especially those interested in digitally-aided 3D production.

ST ART 2230 Drawing II: 3 semester hours

Prerequisites: ST ART 1140 or consent of the instructor. This course facilitates the development of drawing skills through continued observation and problems of invention. Student will explore and use varied drawing materials and techniques including graphite, charcoal, conte crayon, and inks. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2231 Figure Drawing I: 3 semester hours

Prerequisites: ST ART 1140 or consent of instructor. This course involves basic studies of the human form and anatomy in a variety of drawing media. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2233 Introduction to Illustration: 3 semester hours

Prerequisites: ST ART 1140 or permission of instructor. This course provides a hands-on introduction to current commercial illustration methods and techniques in both digital and analog mediums. Emphasis will be placed on gaining and strengthening artistic and technical skills, developing an understanding of professional objectives (the clients' needs), and creating thoughtful and original responses to illustration projects.

ST ART 2235 Comics and Cartoon Illustration: 3 semester hours

This is a course in creating and appreciating the world of comics and cartoons. Students will investigate and learn the tools and techniques for creating cartoons and cartoon illustrations to create their own cartoons through the use of traditional media and computers. While designed for beginners, experienced artists will be encouraged to perfect their personal styles. The class will create and print its own comic book. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2245 Painting I: 3 semester hours

Prerequisites: ST ART 1140 and ST ART 1150, or consent of instructor. This course is an introduction to the use of oil and/or acrylic painting media. Students will address studio problems to develop technical and expressive skills on various surfaces. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2252 Printmaking I: 3 semester hours

Prerequisites: ST ART 1150 and ST ART 2230, or consent of instructor. This course provides an introduction to printmaking techniques, materials, and theories. The course will include work in a variety of print materials. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2260 Photography I: 3 semester hours

This course is an introduction to the techniques and aesthetics of digital photography, along with photo editing software and printing techniques. Students must provide a digital camera. Basic computer lab equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 2269 Commercial Application in Photo: Photojournalism, Documentary, and Public Relations Photography: 3 semester hours

Prerequisite: ST ART 2263 or consent of instructor. Exploration of issues and applications within the field of photojournalism, documentary, and public relations photography. The class will concentrate on a variety of photographic applications focusing on news and editorial imagemaking, as well as training the student in public relations assignments. This class will involve both learning exercises and the creation of original computer-aided photographic art. Students must provide a digital camera. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 2270 Ceramics I: 3 semester hours

This course is an introduction to the basic methods and theory of ceramics including work with hand-built construction, wheel techniques and glazing. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2275 Sculpture I: 3 semester hours

This course is an introduction to traditional and contemporary materials, aesthetics, and theories of three-dimensional art. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2278 Introduction to Fibers and Textiles: 3 semester hours

This course provides an exploration of a variety of on- and off-loom weaving and other fiber and textile media and techniques. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 2285 Entrepreneurship for the Visual Arts: 3 semester hours

Prerequisites: ST ART 1150 or consent of the instructor. In this course, students will explore ways of establishing, promoting, and sustaining a creative practice. The basics of arts entrepreneurship, which may include marketing, branding, portfolio development, valuing work, and routes to market, are investigated through case studies and practice.

ST ART 2288 Ceramics II: 3 semester hours

Prerequisites: ST ART 2270. This course is a continuation of ST ART 2270. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 2290 Special Study: 1-10 semester hours

Prerequisites: Junior/Senior standing and consent of department and instructor. Independent study through readings, reports or field research. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3074 Special Topics in Studio Art: 3 semester hours

Prerequisites: Minimum completion of 18 hours in Studio Art. Selected topics in studio studies. May be repeated for credit with a change of topic. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3305 Graphic Design II: 3 semester hours

Prerequisites: ST ART 1150, ST ART 2205. This course is a continuing introduction to graphic design, focusing on developing concepts and design process, typographic systems and layout systems. The course is recommended to be taken concurrently with ST ART 2220, Computer Design I. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3310 Graphic Design III: 3 semester hours

Prerequisites: ST ART 2220, ST ART 3305. The course considers advanced studio problems to further the understanding of design and its relationship to typographic elements, illustration, and communication. The course will encourage both conceptual and technical development of the designer. The course is recommended to be taken concurrently with ST ART 2221, Computer Design II. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3311 Graphic Design IV: 3 semester hours

Prerequisites: ST ART 2221 and ST ART 3310. This more advanced course further explores studio problems in the graphic arts. The course is recommended to be taken concurrently with ST ART 2210, Typography. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3312 Advanced Topics in Graphic Design: 3 semester hours

Prerequisites: ST ART 3311 or permission of instructor. Studies of selected topics, which will vary. May be repeated for credit with a different topic, for a maximum of 9 credit hours. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3313 Introduction to Motion: 3 semester hours

Prerequisites: ST ART 2220 and basic knowledge of Photoshop and Illustrator. This course explores the fundamentals of motion design for the graphic designer. Students will learn the basics of animating, using After Effects software. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3315 Image Making for Graphic Design: 3 semester hours

Prerequisites: ST ART 3305 or consent of instructor. This course teaches skills of making images and custom type for use in visual communication. Topics covered may include a survey of traditional and experimental illustration techniques with an emphasis on creation of original imagery. The class will explore how hand images are further developed and combined on the computer for use in design; creativity, discovery, and craft are highly emphasized. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3317 Art of 3D Animation II: 3 semester hours

Prerequisites: ST ART 3316. In this production course, students will work on advanced techniques of animation and the mechanics of spatial graphics software, and will study the storytelling and visual techniques central to creating a successful animated presentation. Each student will produce an animated video presentation during the class. Basic computer lab equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3320 Advanced Problems in Graphic Design I: 3 semester hours

Prerequisites: ST ART 3311 or consent of the instructor. This course is focused on professional-level art and portfolio production. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3321 Advanced Problems in Graphic Design II: 3 semester hours

Prerequisites: ST ART 3320. This course is a continuation of professional-level art and portfolio production. The course includes the preparation of a faculty-reviewed portfolio. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3323 Fundamentals of Researching User Experience: 3 semester hours

Prerequisites: ST ART 3322. In this course, students will discover in greater detail the methods for researching user experiences within interactive systems. This will include basic tools like interviews, surveys, and usability studies. The course will demonstrate how to translate user research into personas, use-case scenarios, and functional requirements for software and other uses, such as implementation in marketing and product design. Course work will include readings, research papers, and user research. Basic equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3330 Drawing III: 3 semester hours

Prerequisites: ST ART 2230 or consent of instructor. This course offers studio problems designed to further the development of drawing skills in various media. Limited color will also be introduced. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3333 Figure Drawing II: 3 semester hours

Prerequisites: ST ART 2231 or consent of instructor. This course is a continuation of the study of human form and anatomy in a variety of drawing media. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3342 Painting II: 3 semester hours

Prerequisites: ST ART 2245 or consent of instructor. This course is a continuation of basic studio problems in painting media. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3343 Painting III: 3 semester hours

Prerequisites: ST ART 3342 or consent of instructor. The course is an advanced exploration of studio problems in painting media. Attention paid to individual development of theory, expression, and technique. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3344 Watercolor Painting: 3 semester hours

Prerequisites: ST ART 1150 and ST ART 2230 or consent of the instructor. The course explores beginning problems in watercolor painting. Content includes the study of traditional and contemporary approaches to color, color techniques, and treatment of papers. It may be repeated for credit. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3350 Studio Art Internship: 1-6 semester hours

Prerequisites: Junior/Senior standing in studio art and consent of the faculty advisor. The internship provides experience in design firms, professional art studios, or comparable settings. Students will assist professionals in the diverse duties associated with studio art activities. Course assignments may include research assignments and/or reports to be reviewed by the faculty advisor and/or supervisor. May be repeated for credit, up to a maximum of 6 credit hours.

ST ART 3351 Printmaking II: 3 semester hours

Prerequisites: ST ART 2252 or consent of instructor. This course is a continuation of introductory printmaking techniques, materials, and theories. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3352 Printmaking: Screenprinting: 3 semester hours

Prerequisites: ST ART 2252 or consent of instructor. This course provides an introduction to the techniques, methods, and aesthetics of screenprinting. Studio problems involving uses and approaches will be emphasized. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3354 Printmaking: Lithography: 3 semester hours

Prerequisites: ST ART 2252 or consent of instructor. This course provides an introduction to printmaking skills and theory in stone and plate lithography and examines studio problems in the use of materials and equipment. Attention will be given to students' individual development. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3356 Printmaking: Etching: 3 semester hours

Prerequisites: ST ART 2252 or consent of instructor. This course is an introduction to printmaking skills and theory of contemporary etching practices. It involves the development of skills and aesthetic judgements in the media using non-toxic etching processes. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3360 Photography II: 3 semester hours

Prerequisites: ST ART 2260 or consent of instructor. The course is a continued introduction to the techniques and aesthetics of black and white photography and the darkroom. Students must provide a film camera with adjustable speeds and aperture. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3361 Photography III: 3 semester hours

Prerequisite: ST ART 3360. An exploration into contemporary theories and trends in photography. Advanced projects, portfolios and techniques will be expected from those enrolled. Basic equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3365 Non-Silver Photography: 3 semester hours

Prerequisites: ST ART 2260 or consent of the instructor. This course is an introduction to the aesthetics and techniques of nontraditional photographic processes. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3366 Commercial Applications in Photography: 3 semester hours

Prerequisites: ST ART 2260 or consent of instructor. This course explores issues and applications within the field of commercial photography. Topics may include event photography, product photography, or portrait photography. Techniques of lighting, posing, and studio equipment are discussed. This class involves both learning exercises and the creation of original computer-aided photographic art. Students must provide a digital camera. Basic equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3382 Advanced 2D Practices: 3 semester hours

Prerequisites: ST ART 1150 and two 2000 level courses in 2D art practice. This course will afford students the opportunity to continue to explore and develop advanced technical and conceptual strategies in two-dimensional media. This course may be offered with varying themes, and may be repeated for credit with a different topic. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3385 Advanced 3D Practices: 3 semester hours

Prerequisites: ST ART 1151 and two 2000 level courses in studio art, one of which must be in 3D practice. This course will afford students the opportunity to continue to explore and develop advanced technical and conceptual strategies in three-dimensional media. This course may be offered with varying themes, and may be repeated for credit with a different topic. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

ST ART 3390 Special Study: 1-10 semester hours

Prerequisite: Junior/senior standing and consent of department chairperson and instructor. Independent study through readings, reports, or field research. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 3395 Scale Model Design and Construction: 3 semester hours

Prerequisites: ST ART 1151, ST ART 2270 or ST ART 2275, or consent of instructor. This course covers the art and craft of scale modeling for exhibits, the entertainment industry and architecture. Students in the course will learn the art and craft of scale model building through hands on projects. The course explores different construction methods and methodologies for various industries that use scale models. Construction methods will include molding and casting, 3D printing, styrene construction, plastics, lighting and wood production.

ST ART 4495 Senior Studio Seminar: 3 semester hours

Prerequisites: Senior standing and four ST ART courses at the 3000 level. This course consists of critiques and discussions of the methods of studio portfolio development, including display, documentation, gallery representation, grant writing and professional preparation. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies. Offered only during Fall Semester.

ST ART 4496 Senior Studio Seminar: 3 semester hours

Prerequisites: Senior standing and ST ART 4495. Weekly critiques and discussions of technical and professional issues. Will instruct students in methods of portfolio display, documentation, gallery representation, grant writing, and professional preparation. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies. Offered only during Winter Semester.

ST ART 4497 Senior Seminar in Graphic Design I: 3 semester hours

Prerequisites: Senior standing and ST ART 3321. This course consists of critiques and discussions of technical and critical issues during the development of a professional graphic design portfolio. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies. Offered only during Fall Semester. Students must pass the junior portfolio review to enroll.

ST ART 4498 Senior Seminar in Graphic Design II: 3 semester hours

Prerequisites: ST ART 4497. Continuation of ST ART 4497. Will instruct students in the methods of professional preparation. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

ST ART 5590 Special Study: 1-6 semester hours

Prerequisites: Graduate standing and consent of instructor. Independent study through art making, readings, reports, or field research. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies. May be retaken for credit with consent of instructor.

Biochemistry and Biotechnology

General Information

Degrees

Biochemistry and Biotechnology provides academic programs leading to the undergraduate B.S. degree or the graduate M.S. degree in Biochemistry and Biotechnology. These degrees are offered in cooperation with the Department of Biology and the Department of Chemistry and Biochemistry. Faculty members in this program are engaged in teaching and research in areas such as biochemistry, genetics, molecular biology, and cell biology. Majors have the opportunity through coursework, laboratories, seminars, and research experience to develop the knowledge and skills necessary to enter the workforce or to go on with further graduate education.

Career Outlook

The emerging Biotechnology sector is increasing the regional and national demand for workers with significant training in molecular biology, biochemistry, and genetics. The St. Louis metropolitan area has long been a major center for biochemistry and biotechnology, and in the past decade it has become a national hub for life sciences research and development activity. A degree in Biochemistry and Biotechnology provides students with the training they need to become part of the broad biotechnology and life sciences industries.

Biochemistry and Biotechnology BS (p. 404)

Biochemistry and Biotechnology BS/MS Dual Degree Program (p. 406)

Biochemistry and Biotechnology Accelerated Master's Program (p. 408)

Biochemistry and Biotechnology MS (p. 406)

Biochemistry and Biotechnology MS, Professional Emphasis (p. 407)

BIOL 1831 Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L): 5 semester hours

Prerequisites: A minimum of high school chemistry and MATH 1030; ENGL 1100 or equivalent (may be taken concurrently). Required for students intending to major in biology or take specified biology courses at the 2000 level or above. This course presents an introduction to some of the principles of biology and scientific methodology applied to the molecular/ cellular through organ system levels of organization. Topics include: cell structure, metabolism, reproduction, heredity and major physiological processes regulated by organ systems. Three hours of lecture, three and one half hours of lab, and one hour of discussion per week.

BIOL 2012 Genetics: 3 semester hours

Prerequisites: BIOL 1831, MATH 1030, and CHEM 1111. This course covers the fundamental principles of inheritance, including classical genetic theory as well as recent advances in the molecular basis of heredity. It is three (3) hours of lecture per week.

BIOL 2013 Genetics Laboratory: 2 semester hours

Prerequisites: Concurrent registration in BIOL 2012, or consent of instructor. Laboratory to accompany BIOL 2012. Three and one-half hours of organized laboratory time per week. Students may need to return to the laboratory at unscheduled times to complete some exercises.

BIOL 2482 Microbiology: 3 semester hours

Prerequisites: BIOL 1831 (majors must also take BIOL 1821), MATH 1030, and CHEM 1111. Study of microorganisms, their metabolism, genetics, and their interaction with other forms of life. Three hours of lecture per week.

BIOL 2483 Microbiology Laboratory: 2 semester hours

Prerequisite: BIOL 2482 (may be taken concurrently). Experimental studies and procedures of microbiological techniques. Three and one-half hours of organized laboratory time per week. Students will need to return to the laboratory at unscheduled times to complete some exercises.

BIOL 3622 Cell Biology: 3 semester hours

Prerequisites: BIOL 1831, BIOL 2012, CHEM 1121, and MATH 1030. This course examines the organization and basic processes of cells including tissues, organelles, glycolysis, respiration, photosynthesis, trafficking, cytoskeleton, signal transduction, and cell division.

BIOL 3699 Undergraduate Internship in Biotechnology: 1-4 semester hours

Prerequisites: BIOL 1821, BIOL 1831, and CHEM 1111 and CHEM 1121 and consent of instructor. Concurrent enrollment in CHEM 2612 or higher is strongly encouraged. A 2.5 GPA and enrollment in the undergraduate Biotechnology Certificate Program is required. Internship will consist of a period of observation, experimentation and on-the-job training in a biotechnology laboratory. The laboratory may be industrial or academic. Credit will be determined by the number of hours a student works each week and in consultation between the intern's supervisor and instructor. Internship assignments will be commensurate with the education and experience of the student. Two credits may be used to fulfill the lab requirement.

BIOL 4442 Developmental Biology: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 3622. A study of the basic principles that shape the embryonic and post-embryonic development of animals with an emphasis on the underlying cellular and molecular mechanisms. Specific topics include fertilization, determination of cell fate and differentiation, cell migration, establishment of the body plan, formation of selected organs and organ systems, stem cells, and limb regeneration. Environmental influences on development and the impact of developmental biology on modern medicine are also discussed. Three hours of lecture/discussion per week. Students may not receive credit for both BIOL 4442 and BIOL 6442.

BIOL 4550 Bacterial Pathogenesis: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 2482. Examination of the strategies bacterial pathogens use to infect animals. Topics include host immune responses to infection, bacterial virulence factors, regulation of bacterial virulence, and the cellular and molecular approaches used to study host/parasite interactions. Three hours of lecture per week. Students may not receive credit for both BIOL 4550 and BIOL 6550.

BIOL 4602 Molecular Biology: 3 semester hours

Prerequisites: BIOL 2012 and CHEM 2612. This course is a survey of the principles of molecular biology, with emphasis on understanding the genetic regulation of DNA, RNA, and protein synthesis and function in eukaryotic cells.

BIOL 4608 Synthetic Biology: 3 semester hours

Prerequisites: BIOL 2012, BIOL 2482. A study of the molecular biology of microbial cells, in the context of synthetic biological systems. Topics include DNA replication, transcription, translation, gene regulation and protein structure as well as aspects of genetic engineering as they apply to the construction of novel biological systems. Following an introduction to the design of biological parts used in synthetic biology, students read, discuss and present recent journal articles in order to learn about current advances and applications of synthetic biology. Three hours of lecture per week. Students may not receive credit for BIOL 4608 and BIOL 6608.

BIOL 4614 Biotechnology Laboratory I: 4 semester hours

Prerequisites: BIOL 2012 or consent of instructor. An introduction to the fundamental concepts that underlie the field of biotechnology. Both the basic principles of molecular biology and hand-on experience with the techniques of the field will be addressed through lectures, discussions, and a series of laboratory exercises. Two hours of lecture and four hours of laboratory per week. Fulfills a laboratory requirement only; may not be used to fulfill the higher level (4000-5000) lecture course requirement for the B.A. or B.S. degree in biology. Students may not receive credit for BIOL 4614 and a comparable biotechnology course from another institution.

BIOL 4615 Biotechnology Laboratory II: 4 semester hours

Prerequisites: BIOL 4614 and either BIOL 4602 or BIOL 4732 or CHEM 4712, or consent of instructor. This course is an in-depth look at theory and practice of biotechnology. Lectures and discussion will examine the underlying principles, and laboratory exercises will present hands-on experience with current techniques. The course entails one hour of lecture and six hours of laboratory per week. It fulfills a laboratory requirement only and may not be used to fulfill the higher level (4000-5000) lecture course requirement for the B.A. or B.S. degree in Biology. Students may not receive credit for BIOL 4615 and BIOL 6615.

BIOL 4622 Cellular Basis of Disease: 3 semester hours

Prerequisites: BIOL 3622. A study of the structural organization and processes of eukaryotic cells, focusing on how defects in cellular function lead to genetic diseases and cancer. Topics of discussion may include membrane dynamics, intracellular trafficking, signal transduction, and the cell cycle. Three hours of lecture per week. Students may not receive credit for both BIOL 4622 and BIOL 6622.

BIOL 4632 Nucleic Acid Structure and Function: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 4732 or equivalent, or consent of instructor. A comprehensive view of the structural properties of DNA and RNA that promote molecular interactions and biological function. Topics will include the physical properties of nucleic acids, the formation and biological importance of higher order structures, RNA enzymatic activities, nucleic acid-protein interactions, and RNA metabolism. Three hours of lecture per week. Students may not receive credit for both BIOL 4632 and BIOL 6632.

BIOL 4642 Plant Molecular Biology and Biotechnology: 3 semester hours

Prerequisites: BIOL 2012, BIOL 3622. This course will introduce molecular biology principles that govern plant growth, development, and responses to stress. This course integrates the experimental approaches of genetics, molecular biology, and biochemistry, with a specific focus on biotechnology techniques and applications. Students may not receive credit for both BIOL 4642 and BIOL 6642.

BIOL 4652 Virology: 3 semester hours

Prerequisite: BIOL 2012 and BIOL 3622. This first half of the course entails a comparative study of the structure, replication, and molecular biology of viruses. The second half of the course focuses on the pathogenesis, control, and evolution of animal viruses. Three hours of lecture per week. Students may not receive credit for both BIOL 4652 and BIOL 6652.

BIOL 4797 Biochemistry and Biotechnology Seminar: 1 semester hour

Same as CHEM 4797. Prerequisites: Senior standing in the Biochemistry and Biotechnology program and consent of faculty advisor. This course will focus on selected publications related to biochemistry and biotechnology from both refereed journals and news sources. Students are expected to participate in discussions and to prepare oral and written presentations. Completion of the Major Field Achievement Test in Biochemistry & Biotechnology is a course requirement. May not be taken for graduate credit.

BIOL 4822 Introduction to Neuroscience: 3 semester hours

Prerequisite: BIOL 3802 or consent of instructor. The study of nervous systems, featuring the cellular bases of initiation and conduction for the impulse, synaptic transmission, and the network integrative function of invertebrate and vertebrate nervous systems. This course emphasizes the multidisciplinary nature of the neurosciences, including anatomical, physiological and molecular approaches to understanding neural function. Three hours of lecture per week.

BIOL 4842 Immunobiology: 3 semester hours

Prerequisite: BIOL 3622 and CHEM 2612. The fundamental principles and concepts of immunology and immunochemistry. Emphasis on the relation of immunological phenomena to biological phenomena and biological problems. Three hours lecture per week.

BIOL 4905 Research: 1-3 semester hours

Prerequisites: Consent of faculty research advisor. Research in an area selected by the student in consultation with and under the direct supervision of an UMSL biology faculty research adviser. Research opportunities are subject to availability and must be approved in advance of beginning research. The project may include the reading of pertinent literature, laboratory or field experience, including keeping of a logbook, and a summary paper and a presentation, all based on an average 8 hours per week per credit during a 15 week semester at the discretion of the instructor. Credit arranged. Course may be repeated for a total of up to 5 credit hours. A maximum of one lab requirement may be satisfied using any two BIOL 4905 credits. Additional credits may be applied toward the total biology hours required for the biology BA or BS. May not be taken for graduate credit.

BIOL 4920 Selected Topics in Biology: 3 semester hours

Prerequisites: Junior standing and consent of instructor. The topic for this course will vary each semester. Topics offered for the following semester will be posted in the departmental office. This course may be repeated once if the topic is different.

BIOL 5012 Advanced Genetics: 3 semester hours

Prerequisites: BIOL 2012 or consent of instructor. This course explores advanced topics in the study of genetics, including advanced principles of inheritance, classical genetic theory, advances in understanding the nature of genetic material, and the molecular basis of heredity. Variation between individuals and populations will be considered to emphasize the effects of genetics on both medical and evolutionary questions. A particular focus will be placed on identifying, analyzing, and communicating findings from recent primary literature.

BIOL 5069 Topics in Cellular and Molecular Biology: 1 semester hour

Prerequisite: Graduate standing or consent of instructor. Presentation and discussion of student and faculty research projects and/or current research articles in molecular, cellular and developmental biology. May be repeated. Course graded on a satisfactory/unsatisfactory basis.

BIOL 5436 Advanced Applied Bioinformatics: 3 semester hours

Prerequisites: BIOL 4732 or BIOL 4602 or consent of instructor. This course provides an advanced foundation in using various computational approaches to solve biological problems. Specific attention focuses on methods for using and interpreting information from biological databases, analyzing biological sequence information, and making functional and structural predictions. Students may not receive credit for both BIOL 4436 and BIOL 5436.

BIOL 5798 Practicum in Science in Business: 1-2 semester hours

Same as CHEM 5798. Prerequisites: Graduate standing and enrollment in a Professional Science emphasis in Chemistry, Biochemistry & Biotechnology, or Biology. Students will integrate and apply their scientific expertise to a practical, business-related problem. The course will emphasize interdisciplinary team-work as well as both written and oral communication skills.

BIOL 5799 Internship in Sciences in Business: 1-2 semester hours

Same as CHEM 5799. Prerequisites: Graduate standing and enrollment in a Professional Science emphasis area in Chemistry, Biochemistry & Biotechnology, or Biology. The internship will consist of a period of on-the-job training at a local company. Credit hours will be determined by the number of hours the student works each week and in consultation between the intern's supervisor and the course instructor. Internship assignments will be commensurate with the education and experience of the student, with an emphasis on work at the interface between the scientific and business components of the company. A written report describing the internship project is required.

BIOL 6442 Advanced Developmental Biology: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 3622. A study of the basic principles that shape the embryonic and post-embryonic development of animals with an emphasis on the underlying cellular and molecular mechanisms. Specific topics include fertilization, determination of cell fate and differentiation, cell migration, establishment of the body plan, formation of selected organs and organ systems, stem cells, and limb regeneration. Environmental influences on development and the impact of developmental biology on modern medicine are also discussed. Three hours of lecture/discussion per week. Students may not receive credit for both BIOL 4442 and BIOL 6442.

BIOL 6550 Advanced Bacterial Pathogenesis: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 2482. Examination of the strategies bacterial pathogens use to infect animals. Topics include host immune responses to infection, bacterial virulence factors, regulation of bacterial virulence, and the cellular and molecular approaches used to study host/parasite interactions. Students may not receive credit for both BIOL 6550 and BIOL 4550. Students will be required to give an oral presentation and/or write an extra paper on a topic relevant to the course. Three hours of lecture per week.

BIOL 6602 Advanced Molecular Biology: 3 semester hours

Prerequisites: BIOL 2012 and CHEM 2612, or consent of instructor. This course covers advanced principles of molecular biology, with an emphasis on primary literature. Students may be required to give an oral presentation and/or write papers on a topic relevant to the course. Students may not receive graduate credit for both BIOL 4602 and BIOL 6602.

BIOL 6608 Advanced Synthetic Biology: 3 semester hours

Prerequisites: BIOL 2012, BIOL 2482. A study of the molecular biology of microbial cells, in the context of synthetic biological systems. Topics include DNA replication, transcription, translation, gene regulation and protein structure as well as aspects of genetic engineering as they apply to the construction of novel biological systems. Following an introduction to the design of biological parts used in synthetic biology, students read, discuss and present recent journal articles in order to learn about current advances and applications of synthetic biology. Three hours of lecture per week. Students may not receive credit for both BIOL 4608 and BIOL 6608.

BIOL 6615 Advanced Biotechnology Laboratory II: 4 semester hours

Prerequisites: BIOL 4602 or BIOL 4732 or CHEM 4712, or consent of instructor. This course is an advanced analysis of the theory and practice of biotechnology. Lectures and discussion will examine the underlying principles, and laboratory exercises will present hands-on experience with current techniques. It entails one hour of lecture and six hours of laboratory per week. Students may not receive credit for both BIOL 6615 and BIOL 4615.

BIOL 6622 Advanced Cellular Basis of Disease: 3 semester hours

Prerequisites: BIOL 3622, or consent of instructor. A study of the structural organization and processes of eukaryotic cells, focusing on how defects in cellular function lead to genetic diseases and cancer. Topics of discussion may include membrane dynamics, intracellular trafficking, signal transduction, and the cell cycle. Three hours of lecture per week. Students may not receive credit for both BIOL 6622 and BIOL 4622.

BIOL 6632 Advanced Nucleic Acid Structure and Function: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 4732 or equivalent, or consent of instructor. A comprehensive view of the structural properties of DNA and RNA that promote molecular interactions & biological function. Topics will include the physical properties of nucleic acids, the formation and biological importance of higher order structures, RNA enzymatic activities, nucleic acid-protein interactions, and RNA metabolism. Three hours of lecture and one hour of discussion per week. Students may not receive credit for both BIOL 4632 and BIOL 6632.

BIOL 6642 Advanced Plant Biology and Biotechnology: 3 semester hours

Prerequisites: Graduate standing. This course will introduce molecular biology principles that govern plant growth, development, and responses to stress. This course integrates the experimental approaches of genetics, molecular biology, and biochemistry, with a specific focus on biotechnology techniques and applications. Student may not receive credit for both BIOL 4642 and BIOL 6642.

BIOL 6652 Advanced Virology: 3 semester hours

Prerequisites: BIOL 2012, BIOL 3622, and graduate standing. This first half of the course entails a comparative study of the structure, replication, and molecular biology of viruses. The second half of the course focuses on the pathogenesis, control, and evolution of animal viruses. Three hours of lecture, one hour of discussion or seminar per week. Students may not receive credit for both BIOL 4652 and BIOL 6652.

BIOL 6699 Graduate Internship in Biotechnology: 1-4 semester hours

Prerequisites: Graduate standing and enrollment in graduate Biotechnology Certificate Program. 6 credit hours maximum (maximum of 8 combined credit hours of BIOL 6905 and internship) Internship will consist of period of observation, experimentation and on-the-job training in biotechnology laboratory. The laboratory may be industrial or academic. Credit will be determined by the number of hours the student works each week and in consultation between the intern's supervisor and the instructor. Internship assignments will be commensurate with the education and experience of the student.

BIOL 6889 Graduate Seminar: 2 semester hours

Presentation and discussion of various research problems in biology. Graduate student exposure to the seminar process.

BIOL 6905 Graduate Research in Biology: 1-10 semester hours

Research in area selected by student in consultation with faculty members.

BIOL 6915 Graduate Research Practicum: 1-2 semester hours

Prerequisite: Consent of instructor. This course is designed for graduate students wishing to pursue research experience in an area outside their dissertation topic. The project can be techniques-oriented or focused on a specific research question. The credit hours will depend on the time commitment to the project as decided by the supervisory faculty member.

CHEM 1111 Introductory Chemistry I (MOTR CHEM 150L): 5 semester hours

Prerequisite: MATH 1030 (or a score of 26 or higher on either the Math ACT or the Missouri Math Placement Test) and MATH 1035 (MATH 1035 may be taken concurrently). Presents an introduction to the fundamental laws and theories of chemistry. Laboratory experiments are designed to demonstrate some aspects of qualitative and quantitative analysis and to develop skills in laboratory procedures. Chemistry majors may not include both CHEM 1011 and CHEM 1111 in the 120 hours required for graduation. Three hours of lecture, one and one-half hours of workshop, and three hours of laboratory per week.

CHEM 1121 Introductory Chemistry II: 5 semester hours

Prerequisite: CHEM 1111 or advanced placement. Lecture and laboratory are a continuation of CHEM 1111. Three hours of lecture, one and one-half hours of workshop and three hours laboratory per week.

CHEM 2223 Quantitative Analysis in Chemistry: 3 semester hours

Prerequisites: CHEM 1121. This course covers basic analytical chemistry theory and techniques, principles of experimental error analysis, and the application of statistics to data treatment. A significant proportion of the laboratory experiments emphasize quantification of unknown samples.

CHEM 2612 Organic Chemistry I: 3 semester hours

Prerequisite: CHEM 1121 (may be taken concurrently). An introduction to the structure, properties, synthesis, and reactions of aliphatic and aromatic carbon compounds. Three hours of lecture per week.

CHEM 2622 Organic Chemistry II: 3 semester hours

Prerequisite: CHEM 2612. A systematic study of organic reactions and their mechanisms; organic synthetic methods. Three hours of lecture per week.

CHEM 2633 Organic Chemistry Laboratory: 2 semester hours

Prerequisite: CHEM 2612. An introduction to laboratory techniques and procedures of synthetic organic chemistry including analysis of organic compounds. One hour of lecture and four and one-half hours of laboratory per week.

CHEM 3643 Advanced Organic Chemistry Laboratory: 2 semester hours

Prerequisites: CHEM 2223, CHEM 2622, CHEM 2633, and CHEM 3022 (may be taken concurrently). Identification of organic compounds by classical and spectroscopic methods; advanced techniques in synthesis and separation of organic compounds. One hour of lecture and four and one-half hours of laboratory per week. Not for graduate credit.

CHEM 3905 Chemical Research: 1-10 semester hours

Prerequisite: Consent of instructor. Independent laboratory and library study, in conjunction with faculty member, of fundamental problems in chemistry. A written report describing the research is required.

CHEM 4712 Biochemistry: 3 semester hours

Prerequisites: CHEM 2622. This course examines the chemistry and function of cell constituents, and the interaction and conversions of intracellular substances. Students may not receive credit for both BIOL 4732 and CHEM 4712.

CHEM 4722 Advanced Biochemistry: 3 semester hours

Prerequisite: CHEM 4712. This course covers selected advanced topics in the chemistry of life processes. Students may not receive credit for both CHEM 4722 and CHEM 5722.

CHEM 4733 Biochemistry Laboratory: 2 semester hours

Prerequisites: CHEM 4712 (may be taken concurrently), and CHEM 2223. Laboratory study of biochemical processes in cellular and subcellular systems with emphasis on the isolation and purification of proteins (enzymes) and the characterization of catalytic properties. One hour of lecture and four and one-half hours of laboratory per week.

CHEM 4772 Physical Biochemistry: 3 semester hours

Prerequisites: CHEM 3312 or CHEM 4712 or BIOL 4732. This course is designed to acquaint students with concepts and methods in biophysical chemistry. Topics that will be discussed include protein and DNA structures, forces involved in protein folding and conformational stability, protein-DNA interactions, methods for characterization and separation of macromolecules, and biological spectroscopy. Students may not receive credit for both CHEM 4772 and CHEM 5772.

CHEM 4774 Introduction to Bioinformatics: 3 semester hours

Prerequisites: CHEM 4712 or equivalent. This course introduces modern approaches in bioinformatics and computational biochemistry. Topics covered include a survey of biological databases, predictions from protein and DNA sequences, sequence alignment and sequence database searches, building phylogenetic trees, three-dimensional protein structure prediction, molecular modeling and simulation, and computational genomics. Students may not receive credit for both CHEM 4774 and CHEM 5774.

CHEM 4797 Biochemistry and Biotechnology Seminar: 1 semester hour

Same as CHEM 4797. Prerequisites: Senior standing in the Biochemistry and Biotechnology program and consent of faculty advisor. This course will focus on selected publications related to biochemistry and biotechnology from both refereed journals and news sources. Students are expected to participate in discussions and to prepare oral and written presentations. Completion of the Major Field Achievement Test in Biochemistry & Biotechnology is a course requirement. May not be taken for graduate credit.

CHEM 4814 Special Topics in Chemistry: 1-10 semester hours

A reading and seminar course in selected advanced topics.

CHEM 4897 Seminar in Chemistry: 2 semester hours

Prerequisites: CHEM 3022 and senior standing. This course will provide students with the opportunity to listen to talks presented by students, faculty, and invited speakers. Students must complete a comprehensive examination before the end of the course. Chemistry majors should enroll during the semester in which they intend to graduate, or during their next-to-last semester before graduation.

CHEM 5212 Advanced Instrumental Analysis: 3 semester hours

Prerequisites: Graduate standing and consent of instructor. This course covers the principles and applications of modern methods of instrumental analysis for analytical chemistry measurements. Topics may be selected from, but are not limited to, the areas of electrochemistry, absorption and emission spectroscopy, chromatography, mass spectrometry, surface analysis, and nuclear magnetic resonance. Additional independent study and work are required. Students may not receive credit for both CHEM 4212 and CHEM 5212.

CHEM 5294 Special Topics in Analytical Chemistry: 1-3 semester hours

Prerequisites: Consent of instructor. This course covers topics in analytical chemistry that may change from semester to semester, and more than one course or topic may be offered in a given semester. Topics may be selected from the areas of chromatography, mass spectrometry, analytical spectroscopy, thermal analysis, X-ray diffraction, surface analysis, magnetism, ion-exchange, size-exclusion chromatography, or other topics in modern analytical chemistry. The course may be taken more than once for credit provided that topic(s) are different in each case.

CHEM 5302 Foundations of Physical Chemistry: 3 semester hours

Prerequisites: Consent of Instructor. A survey of fundamental and advanced topics in physical chemistry including thermodynamics, kinetics, quantum chemistry, and spectroscopy. Three hours of lecture per week. Additional independent study work is required. Students may not receive credit for both CHEM 4302 and CHEM 5302.

CHEM 5394 Special Topics in Physical Chemistry: 1-3 semester hours

Prerequisite: Consent of instructor. The topic for this course may change from semester to semester, and more than one course or topic can be offered in a given semester. The course may be taken more than once for credit provided that the topic is different in each case. The course can have more than one instructor.

CHEM 5396 Directed Readings in Physical Chemistry: 1-3 semester hours

Prerequisites: Consent of Physical Chemistry Faculty. A series of readings of monographs, review papers, and/or research publications for a particular student directed at providing that student with appropriate background preparation for experimental or theoretical Ph.D.-level research in an area of physical chemistry. The particular readings will be selected by the physical chemistry staff. Potential topics include but are not limited to advances in Electrochemistry, Surface Chemistry, Thermodynamics, Molecular Spectroscopy, Quantitative Absorption Spectroscopy using new Methodologies, Applications of Group Theory in Spectroscopy, and Computational Chemistry. Assessment may be in various forms including by assignments and seminars. Students may take this course more than once for credit through the particular topic must be different in each case.

CHEM 5494 Special Topics in Inorganic Chemistry: 1-3 semester hours

Prerequisite: Consent of instructor. The topic for this course may change from semester to semester, and more than one course or topic can be offered in a given semester. The course may be taken more than once for credit provided that the topic is different in each case. The course can have more than one instructor.

CHEM 5622 Advanced Organic Chemistry II - Reactions And Synthesis: 3 semester hours

Prerequisite: CHEM 2622. This graduate level course will examine a variety of organic transformations typically utilized in organic synthesis. Topics may include, carbon-carbon bond formation, pericyclic reactions, oxidation, reduction, and functional group interconversions. Mechanism and stereochemistry will also be emphasized. Three hours of lecture per week. Credit cannot be earned for both CHEM 4622 and CHEM 5622.

CHEM 5652 Spectroscopic Identification of Organic Compounds: 3 semester hours

Prerequisites: Graduate standing or CHEM 3643. An applied approach to the use of spectroscopic techniques in organic chemistry. Topics to include integrated applications of infrared and Raman spectroscopy, ^{13}C and ^1H nuclear magnetic resonance spectroscopy and mass spectroscopy for the purpose of elucidating the structure and dynamics of organic compounds. Three hours of lecture per week.

CHEM 5694 Special Topics in Organic Chemistry: 1-3 semester hours

Prerequisite: Consent of instructor. The topic for this course may change from semester to semester, and more than one course or topic can be offered in a given semester. The course may be taken more than once for credit provided that the topic is different in each case. The course can have more than one instructor.

CHEM 5772 Advanced Physical Biochemistry: 3 semester hours

Prerequisites: CHEM 3312 or CHEM 4712 or BIOL 4732. Designed to acquaint students with concepts and methods in biophysical chemistry. Topics that will be discussed include protein and DNA structures, forces involved in protein folding and conformational stability, protein-DNA interactions, methods for characterization and separation of macromolecules, and biological spectroscopy. Three hours of lecture per week. Students may not receive credit for both CHEM 4772 and CHEM 5772.

CHEM 5774 Bioinformatics: 3 semester hours

Prerequisites: CHEM 4712 or equivalent. This course introduces modern approaches in bioinformatics and computational biochemistry. Topics to be covered include a survey of biological databases, predictions from protein and DNA sequences, sequence alignment and sequence database searches, building phylogenetic trees, three-dimensional protein structure prediction, molecular modeling and simulation, and computational genomics. Additional independent study work is required. Students may not receive credit for both CHEM 4774 and CHEM 5774.

CHEM 5794 Special Topics in Biochemistry: 1-3 semester hours

Prerequisites: Consent of instructor. The topic for this course may change from semester to semester, and more than one course or topic can be offered in a given semester. The course may be taken more than once for credit provided that the topic is different in each case. The course can have more than one instructor.

CHEM 5798 Practicum in Science in Business: 1-2 semester hours

Same as: BIOL 5798. Prerequisites: Graduate standing and enrollment in a Professional Science emphasis in Chemistry, Biochemistry & Biotechnology, or Biology. Students will integrate and apply their scientific expertise to a practical, business-related problem. The course will emphasize interdisciplinary team-work as well as both written and oral communication skills.

CHEM 5799 Internship in Science in Business: 1-2 semester hours

Same as: BIOL 5799. Prerequisites: Graduate standing and enrollment in a Professional Science emphasis area in Chemistry, Biochemistry & Biotechnology, or Biology. The internship will consist of period of on-the-job training at a local company. Credit hours will be determined by the number of hours the student works each week and in consultation between the intern's supervisor and the course instructor. Internship assignments will be commensurate with the education and experience of the student, with an emphasis on work at the interface between the scientific and business components of the company. A written report describing the internship project is required.

CHEM 6787 Problem Seminar in Biochemistry: 1 semester hour

Prerequisite: Consent of the biochemistry staff. Problems from the current literature, presentations and discussions by faculty, students and visiting scientists. Ph.D. students may take more than once for credit. Up to three credits may be applied to the M.S. degree program.

CHEM 6897 Chemistry Colloquium: 1 semester hour

This course consists of presentations of papers by faculty and invited speakers. It meets for one hour per week.

CHEM 6905 Graduate Research in Chemistry: 1-10 semester hours

Biology

General Information

Degrees and Areas of Concentration

The Department of Biology provides academic programs leading to the B.A. or B.S. in Biology. In cooperation with the College of Education, the department offers the B.S. Ed. in Secondary Education with Emphasis in Biology and the B.A. or B.S. in Biology with Master's Level Coursework for Secondary Teacher Certification. It also offers graduate work leading to the Master of Science and the Doctor of Philosophy degrees in Biology. Biology faculty members are engaged in teaching and research in areas ranging from cell and molecular biology to population and community studies.

Minor in Biology

Students majoring in another discipline may earn a minor in biology by completing a prescribed course of study. Unique programs can be developed to coordinate with special career objectives.

Graduate Studies

The Department of Biology offers graduate work leading to the M.S. and Ph.D. degrees in biology. Graduate students will normally work toward an M.S. or Ph.D. degree in two broad areas of biology: a) cellular, molecular, and developmental biology, or b) ecology, evolution, and systematics. Students in the M.S. and Ph.D. programs also have the opportunity to do their graduate work in collaboration with scientists at the Missouri Botanical Garden, the Donald Danforth Plant Science Center, or the Saint Louis Zoo through cooperative graduate programs.

Facilities

Department facilities include research and teaching laboratories, environmental chambers, greenhouses, and a large array of supporting modern research instrumentation. Graduate research can be pursued using facilities of the Missouri Botanical Garden, the Donald Danforth Plant Science Center, or the Saint Louis Zoo. Several sites within an hour of campus are suitable for regional field studies, including state parks, wildlife conservation areas, the Shaw Nature Reserve, and Washington University's Tyson Research Center. UMSL is a member of the St. Louis University Research Station Consortium that operates Lay and Reis Field Stations in Missouri and is also a member of the Organization for Tropical Studies, which operates three field stations in Costa Rica. Student researchers work independently at research stations throughout the world.

Cooperative Programs

The department participates in a cooperative consortium program in biology with Washington University, Saint Louis University, Southern Illinois University-Edwardsville, the St. Louis Zoo, the Donald Danforth Plant Science Center, and the Missouri Botanical Garden.

Program Objectives and Career Prospects

The degree program at the baccalaureate level is designed to prepare the student for further professional training in areas such as medicine, dentistry, veterinary medicine, optometry, plant science, conservation, and related areas or for further graduate training in research in biology.

The Master of Science program is an extension of the undergraduate program and provides the research-oriented training and education necessary for students to enter doctoral programs in biology and develops

professional biologists qualified to function in responsible technical positions. It also trains students to become effective secondary school and junior college biology teachers.

The Ph.D. program prepares students to be research biologists in academics or other professional fields in ecology, evolution and systematic and cellular and molecular biology. Employment opportunities are available in college or university research and teaching, in government and public institutions such as museums, botanical gardens and conservation organizations, and in industry.

Degrees

Biology BA (p. 411)

Biology BS (p. 414)

Biology MS (p. 418)

- Cell and Molecular Biology Emphasis (p. 419)
- Ecology Evolution and Systematics Emphasis (p. 420)
- Professional Science in Cellular and Molecular Biology Emphasis (p. 421)

Biology MS Accelerated Master's Degree (p. 421)

Biology PhD

- Cell and Molecular Biology Emphasis (p. 422)
- Ecology, Evolution and Behavior Emphasis (p. 424)
- Integrative Biology Emphasis (p. 426)

Minors

Biology Minor (p. 418)

Environmental Studies Minor (p. 572)

Certificates

Biotechnology Graduate Certificate (p. 427)

Global Biodiversity Conservation and Leadership Graduate Certificate (p. 579)

Courses

BIOL 1010 Introduction to Student Research: 1-3 semester hours

Prerequisites: Minimum of four semesters of high school science and math courses and consent of the instructor. This course provides high school students an opportunity to develop individual research projects under faculty mentorship. It includes interdisciplinary lectures, demonstrations, seminars, and project guidance. Evaluation will be based on written and oral presentation of the research project and student portfolio.

BIOL 1012 General Biology: The Science of Life (MOTR BIOL 100): 3 semester hours

This non-majors biology course is designed for students who want to know more about themselves and the living things surrounding them. The course emphasizes the fundamental principles and processes of biology. Course topics may include the scientific method, organization of living things, cell and molecular biology, genetics, evolution, human body systems, and ecology. Credit for BIOL 1012 can be applied towards fulfillment of the general education requirement in science. Biology majors, Biochemistry and Biotechnology (BCBT) majors, or any students who plan to pursue a career in medicine or one of the medical-oriented professions should enroll in BIOL 1831 rather than BIOL 1012.

BIOL 1013 General Biology Laboratory: The Science of Life: 1 semester hour

Prerequisites: BIOL 1012 (may be taken concurrently). This non-majors biology laboratory course is designed to complement the non-majors general biology lecture course BIOL 1012. The activities students undertake and the thought processes they develop are similar to those used by scientists. Students become actively involved in learning about science by doing it. Specific course topics may include the scientific method, organization of living things, cell and molecular biology, genetics, evolution, ecology, and human anatomy and physiology. Credit for BIOL 1013 can be applied towards fulfillment of the general education requirement in a laboratory science.

BIOL 1102 Human Biology (MOTR LIFS 150): 3 semester hours

Lectures and readings concerned with the reproduction, development, genetics, functional anatomy, behavior, ecology, and evolution of the human species. Three hours lecture per week.

BIOL 1110 Nutrition in Health: 3 semester hours

This course studies dietary nutrients essential for health, proper selection of foods to provide them and current issues affecting them.

BIOL 1131 Human Physiology and Anatomy I: 4 semester hours

Prerequisites: BIOL 1012 or equivalent or consent of instructor. This course covers the basic aspects of the structure of the healthy human body and how it functions. Special emphasis is on how the human body adapts itself to its environment and how changes affect physiological activities. Three hours lecture and two hours laboratory per week.

BIOL 1131A Human Physiology and Anatomy I Lecture Only: 3 semester hours

Prerequisites: BIOL 1012. This course covers the basic aspects of the structure of the healthy human body and how it functions. Special emphasis is on how the human body adapts itself to its environment and how changes affect physiological activities. Three hours lecture per week.

BIOL 1131L Human Anatomy and Physiology I Lab Only: 1 semester hour

Prerequisites: BIOL 1131A, BIOL 1012, and consent of instructor. This laboratory course covers the basic aspects of the structure of the healthy human body and how it functions. Special emphasis is on how the human body adapts itself to its environment and how changes affect physiological activities. It involves two hours of laboratory per week.

BIOL 1141 Human Physiology and Anatomy II: 4 semester hours

Prerequisite: BIOL 1131. A continuation of BIOL 1131. A study of the basic aspects of human physiology and anatomy. Three hours lecture and two hours laboratory per week.

BIOL 1141A Human Anatomy and Physiology II Lecture Only: 3 semester hours

Prerequisites: BIOL 1131 and consent of instructor. This course is a continuation of BIOL 1131 and includes a study of the basic aspects of human physiology and anatomy. This course is the lecture portion only of BIOL 1141.

BIOL 1141L Human Anatomy and Physiology II Lab Only: 1 semester hour

Prerequisites: BIOL 1131 and consent of instructor. This laboratory course is a continuation of BIOL 1131 and includes a study of the basic aspects of human physiology and anatomy. It involves two hours of laboratory per week.

BIOL 1150 Concepts in Health and Wellness: 3 semester hours

This course introduces students to the concepts and issues related to multiple dimensions of health and wellness through topics such as nutrition, exercise, mental health, sexual health, and environmental health.

BIOL 1162 General Microbiology: 3 semester hours

Prerequisite: BIOL 1012 or its equivalent. A survey of microbiology structure, genetics, and physiology. Special emphasis will be placed on the transmission and control of such organisms as it relates to the maintenance of human health. Three hours of lecture per week.

BIOL 1202 Environmental Biology: 3 semester hours

An examination of the biological basis of current environmental problems, with emphasis upon resources, energy, pollution and conservation. Three hours lecture per week.

BIOL 1800 Introduction to the Biology Major: 1 semester hour

Prerequisites: Biology major or consent of the instructor. This course is an orientation to the field of biology for majors and for students who are considering declaring the major. This course introduces students to concepts, skills, and practices that are essential for success as a Biology major and must be completed by all freshman and transfer Biology majors during their first semester of study at UMSL.

BIOL 1821 Introductory Biology: Organisms and the Environment (MOTR BIOL 150LEC): 5 semester hours

Prerequisites: A minimum of high school chemistry, ENGL 1100 or equivalent (may be taken concurrently), and placement into college algebra or higher. This course presents an introduction to some of the principles of biology and scientific methodology applied to the organism and supraorganism levels of biology. Topics to be covered may include ecology, evolution, diversity, and population biology. Three hours of lecture, three our hours of lab, and one hour of discussion per week. This course is required for students intending to major in biology or take specified biology courses at the 2000 level or above.

BIOL 1831 Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L): 5 semester hours

Prerequisites: A minimum of high school chemistry and MATH 1030; ENGL 1100 or equivalent (may be taken concurrently). Required for students intending to major in biology or take specified biology courses at the 2000 level or above. This course presents and introduction to some of the principles of biology and scientific methodology applied to the molecular/ cellular through organ system levels of organization. Topics include: cell structure, metabolism, reproduction, heredity and major physiological processes regulated by organ systems. Three hours of lecture, three and one half hours of lab, and one hour of discussion per week.

BIOL 1920 Introductory Topics in Biology: 1-5 semester hours

Prerequisites: Consent of instructor. The topics will vary each semester. See online course schedule for topics. Credit arranged. May be taken more than once for credit if topics are different. The applicability toward a Biology degree is dependent on the topic.

BIOL 2010 Introduction to Inquiry Approaches to STEM Education (STEP I): 1 semester hour

Same as CHEM 2010, PHYSICS 2010, MATH 2010, and SEC ED 2010. Prerequisites: Concurrent enrollment BIOL 1821, BIOL 1831, CHEM 1111, CHEM 1121, PHYSICS 2111, PHYSICS 2112, MATH 1800, or MATH 1900 or have a declared STEM major. Students who want to explore teaching careers become familiar with lesson plan development by writing, teaching and observing lessons in a local school class. Students build and practice inquiry-based lesson design skills and become familiar with and practice classroom management in the school setting. As a result of the STEP I experiences students should be able to decide whether to continue to explore teaching as a career and ultimately finishing the remainder of the WE TEACH MO curriculum leading to teacher certification. The classroom observations and teaching represent a major field component and requires at least one two hour block of free time during the school day once a week.

BIOL 2011 Designing Inquiry-Based STEM Experiences (STEP II): 1 semester hour

Same as CHEM 2011, PHYSICS 2011, MATH 2011, and SEC ED 2011. Prerequisites: BIOL 2010, CHEM 2010, PHYSICS 2010, MATH 2010, or SEC ED 2010. Students explore teaching careers, become familiar with STEM school setting through observing and discussing the school environment and by developing and teaching inquiry-based lessons.

BIOL 2012 Genetics: 3 semester hours

Prerequisites: BIOL 1831, MATH 1030, and CHEM 1111. This course covers the fundamental principles of inheritance, including classical genetic theory as well as recent advances in the molecular basis of heredity. It is three (3) hours of lecture per week.

BIOL 2013 Genetics Laboratory: 2 semester hours

Prerequisites: Concurrent registration in BIOL 2012, or consent of instructor. Laboratory to accompany BIOL 2012. Three and one-half hours of organized laboratory time per week. Students may need to return to the laboratory at unscheduled times to complete some exercises.

BIOL 2102 Ecology: 3 semester hours

Prerequisites: BIOL 1821 and BIOL 1831. This course examines the relationships between living organisms and their environment.

BIOL 2103 Ecology Laboratory: 2 semester hours

Prerequisites: BIOL 2102 (may be taken concurrently); a general statistics course is strongly recommended. This laboratory course analyzes environmental factors influencing the abundance and distribution of living organisms. Some classes will be held at field sites in and around St. Louis.

BIOL 2402 Vertebrate Anatomy: 3 semester hours

Prerequisites: BIOL 1821 and BIOL 1831. Development, structure, function, interrelationships, and zoogeography of vertebrate animals with particular attention to phylogenetic aspects. Three hours of lecture per week.

BIOL 2403 Vertebrate Anatomy Laboratory: 2 semester hours

Prerequisite: BIOL 2402 (may be taken concurrently). Laboratory to accompany BIOL 2402. Morphological analysis and systematic survey of major vertebrate groups. Overview of the vertebrate life forms and their adaptations to habitats and resources. Three and one-half hours of laboratory per week.

BIOL 2482 Microbiology: 3 semester hours

Prerequisites: BIOL 1831 (majors must also take BIOL 1821), MATH 1030, and CHEM 1111. Study of microorganisms, their metabolism, genetics, and their interaction with other forms of life. Three hours of lecture per week.

BIOL 2483 Microbiology Laboratory: 2 semester hours

Prerequisite: BIOL 2482 (may be taken concurrently). Experimental studies and procedures of microbiological techniques. Three and one-half hours of organized laboratory time per week. Students will need to return to the laboratory at unscheduled times to complete some exercises.

BIOL 2920 Contemporary Topics in Biology: 1-5 semester hours

Prerequisites: Consent of instructor. The topics will vary each semester. See course schedule online for topics. Credit arranged. May be taken more than once for credit if topics are different.

BIOL 3001 Experiential Practicum in Biosciences: 1 semester hour

Prerequisites: Consent of Biology Curriculum Committee. Credit for off-campus bioscience projects providing extraordinary student experience and service to a community in need.

BIOL 3102 Animal Behavior: 3 semester hours

Prerequisites: BIOL 1821 and BIOL 1831. The study of invertebrate and vertebrate behavior, including neurophysiological, hormonal, developmental, genetic, ecological and evolutionary aspects of behavior; behavior interactions within and between populations. Three hours of lecture per week.

BIOL 3103 Animal Behavior Laboratory: 2 semester hours

Prerequisites: BIOL 3102 (may be taken concurrently). Observational and experimental studies of animal behavior in the field and laboratory. Three and one-half hours of formal laboratory time per week, but additional time may be required for independent projects. Some activities involve field trips or trips to the St. Louis Zoo.

BIOL 3202 Conservation Biology: 3 semester hours

Prerequisites: BIOL 1821 and BIOL 1831. This course is an introduction to the principles and theories of conservation biology, and field interviews with governmental and nongovernmental agencies. Course topics may include biodiversity, extinctions, population modeling, habitat fragmentation, conservation area management, restoration ecology, and social science elements of conservation strategies. Class sessions will include lectures and discussions. Three hours of lecture per week.

BIOL 3203 Conservation Biology Laboratory: 2 semester hours

Prerequisite: BIOL 3202 (recommended to be taken concurrently). This is the laboratory to accompany BIOL 3202. This laboratory class will include several field trips to local conservation projects, and field interviews with governmental and nongovernmental agencies. Three and one-half hours of laboratory per week.

BIOL 3302 Evolution: 3 semester hours

Prerequisites: BIOL 1821, BIOL 1831, BIOL 2012, and MATH 1030. This course covers the theory, events, and processes of organic evolution.

BIOL 3622 Cell Biology: 3 semester hours

Prerequisites: BIOL 1831, BIOL 2012, CHEM 1121, and MATH 1030. This course examines the organization and basic processes of cells including tissues, organelles, glycolysis, respiration, photosynthesis, trafficking, cytoskeleton, signal transduction, and cell division.

BIOL 3699 Undergraduate Internship in Biotechnology: 1-4 semester hours

Prerequisites: BIOL 1821, BIOL 1831, and CHEM 1111 and CHEM 1121 and consent of instructor. Concurrent enrollment in CHEM 2612 or higher is strongly encouraged. A 2.5 GPA and enrollment in the undergraduate Biotechnology Certificate Program is required. Internship will consist of a period of observation, experimentation and on-the-job training in a biotechnology laboratory. The laboratory may be industrial or academic. Credit will be determined by the number of hours a student works each week and in consultation between the intern's supervisor and instructor. Internship assignments will be commensurate with the education and experience of the student. Two credits may be used to fulfill the lab requirement.

BIOL 3802 Vertebrate Physiology: 3 semester hours

Prerequisites: BIOL 1821 and BIOL 1831 and CHEM 1111. This course covers the basic functional aspects of organ systems in relation to the physiochemical properties of protoplasm. It is three hours of lecture per week.

BIOL 3803 Vertebrate Physiology Lab: 2 semester hours

Prerequisite: BIOL 3802 (may be taken concurrently). Instrumental and experimental studies in physiology. Three and one-half hours laboratory per week.

BIOL 3920 Special Topics in Biology: 1-5 semester hours

Prerequisites: Consent of instructor. The topics will vary each semester. See course schedule online for topics. Credit arranged. May be taken more than once for credit if topics are different.

BIOL 4102 Behavioral Ecology: 3 semester hours

Prerequisite: BIOL 3102 (BIOL 3302 recommended). The evolution and ecology of animal behavior. Topics include the theoretical framework for making predictions, foraging, decision making, sensory ecology, sexual selection, mating systems, sociality and groups, cooperation, signal use and communication. Three hours of lecture per week. Students may not receive credit for both BIOL 4102 and BIOL 6102.

BIOL 4122 Biostatistics: 3 semester hours

Prerequisites: MATH 1030 and a minimum of 15 hours in biology. This course covers basic theory and mathematics behind statistical testing in biology. It includes components on experimental design, a historical perspective on statistics, and the description of a range of parametric and non-parametric statistical tests. This course also includes a practical component, where students apply their statistical knowledge using the R statistical computing environment. The course fulfills the statistics requirement for the BA or BS degree in biology.

BIOL 4182 Population Biology: 3 semester hours

Prerequisite: BIOL 2102 and BIOL 2012 (BIOL 3302 recommended). Introduces concepts and mathematical models of population ecology and population genetics. By integrating the ecology and genetics of populations, the course goal is to understand the processes that contribute to microevolution of populations. Topics include: demography, metapopulation biology, natural selection, migration, gene flow, and genetic drift. Three hours of lecture per week. Students may not receive credit for both BIOL 4182 and BIOL 6182.

BIOL 4270 Global Climate Change: 3 semester hours

Prerequisites: BIOL 3302 or consent of instructor. Topics included are fundamental physical, meteorological, and biological circumstances of global climate change, as well as predictions of its future effects on biological diversity, including humans, and how those estimates are made. In addition, basic environmental economics and politics of climate change at local and global levels will be included. The course will be taught as a series of lectures and discussions led by guest experts in each of the subdisciplines covered. Students may not receive credit for both BIOL 4270 and BIOL 6270.

BIOL 4299 Practicum in Conservation: 2 semester hours

Prerequisites: BIOL 3202 and consent of instructor. This course is generally restricted to students officially enrolled in the Certificate Program in Conservation Biology. The course provides practical experience with conservation or environmental agencies. Specific placement will be selected according to student's interests and career goals as well as availability of agency openings. Course requirements include practical experience and final report on practicum experience.

BIOL 4402 Ornithology: 3 semester hours

Prerequisites: BIOL 2102 and junior standing. Introduction to avian biology and ecology. Material to be covered will include basic adaptations of anatomy, physiology, and behavior of birds. There will be a strong emphasis on avian ecology and conservation. Specific topics will include flight, reproductive behavior, migration, foraging behavior, community structure, and current conservation concerns. The diversity of birds will be emphasized through comparisons between temperate and tropical regions. Three hours of lecture per week.

BIOL 4403 Ornithology Laboratory: 2 semester hours

Prerequisites: BIOL 4402 (may be taken concurrently), or consent of instructor. This course will introduce students to methods of identifying and studying birds. Labs will almost entirely be comprised of field trips to local areas and will emphasize diversity of birds, adaptations shown by different groups, and means of identification, particularly of birds found in Missouri. Field projects will focus on techniques for censusing birds, sampling foraging behavior, and studying habitat selection. Indoor periods will cover internal and external anatomy of birds. Slides and field trips to the St Louis Zoo will be used to survey the diversity of birds worldwide. Three and one-half hours of laboratory per week. Longer (e.g., Saturday) field trips will be made when appropriate.

BIOL 4412 Principles of Ichthyology: 3 semester hours

Prerequisites: BIOL 1821 and BIOL 2102. This course provides an introduction to the diversity of fishes, with a particular emphasis on systematics as well as the form and function of different species in the context of their natural history. Students will learn how to identify common fish species in Missouri and other portions of the United States. The course includes hands-on work with specimens and excursions to learn about fish in their natural habitats.

BIOL 4422 Entomology: 3 semester hours

Prerequisites: BIOL 1821, BIOL 1831, 9 additional hours of biology and upper-division standing. Development, structure, function, behavior and ecology of insects, including a systematic survey of the orders of Insecta. Three hours of lecture per week.

BIOL 4423 Entomology Laboratory: 2 semester hours

Prerequisites: BIOL 4422 (may be taken concurrently). Laboratory to accompany BIOL 4422. Studies of the morphology, physiology, and behavior of insects to give a sampling of biological studies of the class Insecta. Formation of a collection of insects, comprising a systematic survey of orders and principal families, will be an integral part of the course and will require additional time beyond the official lab hours. Three and one-half hours of lab per week.

BIOL 4436 Applied Bioinformatics: 3 semester hours

Prerequisites: BIOL 2012 and one of the following: BIOL 3302, BIOL 3622, BIOL 4182, BIOL 4602, or BIOL 4732. This course will provide exposure to using various computational approaches to solve biological problems. Specific attention will focus on methods for using and interpreting information from biological databases, analyzing biological sequence information, and making functional and structural predictions. Students may not receive credit for both BIOL 4436 and BIOL 5436.

BIOL 4442 Developmental Biology: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 3622. A study of the basic principles that shape the embryonic and post-embryonic development of animals with an emphasis on the underlying cellular and molecular mechanisms. Specific topics include fertilization, determination of cell fate and differentiation, cell migration, establishment of the body plan, formation of selected organs and organ systems, stem cells, and limb regeneration. Environmental influences on development and the impact of developmental biology on modern medicine are also discussed. Three hours of lecture/discussion per week. Students may not receive credit for both BIOL 4442 and BIOL 6442.

BIOL 4502 Evolution of Cognition: 3 semester hours

Prerequisites: BIOL 3102 or consent of instructor; BIOL 3302 and PSYCH 2211 are strongly recommended. The evolutionary ecology of animal cognitive abilities. Topics include learning, memory, perception, navigation, and communication from an evolutionary perspective. The focus is on cognitive abilities as adaptations, which have evolved to solve specific environmental problems. Topics include empirical methods for assessing cognitive ability, experimental design, theoretical approaches for generating predictions, and the parsimonious interpretation of data. Two hours of lecture and one hour of discussion per week.

BIOL 4550 Bacterial Pathogenesis: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 2482. Examination of the strategies bacterial pathogens use to infect animals. Topics include host immune responses to infection, bacterial virulence factors, regulation of bacterial virulence, and the cellular and molecular approaches used to study host/parasite interactions. Three hours of lecture per week. Students may not receive credit for both BIOL 4550 and BIOL 6550.

BIOL 4602 Molecular Biology: 3 semester hours

Prerequisites: BIOL 2012 and CHEM 2612. This course is a survey of the principles of molecular biology, with emphasis on understanding the genetic regulation of DNA, RNA, and protein synthesis and function in eukaryotic cells.

BIOL 4608 Synthetic Biology: 3 semester hours

Prerequisites: BIOL 2012, BIOL 2482. A study of the molecular biology of microbial cells, in the context of synthetic biological systems. Topics include DNA replication, transcription, translation, gene regulation and protein structure as well as aspects of genetic engineering as they apply to the construction of novel biological systems. Following an introduction to the design of biological parts used in synthetic biology, students read, discuss and present recent journal articles in order to learn about current advances and applications of synthetic biology. Three hours of lecture per week. Students may not receive credit for BIOL 4608 and BIOL 6608.

BIOL 4614 Biotechnology Laboratory I: 4 semester hours

Prerequisites: BIOL 2012 or consent of instructor. An introduction to the fundamental concepts that underlie the field of biotechnology. Both the basic principles of molecular biology and hand-on experience with the techniques of the field will be addressed through lectures, discussions, and a series of laboratory exercises. Two hours of lecture and four hours of laboratory per week. Fulfills a laboratory requirement only; may not be used to fulfill the higher level (4000-5000) lecture course requirement for the B.A. or B.S. degree in biology. Students may not receive credit for BIOL 4614 and a comparable biotechnology course from another institution.

BIOL 4615 Biotechnology Laboratory II: 4 semester hours

Prerequisites: BIOL 4614 and either BIOL 4602 or BIOL 4732 or CHEM 4712, or consent of instructor. This course is an in-depth look at theory and practice of biotechnology. Lectures and discussion will examine the underlying principles, and laboratory exercises will present hands-on experience with current techniques. The course entails one hour of lecture and six hours of laboratory per week. It fulfills a laboratory requirement only and may not be used to fulfill the higher level (4000-5000) lecture course requirement for the B.A. or B.S. degree in Biology. Students may not receive credit for BIOL 4615 and BIOL 6615.

BIOL 4622 Cellular Basis of Disease: 3 semester hours

Prerequisites: BIOL 3622. A study of the structural organization and processes of eukaryotic cells, focusing on how defects in cellular function lead to genetic diseases and cancer. Topics of discussion may include membrane dynamics, intracellular trafficking, signal transduction, and the cell cycle. Three hours of lecture per week. Students may not receive credit for both BIOL 4622 and BIOL 6622.

BIOL 4632 Nucleic Acid Structure and Function: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 4732 or equivalent, or consent of instructor. A comprehensive view of the structural properties of DNA and RNA that promote molecular interactions and biological function. Topics will include the physical properties of nucleic acids, the formation and biological importance of higher order structures, RNA enzymatic activities, nucleic acid-protein interactions, and RNA metabolism. Three hours of lecture per week. Students may not receive credit for both BIOL 4632 and BIOL 6632.

BIOL 4642 Plant Molecular Biology and Biotechnology: 3 semester hours

Prerequisites: BIOL 2012, BIOL 3622. This course will introduce molecular biology principles that govern plant growth, development, and responses to stress. This course integrates the experimental approaches of genetics, molecular biology, and biochemistry, with a specific focus on biotechnology techniques and applications. Students may not receive credit for both BIOL 4642 and BIOL 6642.

BIOL 4652 Virology: 3 semester hours

Prerequisite: BIOL 2012 and BIOL 3622. This first half of the course entails a comparative study of the structure, replication, and molecular biology of viruses. The second half of the course focuses on the pathogenesis, control, and evolution of animal viruses. Three hours of lecture per week. Students may not receive credit for both BIOL 4652 and BIOL 6652.

BIOL 4713 Techniques in Biochemistry: 2 semester hours

Prerequisites: BIOL 4732 or CHEM 4712 (may be taken concurrently). Laboratory activities introducing fundamental qualitative and quantitative biochemical techniques. Student evaluation will be based on laboratory participation, student laboratory reports, and written examinations. Three and one-half hours of organized laboratory time per week. Students may need to return to the laboratory at unscheduled times to complete some experiments.

BIOL 4732 Principles of Biochemistry: 3 semester hours

Prerequisites: CHEM 2612 and BIOL 1831. This course explores the structure, function, and chemistry of biological molecules including enzymology, bioenergetics, and cellular metabolism. Biochemistry and Biotechnology majors should take CHEM 4712. Students may not receive credit for both BIOL 4732 and CHEM 4712.

BIOL 4743 Principles of Pharmacology: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 3622 or consent of instructor. This course covers the foundational principles of drug delivery, distribution and loss within the body (pharmacokinetics), and the molecular mechanisms of drug effects in the body (pharmacodynamics). To illuminate these principles, selected classes of drugs will be discussed in regard to delivery, distribution with the body, mechanism of action, metabolism and elimination at both the qualitative and quantitative level. Students may not receive credit for both BIOL 4743 and BIOL 6743.

BIOL 4797 Biochemistry and Biotechnology Seminar: 1 semester hour

Same as CHEM 4797. Prerequisites: Senior standing in the Biochemistry and Biotechnology program and consent of faculty advisor. This course will focus on selected publications related to biochemistry and biotechnology from both refereed journals and news sources. Students are expected to participate in discussions and to prepare oral and written presentations. Completion of the Major Field Achievement Test in Biochemistry & Biotechnology is a course requirement. May not be taken for graduate credit.

BIOL 4822 Introduction to Neuroscience: 3 semester hours

Prerequisite: BIOL 3802 or consent of instructor. The study of nervous systems, featuring the cellular bases of initiation and conduction to the impulse, synaptic transmission, and the network integrative function of invertebrate and vertebrate nervous systems. This course emphasizes the multidisciplinary nature of the neurosciences, including anatomical, physiological and molecular approaches to understanding neural function. Three hours of lecture per week.

BIOL 4842 Immunobiology: 3 semester hours

Prerequisite: BIOL 3622 and CHEM 2612. The fundamental principles and concepts of immunology and immunochemistry. Emphasis on the relation of immunological phenomena to biological phenomena and biological problems. Three hours lecture per week.

BIOL 4889 Senior Seminar: 2 semester hours

Prerequisites: BIOL 1821, BIOL 1831, BIOL 2012, BIOL 3302, BIOL 3622, and the consent of your assigned Biology Advisor. This course involves oral and written presentations by students of selected scientific research papers. Students will also participate in discussions of scientific research. The course may not be taken for graduate credit. This course is intended to be taken during the last semester prior to graduation.

BIOL 4905 Research: 1-3 semester hours

Prerequisites: Consent of faculty research advisor. Research in an area selected by the student in consultation with and under the direct supervision of an UMSL biology faculty research adviser. Research opportunities are subject to availability and must be approved in advance of beginning research. The project may include the reading of pertinent literature, laboratory or field experience, including keeping of a logbook, and a summary paper and a presentation, all based on an average 8 hours per week per credit during a 15 week semester at the discretion of the instructor. Credit arranged. Course may be repeated for a total of up to 5 credit hours. A maximum of one lab requirement may be satisfied using any two BIOL 4905 credits. Additional credits may be applied toward the total biology hours required for the biology BA or BS. May not be taken for graduate credit.

BIOL 4910 Applied Community Health: 3 semester hours

Prerequisites: Consent of instructor; enrollment limited to community health certificate students. This course provides an advanced practical work experience emphasizing community health concepts. Experiences may include a practicum or internship in an outside agency, research, or an independent study with a community health focus. Students will collaborate with the program director to identify and define the project parameters based on student's experience and goals; all projects must be approved by the course instructor prior to enrollment.

BIOL 4915 Biology Internship: 1-3 semester hours

Prerequisites: Consent of faculty research advisor; generally restricted to junior and senior standing. Research in an area selected by the student to be conducted off-campus in a lab of a professional researcher or faculty person (the internship mentor) other than those in UMSL Biology. Research opportunities are subject to availability and must be approved in advance of beginning research by an UMSL biology faculty liaison and the internship mentor. The project normally includes the reading of pertinent literature, laboratory or field experience, including keeping of a logbook, and a summary paper and a presentation, all based on an average 8 hours per week per credit during a 15 week semester. Credit arranged. This course and BIOL 4905 may be repeated in any combination for a total of up to 5 credit hours. A maximum of one lab requirement may be satisfied using any two BIOL 4905 and/or BIOL 4915 credits. Additional credits may be applied toward the total biology hours required for the biology BA or BS.

BIOL 4920 Selected Topics in Biology: 3 semester hours

Prerequisites: Junior standing and consent of instructor. The topic for this course will vary each semester. Topics offered for the following semester will be posted in the departmental office. This course may be repeated once if the topic is different.

BIOL 5012 Advanced Genetics: 3 semester hours

Prerequisites: BIOL 2012 or consent of instructor. This course explores advanced topics in the study of genetics, including advanced principles of inheritance, classical genetic theory, advances in understanding the nature of genetic material, and the molecular basis of heredity. Variation between individuals and populations will be considered to emphasize the effects of genetics on both medical and evolutionary questions. A particular focus will be placed on identifying, analyzing, and communicating findings from recent primary literature.

BIOL 5059 Topics in Ecology, Evolution, and Systematics: 1 semester hour

Prerequisites: Graduate standing. Presentation and discussion of faculty and student current research projects in behavior, ecology, evolution, and systematics. May be repeated.

BIOL 5069 Topics in Cellular and Molecular Biology: 1 semester hour

Prerequisite: Graduate standing or consent of instructor. Presentation and discussion of student and faculty research projects and/or current research articles in molecular, cellular and developmental biology. May be repeated. Course graded on a satisfactory/unsatisfactory basis.

BIOL 5079 Topics in Floristic Taxonomy: 1 semester hour

Prerequisites: Graduate standing. This is a seminar course in systematics of higher plants, arranged in the Cronquist sequence of families, covering morphology, anatomy, palynology, biogeography, chemosystematics, cytology, and other aspects of plant classification and phylogenetics. It is given at the Missouri Botanical Garden. It is one hour per week.

BIOL 5089 Topics in Animal Behavior: 1 semester hour

Prerequisites: Graduate standing. Presentation and discussion of current research articles and/or student and faculty research projects in animal behavior, including ecology, evolution, genetics, and mechanisms of behavior. May be repeated.

BIOL 5099 Biology Colloquium: 1 semester hour

Prerequisites: Graduate standing. Attendance is required for the Biology weekly seminar series, consisting of research presentations by department faculty and invited speakers. Class sessions will include discussion of scientific research and presentation practices.

BIOL 5177 Graduate Research Writing Workshop in Biology: 1 semester hour

Prerequisites: Graduate standing. This hands-on course is designed to give Biology graduate students practical assistance and advice on writing, including grant proposal content and organization, writing succinctly but clearly, and editing. The course format will include both informational lectures with discussions and working sessions focused on writing and critiquing drafts. Students are recommended to begin the class ready to write at least one aim of a grant or thesis proposal. Course is graded on a satisfactory/unsatisfactory basis.

BIOL 5178 Introduction to Graduate Research in Biology: 1 semester hour

Prerequisites: Graduate standing or consent of instructor. A discussion-based class to introduce new PhD and thesis MS students to the Biology department, graduate school, and best research practices.

BIOL 5179 Ethical Issues in Biology: 1 semester hour

Prerequisites: Graduate standing. Using readings and discussions, students will explore ethical issues in Biology in both professional and social realms. Professional topics include authorship, grants accounting, and academic misconduct; social topics include ethical foundations of basic and applied science, government regulation of science, environmental and individual protection, and current issues. Course graded on a satisfactory/unsatisfactory basis.

BIOL 5192 Community Ecology: 3 semester hours

Prerequisites: Graduate standing and either BIOL 2102 and BIOL 4182 or an equivalent course. Studies of structure and organization of natural communities stressing the abundance and distribution of species, the regulation of species diversity, and the evolution of demographic parameters in populations.

BIOL 5302 Advanced Evolution: 3 semester hours

Prerequisites: BIOL 3302 or graduate standing. Explores advanced topics in the study of adaptation and the origin of species. Covers phenomena both within populations (e.g. natural selection, sexual selection, and molecular evolution) and between populations (e.g. speciation, coevolution, competition, gene flow, biogeography, and comparative phylogenetics), with a particular focus on recent primary literature.

BIOL 5312 Theory of Systematics: 3 semester hours

Prerequisites: BIOL 1821, BIOL 1831 and at least one course beyond the introductory level dealing with animal, plant, or microbial diversity (BIOL 2482, BIOL 2402, BIOL 3102, BIOL 4501, BIOL 4402, or BIOL 4422) or consent of instructor. This course investigates the theory of classification, phylogenetic analysis, systematic biology, and their relation to systematic practice. The course covers goals and schools of systematics, characters and homology, analysis of molecular and morphological data and underlying assumptions, species concepts, classification, naming, and the connections between evolutionary biology and systematics. The course is appropriate for upper level undergraduates & graduate students in all disciplines (animal, plant, and microbial) as an introduction to systematic methods. Three hours of lecture per week.

BIOL 5436 Advanced Applied Bioinformatics: 3 semester hours

Prerequisites: BIOL 4732 or BIOL 4602 or consent of instructor. This course provides an advanced foundation in using various computational approaches to solve biological problems. Specific attention focuses on methods for using and interpreting information from biological databases, analyzing biological sequence information, and making functional and structural predictions. Students may not receive credit for both BIOL 4436 and BIOL 5436.

BIOL 5798 Practicum in Science in Business: 1-2 semester hours

Same as CHEM 5798. Prerequisites: Graduate standing and enrollment in a Professional Science emphasis in Chemistry, Biochemistry & Biotechnology, or Biology. Students will integrate and apply their scientific expertise to a practical, business-related problem. The course will emphasize interdisciplinary team-work as well as both written and oral communication skills.

BIOL 5799 Internship in Sciences in Business: 1-2 semester hours

Same as CHEM 5799. Prerequisites: Graduate standing and enrollment in a Professional Science emphasis area in Chemistry, Biochemistry & Biotechnology, or Biology. The internship will consist of a period of on-the-job training at a local company. Credit hours will be determined by the number of hours the student works each week and in consultation between the intern's supervisor and the course instructor. Internship assignments will be commensurate with the education and experience of the student, with an emphasis on work at the interface between the scientific and business components of the company. A written report describing the internship project is required.

BIOL 6102 Advanced Topics in Behavioral Ecology: 3 semester hours

Prerequisite: BIOL 3102 (BIOL 3302 is recommended). The evolution and ecology of animal behavior. Topics include the theoretical framework for making predictions, foraging, decision making, sensory ecology, sexual selection, mating systems, sociality and groups, cooperation, and signal use and communication. Three hours of lecture per week. Assignments will include a heavy emphasis on theory and modelling approaches to behavioral ecology. Students may not receive credit for both BIOL 4102 and BIOL 6102.

BIOL 6182 Advanced Population Biology: 3 semester hours

Prerequisites: BIOL 2012 (BIOL 3302 recommended). Introduces concepts and mathematical models of population ecology and population genetics. By integrating the ecology and genetics of population, the course goal is to understand the processes that contribute to microevolution of populations. Topics include: demography, metapopulation biology, natural selection, migration, gene flow, and genetic drift. A discussion section will focus on mathematical elements of population biology models. Three hours of discussion per week. Students may not receive credit for both BIOL 4182 and BIOL 6182.

BIOL 6250 Public Policy of Conservation and Sustainable Development: 3 semester hours

Same as POL SCI 6452. Prerequisites: Graduate standing in Political Science or Biology. This course introduced concepts and techniques for formulating, implementing, and analyzing public policy with an emphasis on environmental concerns, conservation, and sustainable development. The course will be team-taught by faculty representing the departments of political science and biology. Course materials will include case studies that demonstrate the special problems of environmental policymaking in developing and developed economies.

BIOL 6270 Advanced Global Climate Change: 3 semester hours

Prerequisites: Graduate standing or permission of the instructor. We will cover the fundamental physical, meteorological, and biological circumstances of global climate change, as well as predictions of its future effects on biological diversity, including humans, and how those estimates are made. We will also cover basic environmental economics and politics of climate change at local and global levels. The course will be taught as a series of lectures and discussions led by guest experts in each of the subdisciplines covered. Students may not receive credit for both BIOL 4270 and BIOL 6270.

BIOL 6299 Internship in Conservation Biology: 1-4 semester hours

Prerequisites: BIOL 6250. This internship-based course consists of a period of study, observation and on-the-job training at a conservation or environmental agency. Specific placements will be selected according to student's interests and career goals. Internships may vary from 2 weeks to 4 months in duration.

BIOL 6412 Advanced Principles of Ichthyology: 3 semester hours

Prerequisites: Graduate standing. This course is an advanced, comprehensive study of the diversity of fishes, with a particular emphasis on systematics as well as the form and function of different species in the context of their natural history. Students will learn to identify common fish species in Missouri and other regions of the United States. The course includes hands-on work with specimens and excursions to study fish in their natural habitats. Students may not receive credit for both BIOL 4412 and BIOL 6412.

BIOL 6442 Advanced Developmental Biology: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 3622. A study of the basic principles that shape the embryonic and post-embryonic development of animals with an emphasis on the underlying cellular and molecular mechanisms. Specific topics include fertilization, determination of cell fate and differentiation, cell migration, establishment of the body plan, formation of selected organs and organ systems, stem cells, and limb regeneration. Environmental influences on development and the impact of developmental biology on modern medicine are also discussed. Three hours of lecture/discussion per week. Students may not receive credit for both BIOL 4442 and BIOL 6442.

BIOL 6502 Advanced Evolution of Cognition: 3 semester hours

Prerequisites: BIOL 3102 and BIOL 3302, or consent of instructor; PSYCH 2211 strongly recommended. The evolutionary ecology of animal cognitive abilities. Topics include learning, memory, perception, navigation, and communication from an evolutionary perspective. The focus is on cognitive abilities as adaptations, which have evolved to solve specific environmental problems. Topics include empirical methods for assessing cognitive ability, experimental design, theoretical approaches for generating predictions, and the parsimonious interpretation of data. Two hours of lecture and one hour of discussion per week. Students may not receive credit for both BIOL 4502 and BIOL 6502.

BIOL 6550 Advanced Bacterial Pathogenesis: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 2482. Examination of the strategies bacterial pathogens use to infect animals. Topics include host immune responses to infection, bacterial virulence factors, regulation of bacterial virulence, and the cellular and molecular approaches used to study host-parasite interactions. Students may not receive credit for both BIOL 6550 and BIOL 4550. Students will be required to give an oral presentation and/or write an extra paper on a topic relevant to the course. Three hours of lecture per week.

BIOL 6602 Advanced Molecular Biology: 3 semester hours

Prerequisites: BIOL 2012 and CHEM 2612, or consent of instructor. This course covers advanced principles of molecular biology, with an emphasis on primary literature. Students may be required to give an oral presentation and/or write papers on a topic relevant to the course. Students may not receive graduate credit for both BIOL 4602 and BIOL 6602.

BIOL 6608 Advanced Synthetic Biology: 3 semester hours

Prerequisites: BIOL 2012, BIOL 2482. A study of the molecular biology of microbial cells, in the context of synthetic biological systems. Topics include DNA replication, transcription, translation, gene regulation and protein structure as well as aspects of genetic engineering as they apply to the construction of novel biological systems. Following an introduction to the design of biological parts used in synthetic biology, students read, discuss and present recent journal articles in order to learn about current advances and applications of synthetic biology. Three hours of lecture per week. Students may not receive credit for both BIOL 4608 and BIOL 6608.

BIOL 6615 Advanced Biotechnology Laboratory II: 4 semester hours

Prerequisites: BIOL 4602 or BIOL 4732 or CHEM 4712, or consent of instructor. This course is an advanced analysis of the theory and practice of biotechnology. Lectures and discussion will examine the underlying principles, and laboratory exercises will present hands-on experience with current techniques. It entails one hour of lecture and six hours of laboratory per week. Students may not receive credit for both BIOL 6615 and BIOL 4615.

BIOL 6618 Practical Next-Generation Sequencing: 3 semester hours

Prerequisites: Consent of instructor. This is a laboratory course in practical next-generation sequencing. Roughly one-half of the course will focus on bench-top methods for generating sequencing libraries from total RNA as well as the use of next-generation sequencing instruments. The second half of the course will focus on computational methods for analyzing sequencing data, including data visualization and coding.

BIOL 6622 Advanced Cellular Basis of Disease: 3 semester hours

Prerequisites: BIOL 3622, or consent of instructor. A study of the structural organization and processes of eukaryotic cells, focusing on how defects in cellular function lead to genetic diseases and cancer. Topics of discussion may include membrane dynamics, intracellular trafficking, signal transduction, and the cell cycle. Three hours of lecture per week. Students may not receive credit for both BIOL 6622 and BIOL 4622.

BIOL 6632 Advanced Nucleic Acid Structure and Function: 3 semester hours

Prerequisites: BIOL 2012 and BIOL 4732 or equivalent, or consent of instructor. A comprehensive view of the structural properties of DNA and RNA that promote molecular interactions & biological function. Topics will include the physical properties of nucleic acids, the formation and biological importance of higher order structures, RNA enzymatic activities, nucleic acid-protein interactions, and RNA metabolism. Three hours of lecture and one hour of discussion per week. Students may not receive credit for both BIOL 4632 and BIOL 6632.

BIOL 6642 Advanced Plant Biology and Biotechnology: 3 semester hours

Prerequisites: Graduate standing. This course will introduce molecular biology principles that govern plant growth, development, and responses to stress. This course integrates the experimental approaches of genetics, molecular biology, and biochemistry, with a specific focus on biotechnology techniques and applications. Student may not receive credit for both BIOL 4642 and BIOL 6642.

BIOL 6652 Advanced Virology: 3 semester hours

Prerequisites: BIOL 2012, BIOL 3622, and graduate standing. This first half of the course entails a comparative study of the structure, replication, and molecular biology of viruses. The second half of the course focuses on the pathogenesis, control, and evolution of animal viruses. Three hours of lecture, one hour of discussion or seminar per week. Students may not receive credit for both BIOL 4652 and BIOL 6652.

BIOL 6699 Graduate Internship in Biotechnology: 1-4 semester hours

Prerequisites: Graduate standing and enrollment in graduate Biotechnology Certificate Program. 6 credit hours maximum (maximum of 8 combined credit hours of BIOL 6905 and internship) Internship will consist of period of observation, experimentation and on-the-job training in biotechnology laboratory. The laboratory may be industrial or academic. Credit will be determined by the number of hours the student works each week and in consultation between the intern's supervisor and the instructor. Internship assignments will be commensurate with the education and experience of the student.

BIOL 6743 Advanced Pharmacology: 3 semester hours

Prerequisites: Graduate standing. This course covers the foundational principles of drug delivery, distribution, and loss within the body (pharmacokinetics) and the molecular mechanisms of drug effects in the body (pharmacodynamics). To illuminate these principles, selected classes of drugs will be discussed regarding delivery, distribution within the body, mechanism of action, metabolism, and elimination at both the qualitative and quantitative levels. Students will advance their understanding of the topics through oral presentations and/or written papers. Students may not receive credit for both BIOL 4743 and BIOL 6743.

BIOL 6889 Graduate Seminar: 2 semester hours

Presentation and discussion of various research problems in biology. Graduate student exposure to the seminar process.

BIOL 6905 Graduate Research in Biology: 1-10 semester hours

Research in area selected by student in consultation with faculty members.

BIOL 6915 Graduate Research Practicum: 1-2 semester hours

Prerequisite: Consent of instructor. This course is designed for graduate students wishing to pursue research experience in an area outside their dissertation topic. The project can be techniques-oriented or focused on a specific research question. The credit hours will depend on the time commitment to the project as decided by the supervisory faculty member.

BIOL 6920 Advanced Topics in Biology: 1-5 semester hours

Prerequisites: Graduate standing. In-depth studies of selected topics in contemporary biology. May be repeated.

Chemistry and Biochemistry

General Information

Degrees and Areas of Concentration

The Department of Chemistry and Biochemistry offers courses leading to the following baccalaureate degrees:

- B.A. in Chemistry
- B.A. in Chemistry with a Biochemistry Emphasis
- B.S. in Chemistry (with a Chemistry or Biochemistry Option)
- B.S. Ed. in Secondary Education with Emphasis in Chemistry (in cooperation with the College of Education)
- B.A. or B.S. in Chemistry with Master's Level Coursework for Secondary Teacher Certification (in cooperation with the College of Education)

The B.S. degree offered by the department is certified by the American Chemical Society. Students completing the B.S. degree (chemistry or biochemistry option) are certified by the American Chemical Society. The B.S. degree is the professional degree in chemistry, and students who earn the B.S. degree are well prepared for a career in the chemical industry or for graduate work in chemistry. The department provides opportunities for undergraduates to become involved in ongoing research projects. The B.A. degree with an emphasis in biochemistry is especially suited for pre-health students such as pre-medical, pre-dental, or pre-pharmacy students.

The department also offers graduate work leading to the M.S. or Ph.D. degree in chemistry with most graduate courses being scheduled in the evening. A student may earn a M.S. degree with or without a thesis. The non-thesis option provides a convenient way for students who are employed full-time to earn an advanced degree. The department also offers a non-thesis M.S. with a professional science emphasis. This option includes 9 credit hours of business courses and an internship practicum.

Research leading to a M.S. thesis or Ph.D. dissertation may be conducted in one of five emphasis areas, namely, analytical chemistry, inorganic chemistry, organic chemistry, physical chemistry, or biochemistry. The nature of the graduate program allows each student to receive individualized attention from his/her research mentor, and to develop hands-on experience with major instrumentation in the department.

Fellowships, Scholarships and Awards

The following scholarships, fellowships and awards are available to undergraduate chemistry majors:

- The John J. Taylor Scholarship is given to a full-time student with high financial need, pursuing a chemistry degree and currently enrolled either of junior or senior status.
- The Friends and Alumni Scholarship is given to a full-time student with high financial need and pursuing a chemistry degree.
- The Monsanto Scholarship in Biochemistry and Biotechnology is open to full-time Sophomore, Junior or Senior students at the University pursuing a Bachelor of Science degree in Biochemistry and Biotechnology. This scholarship is administered by the Biochemistry and Biotechnology program.
- William and Erma Cooke Chemistry Scholarships are given annually to outstanding full-time chemistry majors who are at least sophomores and have financial need.

- The Lawrence Barton Scholarship is awarded to a junior, preferably a first generation college student.
- The Barbara Willis Brown Scholarship for Women in Chemistry is given annually to a female chemistry major who is at least 25 years of age. The student is encouraged to enroll in undergraduate research (CHEM 3905), however research is not requirement for this award. Student financial need is a consideration.
- The Eric G. Brunngraber Memorial Scholarship is given to a chemistry major based on GPA, statement of research interests, and performance in completed course work.
- Aid to Education Scholarships are given to junior or senior chemistry majors annually. Faculty select awardees on the basis of merit.
- The Gary S. and Kathy A. Jacob Endowed Scholarship is awarded to a full-time undergraduate student interested in pursuing a degree in Chemistry and Biochemistry or in Biochemistry and Biotechnology.
- Charles W. Armbruster Scholarship: These scholarships are awarded to outstanding transfer students. The recipients are selected on the basis of need and merit and they must be enrolled in at least 9 credit hours.
- Hal and Mary Harris Endowed Scholarship in Chemistry: Recipients must be juniors seeking a degree in chemistry with a minimum GPA of 3.0 and enrolled in a minimum of 12 credit hours.
- Stephen S. Lawrence Endowed Scholarship in Chemistry: Recipients will be junior or senior chemistry majors who demonstrate financial need, are enrolled in a minimum of 9 credit hours and maintain a cumulative GPA of at least 2.8. Awardees will have demonstrated a good record of departmental citizenship which may include tutoring, teaching, activity in the chemistry club, or other departmental volunteer activities.
- The Rath Family Scholarship: The scholarship shall be awarded to a full-time, undergraduate student who is interested in pursuing a degree in the STEM disciplines at UMSL. Preference may be given to a student who is majoring in Chemistry/Biochemistry who demonstrates financial need and in addition to students from first generation populations from the Indian Subcontinent/South Asia where possible. A GPA of 3.0 or better and a minimum ACT score of 24 (ACT is only applicable for US students) is required. Award recipients will be encouraged to participate in peer-mentoring, tutoring, or similar programs in the STEM disciplines.
- The Nicholas Chickos Endowed Memorial Scholarship: Recipients must be undergraduate students majoring in chemistry or biochemistry and in good academic standing. Preference may be given to a Veteran student.

Several undergraduate awards are given each year to outstanding students. An award is given to an outstanding student in introductory chemistry. The Outstanding Sophomore Chemistry Major award is made to the top sophomore chemistry student. The American Chemical Society Division of Analytical Chemistry Award is given to the outstanding student in analytical chemistry. Similarly awards are given to the top students in Inorganic, Organic and Physical Chemistry. The American Chemical Society-St. Louis Section, Outstanding Junior Chemistry Major Award is given to the outstanding junior chemistry major, and the outstanding senior receives the Alan F. Berndt Outstanding Senior Award.

The following scholarships, fellowships and awards are available to graduate students in chemistry:

- The M. Thomas Jones Fellowship is given each semester to the graduate student who is deemed by his/her peers to have presented the best research seminar.
- Ceil DeGutis Award for Research Excellence. senior graduate student (meaning typically a fourth or fifth year graduate student) enrolled in one of UMSL's graduate programs in Biology, Chemistry, or Physics for outstanding research performance.
- The Graduate Research Accomplishment Prize is given annually. The recipient is chosen based on his/her publications, presentations at professional meetings, and seminars given at UMSL.
- The Jack L. Coombs Award for outstanding performance as a Graduate Teaching Assistant. It is given each year based on faculty nomination for outstanding performance as a Graduate Teaching Assistant.
- Alumni Graduate Research Fellowships are available for summer study for selected chemistry graduate students.
- Rudolph E. K. Winter Graduate Scholarship. This scholarship will provide one or more stipend supplements for worthy incoming PhD students, as determined by a decision of the appropriate chemistry faculty committee. Preference will be given to students majoring in some aspect of organic chemistry and the award may be renewable for one year if recipient remains in good academic standing.

Departmental Honors

The Department of Chemistry and Biochemistry will award departmental honors to those B.A. and B.S. degree candidates in chemistry with an overall grade point average of 3.2. They must also successfully complete CHEM 3905, Chemical Research, and must present an acceptable thesis.

Career Outlook

The St. Louis metropolitan area has long been a major center for industrial chemistry, and in the past decade it has become a focus for the establishment of life sciences research and development. A bachelor's degree in chemistry provides a student with the professional training needed to play a part in this ever-changing industry.

A major in chemistry provides excellent preprofessional training in the health sciences, and major in biochemistry and biotechnology is often chosen by premedical and predoctoral students and those interested in graduate work in biochemistry and biology. A minor in chemistry provides the minimum qualification and training for a position as a laboratory technician in industry, hospital laboratories, etc.

A Master's degree in chemistry is often required for further advancement in the chemical industry, whereas a doctoral degree opens the door to many opportunities, including careers in the academic world, industrial research and development, and in government laboratories.

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Courses

CHEM 1000 Chemistry: The Central Science: 1 semester hour

This course introduces chemistry majors to the broad nature of the chemical enterprise, including career areas for chemists, trends in chemistry related opportunities in research and industry, and provides an overview of the relevance of chemistry as a discipline. The course reviews the chemistry curriculum and the role of chemistry as a central science and includes presentations from selected current faculty and departmental alumni about research opportunities and other resources within the department. The course is required of all chemistry majors, and is to be taken no later than their second semester of enrollment as a chemistry major at UMSL.

CHEM 1021 Beer Brewing: Chemical and Biochemical Principles: 3 semester hours

This course examines the process of beer brewing as it relates to general topics of chemistry, biochemistry and biology. Each aspect of the brewing process will be examined in detail and the underlying scientific principles identified and discussed. The course is designed for non-science, non-engineering and non-allied health majors and can be used to fulfill a general education requirement for undergraduate degrees. The course consists of two hours of lecture and three hours of lab per week.

CHEM 1052 Chemistry for the Health Professions (MOTR CHEM 100HP): 4 semester hours

An introduction to general, nuclear, structural organic, organic reactions and biochemistry. This course is designed primarily for students in nursing and related health professions, and should not be taken by students majoring in the physical or biological sciences. Chemistry majors may include neither CHEM 1052 or CHEM 1062 in the 120 hours required for graduation. Four hours of lecture per week.

CHEM 1062 Organic and Biochem for the Health Professions: 2 semester hours

Prerequisites: Any college Chemistry course. An introduction to organic reactions and biochemistry. CHEM 1062 is offered during the second half of the semester. Four hours of lecture per week.

CHEM 1111 Introductory Chemistry I (MOTR CHEM 150L): 5 semester hours

Prerequisite: MATH 1030 (or a score of 26 or higher on either the Math ACT or the Missouri Math Placement Test) and MATH 1035 (MATH 1035 may be taken concurrently). Presents an introduction to the fundamental laws and theories of chemistry. Laboratory experiments are designed to demonstrate some aspects of qualitative and quantitative analysis and to develop skills in laboratory procedures. Chemistry majors may not include both CHEM 1011 and CHEM 1111 in the 120 hours required for graduation. Three hours of lecture, one and one-half hours of workshop, and three hours of laboratory per week.

CHEM 1111A CHEM 1111A-Introductory Chemistry 1 - Modular Format: 1 semester hour

Prerequisites: MATH 1030 (or a score equivalent to completion of MATH 1030 on the UMSL mathematics placement assessment). These courses (1111A-1111L) are identical in content to CHEM 1111 but are offered in a modular format. Each credit hour deals with the lecture or laboratory material covered in CHEM 1111. Completion of all five modules with a grade in each of C- or above is equivalent to completion of CHEM 1111. CHEM 1111A covers the first quarter of lecture material covered in CHEM 1111.

CHEM 1111B CHEM 1111B-Introductory Chemistry 1 - Modular Format: 1 semester hour

Prerequisites: CHEM 1111A. Concurrent registration with CHEM 1111A is permitted. CHEM 1111B covers the second quarter of lecture material covered in CHEM 1111.

CHEM 1111C CHEM 1111C-Introductory Chemistry 1 - Modular Format: 1 semester hour

Prerequisites: CHEM 1111B. Concurrent registration with CHEM 1111B is permitted. CHEM 1111C covers the third quarter of lecture material covered in CHEM 1111.

CHEM 1111D CHEM 1111D-Introductory Chemistry 1 - Modular Format: 1 semester hour

Prerequisites: CHEM 1111C. Concurrent registration with CHEM 1111C is permitted. CHEM 1111D covers the final quarter of lecture material covered in CHEM 1111.

CHEM 1111L CHEM 1111L-Introductory Chemistry 1 - Modular Format: 1 semester hour

Prerequisites: CHEM 1111D. Concurrent registration with CHEM 1111D is permitted. CHEM 1111L covers laboratory portion of CHEM 1111.

CHEM 1121 Introductory Chemistry II: 5 semester hours

Prerequisite: CHEM 1111 or advanced placement. Lecture and laboratory are a continuation of CHEM 1111. Three hours of lecture, one and one-half hours of workshop and three hours laboratory per week.

CHEM 1134 Special Topics in Introductory Chemistry: 1-5 semester hours

Prerequisite: Consent of instructor. A lecture and/or laboratory course to assist transfer students to complete the equivalent of CHEM 1111 and CHEM 1121. Students enrolling in this course should contact the instructor prior to the first day of class for guidelines on course requirements, to choose a lab or workshop section, and to request enrollment in the course website.

CHEM 2010 Introduction to Inquiry Approaches to STEM Education (STEP I): 1 semester hour

Same as BIOL 2010, PHYSICS 2010, MATH 2010, and SEC ED 2010. Prerequisites: Concurrent enrollment BIOL 1821, BIOL 1831, CHEM 1111, CHEM 1121, PHYSICS 2111, PHYSICS 2112, MATH 1800, or MATH 1900 or have a declared STEM major. Students who want to explore teaching careers become familiar with lesson plan development by writing, teaching and observing lessons in a local school class. Students build and practice inquiry-based lesson design skills and become familiar with and practice classroom management in the school setting. As a result of the STEP I experiences students should be able to decide whether to continue to explore teaching as a career and ultimately finishing the remainder of the WE TEACH MO curriculum leading to teacher certification. The classroom observations and teaching represent a major field component and requires at least one two hour block of free time during the school day once a week.

CHEM 2011 Designing Inquiry-Based STEM Experiences (STEP II): 1 semester hour

Same as BIOL 2011, PHYSICS 2011, MATH 2011, and SEC ED 2011. Prerequisites: BIOL 2010, CHEM 2010, PHYSICS 2010, MATH 2010, or SEC ED 2010. Students explore teaching careers, become familiar with STEM school setting through observing and discussing the school environment and by developing and teaching inquiry-based lessons.

CHEM 2223 Quantitative Analysis in Chemistry: 3 semester hours

Prerequisites: CHEM 1121. This course covers basic analytical chemistry theory and techniques, principles of experimental error analysis, and the application of statistics to data treatment. A significant proportion of the laboratory experiments emphasize quantification of unknown samples.

CHEM 2612 Organic Chemistry I: 3 semester hours

Prerequisite: CHEM 1121 (may be taken concurrently). An introduction to the structure, properties, synthesis, and reactions of aliphatic and aromatic carbon compounds. Three hours of lecture per week.

CHEM 2622 Organic Chemistry II: 3 semester hours

Prerequisite: CHEM 2612. A systematic study of organic reactions and their mechanisms; organic synthetic methods. Three hours of lecture per week.

CHEM 2633 Organic Chemistry Laboratory: 2 semester hours

Prerequisite: CHEM 2612. An introduction to laboratory techniques and procedures of synthetic organic chemistry including analysis of organic compounds. One hour of lecture and four and one-half hours of laboratory per week.

CHEM 3022 Introduction to Chemical Literature: 1 semester hour

Prerequisites: CHEM 2622 (CHEM 2622 may be taken concurrently). This course will familiarize the student with the literature of chemistry and its use. One hour of lecture per week.

CHEM 3302 Physical Chemistry for The Life Sciences: 3 semester hours

Prerequisites: CHEM 2612 and MATH 1800 or MATH 1100, and PHYSICS 1012. Principles and applications of physical chemistry appropriate to students pursuing degree programs in the life sciences. Topics will include thermodynamics, equilibria, kinetics, and spectroscopy. This course is intended for undergraduates seeking the B.S. degree in Biochemistry and Biotechnology and does not fulfill the physical chemistry required for other Chemistry B.A. and B.S. degree programs.

CHEM 3312 Physical Chemistry I: Thermodynamics and Kinetics: 3 semester hours

Prerequisites: CHEM 1121 and MATH 2000 (MATH 2000 may be taken concurrently), and PHYSICS 2111. This course discusses the principles of physical chemistry, focusing on thermodynamics, theory of gases, phase equilibria, solution behavior, and kinetics.

CHEM 3322 Physical Chemistry II: Quantum Chemistry and Spectroscopy: 3 semester hours

Prerequisites: CHEM 3312 and MATH 2000. This course discusses the principles of physical chemistry, focusing on topics that may include, atomic and molecular structure, spectroscopy, and quantum mechanics.

CHEM 3333 Physical Chemistry Laboratory I: 2 semester hours

Prerequisites: CHEM 2223 and CHEM 3312 (CHEM 3312 may be taken concurrently). This course involves experiments designed to illustrate principles introduced in CHEM 3312.

CHEM 3412 Basic Inorganic Chemistry: 3 semester hours

Prerequisites: CHEM 2622. This course reviews the principles of atomic structure and studies covalent and ionic bonding. Topics may include properties of the elements and synthesis, reactions and bonding aspects of important main group and transition metal compounds.

CHEM 3643 Advanced Organic Chemistry Laboratory: 2 semester hours

Prerequisites: CHEM 2223, CHEM 2622, CHEM 2633, and CHEM 3022 (may be taken concurrently). Identification of organic compounds by classical and spectroscopic methods; advanced techniques in synthesis and separation of organic compounds. One hour of lecture and four and one-half hours of laboratory per week. Not for graduate credit.

CHEM 3905 Chemical Research: 1-10 semester hours

Prerequisite: Consent of instructor. Independent laboratory and library study, in conjunction with faculty member, of fundamental problems in chemistry. A written report describing the research is required.

CHEM 4212 Instrumental Analysis: 3 semester hours

Prerequisites: CHEM 3312 and CHEM 3322. This course studies the principles and applications of modern methods of instrumental analysis for analytical chemistry measurements. Topics may be selected from the areas of electrochemistry, absorption and emission spectroscopy, chromatography, mass spectrometry, surface analysis, and nuclear magnetic resonance.

CHEM 4233 Laboratory in Instrumental Analysis: 2 semester hours

Prerequisites: CHEM 4212, CHEM 3333. Experiments designed to illustrate the principles and practices of instrumental analysis, involving the use of modern instrumentation in analytical chemistry applications. One hour of discussion and four and one-half hours of laboratory per week.

CHEM 4343 Physical Chemistry Laboratory II: 2 semester hours

Prerequisites: CHEM 2223 and CHEM 3322 (CHEM 3322 may be taken concurrently). This course involves experiments designed to illustrate principles introduced in CHEM 3322.

CHEM 4412 Advanced Inorganic Chemistry: 3 semester hours

Prerequisites: CHEM 3322 (may be taken concurrently), CHEM 3412, and CHEM 2622. This course introduces the chemistry of the elements, including atomic and molecular structure, acids and bases, the chemistry of the solid state, and main group and transition metal chemistry. Three hours of lecture per week. Students may not receive credit for both CHEM 4412 and CHEM 5412.

CHEM 4433 Inorganic Chemistry Laboratory: 2 semester hours

Prerequisites: CHEM 3333, CHEM 3643, and CHEM 4412 (CHEM 3643 may be taken concurrently). The more sophisticated techniques of physical and analytical chemistry will be used to study inorganic compounds and their reactions. One hour of lecture and four and one-half hours of laboratory per week. Not for graduate credit.

CHEM 4602 Introduction to Physical Organic Chemistry: 3 semester hours

Prerequisites: CHEM 2622 and CHEM 3322. This course covers the mechanism and theory of organic chemistry. Topics may include kinetics, transition state theory, reaction intermediates, and stereochemical analysis. Three hours of lecture per week. Credit cannot be earned for both CHEM 4602 and CHEM 5602.

CHEM 4622 Introduction to Reactions and Mechanisms in Organic Chemistry: 3 semester hours

Prerequisites: CHEM 2622. This course will examine a variety of organic transformations typically utilized in organic synthesis. Topics may include carbon-carbon bond formation, pericyclic reactions, oxidation, reduction, and functional group interconversions. Mechanism and stereochemistry will also be emphasized. Three hours of lecture per week. Credit cannot be earned for both CHEM 4622 and CHEM 5622.

CHEM 4662 Introduction to Macromolecular, Supramolecular, and Nanoscale Chemistry: 1 semester hour

Prerequisites: CHEM 2622, CHEM 3412, and CHEM 3312. This course introduces students to macromolecular, supramolecular, and nanoscale chemistry. Structure, synthesis and/or preparation, characterization, and physical properties of these systems will be introduced. Credit cannot be earned for both CHEM 4662 and CHEM 5662.

CHEM 4712 Biochemistry: 3 semester hours

Prerequisites: CHEM 2622. This course examines the chemistry and function of cell constituents, and the interaction and conversions of intracellular substances. Students may not receive credit for both BIOL 4732 and CHEM 4712.

CHEM 4722 Advanced Biochemistry: 3 semester hours

Prerequisite: CHEM 4712. This course covers selected advanced topics in the chemistry of life processes. Students may not receive credit for both CHEM 4722 and CHEM 5722.

CHEM 4733 Biochemistry Laboratory: 2 semester hours

Prerequisites: CHEM 4712 (may be taken concurrently), and CHEM 2223. Laboratory study of biochemical processes in cellular and subcellular systems with emphasis on the isolation and purification of proteins (enzymes) and the characterization of catalytic properties. One hour of lecture and four and one-half hours of laboratory per week.

CHEM 4772 Physical Biochemistry: 3 semester hours

Prerequisites: CHEM 3312 or CHEM 4712 or BIOL 4732. This course is designed to acquaint students with concepts and methods in biophysical chemistry. Topics that will be discussed include protein and DNA structures, forces involved in protein folding and conformational stability, protein-DNA interactions, methods for characterization and separation of macromolecules, and biological spectroscopy. Students may not receive credit for both CHEM 4772 and CHEM 5772.

CHEM 4774 Introduction to Bioinformatics: 3 semester hours

Prerequisites: CHEM 4712 or equivalent. This course introduces modern approaches in bioinformatics and computational biochemistry. Topics covered include a survey of biological databases, predictions from protein and DNA sequences, sequence alignment and sequence database searches, building phylogenetic trees, three-dimensional protein structure prediction, molecular modeling and simulation, and computational genomics. Students may not receive credit for both CHEM 4774 and CHEM 5774.

CHEM 4797 Biochemistry and Biotechnology Seminar: 1 semester hour

Same as CHEM 4797. Prerequisites: Senior standing in the Biochemistry and Biotechnology program and consent of faculty advisor. This course will focus on selected publications related to biochemistry and biotechnology from both refereed journals and news sources. Students are expected to participate in discussions and to prepare oral and written presentations. Completion of the Major Field Achievement Test in Biochemistry & Biotechnology is a course requirement. May not be taken for graduate credit.

CHEM 4814 Special Topics in Chemistry: 1-10 semester hours

A reading and seminar course in selected advanced topics.

CHEM 4897 Seminar in Chemistry: 2 semester hours

Prerequisites: CHEM 3022 and senior standing. This course will provide students with the opportunity to listen to talks presented by students, faculty, and invited speakers. Students must complete a comprehensive examination before the end of the course. Chemistry majors should enroll during the semester in which they intend to graduate, or during their next-to-last semester before graduation.

CHEM 5180 Regulatory Science: 3 semester hours

Prerequisites: Graduate standing. This course covers laws, regulations and agencies involved in the registration of conventional, biotechnology and biological crops, crop protectants and growth regulators. US and International laws and regulations will be discussed from technical proof of concept through commercial release. Offered online only through GP-IDEAS Consortium in the fall.

CHEM 5212 Advanced Instrumental Analysis: 3 semester hours

Prerequisites: Graduate standing and consent of instructor. This course covers the principles and applications of modern methods of instrumental analysis for analytical chemistry measurements. Topics may be selected from, but are not limited to, the areas of electrochemistry, absorption and emission spectroscopy, chromatography, mass spectrometry, surface analysis, and nuclear magnetic resonance. Additional independent study and work are required. Students may not receive credit for both CHEM 4212 and CHEM 5212.

CHEM 5280 Advanced Regulatory Science: 3 semester hours

Prerequisites: CHEM 5180. This course builds on CHEM 5180 and provides hands-on exercises concerning agriculture regulatory topics. It introduces laws, regulations and agencies involved in fertilizer, animal and waste management as well as the role of public policy in the regulatory process. Offered online only through GP-IDEAS Consortium in the spring.

CHEM 5294 Special Topics in Analytical Chemistry: 1-3 semester hours

Prerequisites: Consent of instructor. This course covers topics in analytical chemistry that may change from semester to semester, and more than one course or topic may be offered in a given semester. Topics may be selected from the areas of chromatography, mass spectrometry, analytical spectroscopy, thermal analysis, X-ray diffraction, surface analysis, magnetism, ion-exchange, size-exclusion chromatography, or other topics in modern analytical chemistry. The course may be taken more than once for credit provided that topic(s) are different in each case.

CHEM 5302 Foundations of Physical Chemistry: 3 semester hours

Prerequisites: Consent of Instructor. A survey of fundamental and advanced topics in physical chemistry including thermodynamics, kinetics, quantum chemistry, and spectroscopy. Three hours of lecture per week. Additional independent study work is required. Students may not receive credit for both CHEM 4302 and CHEM 5302.

CHEM 5394 Special Topics in Physical Chemistry: 1-3 semester hours

Prerequisite: Consent of instructor. The topic for this course may change from semester to semester, and more than one course or topic can be offered in a given semester. The course may be taken more than once for credit provided that the topic is different in each case. The course can have more than one instructor.

CHEM 5396 Directed Readings in Physical Chemistry: 1-3 semester hours

Prerequisites: Consent of Physical Chemistry Faculty. A series of readings of monographs, review papers, and/or research publications for a particular student directed at providing that student with appropriate background preparation for experimental or theoretical Ph.D.-level research in an area of physical chemistry. The particular readings will be selected by the physical chemistry staff. Potential topics include but are not limited to advances in Electrochemistry, Surface Chemistry, Thermodynamics, Molecular Spectroscopy, Quantitative Absorption Spectroscopy using new Methodologies, Applications of Group Theory in Spectroscopy, and Computational Chemistry. Assessment may be in various forms including by assignments and seminars. Students may take this course more than once for credit through the particular topic must be different in each case.

CHEM 5412 Advanced Graduate Inorganic Chemistry: 3 semester hours

Prerequisites: Graduate standing and consent of instructor. An introduction to the chemistry of the elements, including atomic and molecular structure, acids and bases, the chemistry of the solid state, and main group and transition metal chemistry. Additional independent study work is required. Three hours of lecture per week. Students may not receive credit for both CHEM 4412 and CHEM 5412.

CHEM 5462 Organometallic Chemistry of the Transition Elements: 3 semester hours

Prerequisites: CHEM 4412 or an equivalent course. A study of transition metal compounds containing metal-carbon bonds and related metal-element bonds, including their synthesis, structure and bonding, and reactions. Applications in organic synthesis and catalysis will also be presented. Three hours of lecture per week.

CHEM 5494 Special Topics in Inorganic Chemistry: 1-3 semester hours

Prerequisite: Consent of instructor. The topic for this course may change from semester to semester, and more than one course or topic can be offered in a given semester. The course may be taken more than once for credit provided that the topic is different in each case. The course can have more than one instructor.

CHEM 5602 Advanced Organic Chemistry I - Physical Organic: 3 semester hours

Prerequisites: CHEM 2622 and CHEM 3322. This course covers the mechanism and theory of organic chemistry. Topics may include kinetics, transition state theory, reaction intermediates, and stereochemical analysis. Three hours of lecture per week. Credit cannot be earned for both CHEM 4602 and CHEM 5602.

CHEM 5622 Advanced Organic Chemistry II - Reactions And Synthesis: 3 semester hours

Prerequisite: CHEM 2622. This graduate level course will examine a variety of organic transformations typically utilized in organic synthesis. Topics may include, carbon-carbon bond formation, pericyclic reactions, oxidation, reduction, and functional group interconversions. Mechanism and stereochemistry will also be emphasized. Three hours of lecture per week. Credit cannot be earned for both CHEM 4622 and CHEM 5622.

CHEM 5652 Spectroscopic Identification of Organic Compounds: 3 semester hours

Prerequisites: Graduate standing or CHEM 3643. An applied approach to the use of spectroscopic techniques in organic chemistry. Topics to include integrated applications of infrared and Raman spectroscopy, ^{13}C and ^1H nuclear magnetic resonance spectroscopy and mass spectroscopy for the purpose of elucidating the structure and dynamics of organic compounds. Three hours of lecture per week.

CHEM 5662 Macromolecular, Supramolecular, and Nanoscale Chemistry: 1 semester hour

Prerequisites: CHEM 2622, CHEM 3412, and CHEM 3312. This graduate level course introduces students to macromolecular, supramolecular, and nanoscale chemistry. Structure, synthesis and/or preparation, characterization, and physical properties of these systems will be introduced. Credit cannot be earned for both CHEM 4662 and CHEM 5662.

CHEM 5694 Special Topics in Organic Chemistry: 1-3 semester hours

Prerequisite: Consent of instructor. The topic for this course may change from semester to semester, and more than one course or topic can be offered in a given semester. The course may be taken more than once for credit provided that the topic is different in each case. The course can have more than one instructor.

CHEM 5722 Advanced Graduate Biochemistry: 3 semester hours

Prerequisites: CHEM 4712 or BIOL 4732. Selected advanced topics in the chemistry of life processes. Three hours of lecture per week. Students may not receive credit for both CHEM 4722 and CHEM 5722.

CHEM 5772 Advanced Physical Biochemistry: 3 semester hours

Prerequisites: CHEM 3312 or CHEM 4712 or BIOL 4732. Designed to acquaint students with concepts and methods in biophysical chemistry. Topics that will be discussed include protein and DNA structures, forces involved in protein folding and conformational stability, protein-DNA interactions, methods for characterization and separation of macromolecules, and biological spectroscopy. Three hours of lecture per week. Students may not receive credit for both CHEM 4772 and CHEM 5772.

CHEM 5774 Bioinformatics: 3 semester hours

Prerequisites: CHEM 4712 or equivalent. This course introduces modern approaches in bioinformatics and computational biochemistry. Topics to be covered include a survey of biological databases, predictions from protein and DNA sequences, sequence alignment and sequence database searches, building phylogenetic trees, three-dimensional protein structure prediction, molecular modeling and simulation, and computational genomics. Additional independent study work is required. Students may not receive credit for both CHEM 4774 and CHEM 5774.

CHEM 5794 Special Topics in Biochemistry: 1-3 semester hours

Prerequisites: Consent of instructor. The topic for this course may change from semester to semester, and more than one course or topic can be offered in a given semester. The course may be taken more than once for credit provided that the topic is different in each case. The course can have more than one instructor.

CHEM 5798 Practicum in Science in Business: 1-2 semester hours

Same as: BIOL 5798. Prerequisites: Graduate standing and enrollment in a Professional Science emphasis in Chemistry, Biochemistry & Biotechnology, or Biology. Students will integrate and apply their scientific expertise to a practical, business-related problem. The course will emphasize interdisciplinary team-work as well as both written and oral communication skills.

CHEM 5799 Internship in Science in Business: 1-2 semester hours

Same as: BIOL 5799. Prerequisites: Graduate standing and enrollment in a Professional Science emphasis area in Chemistry, Biochemistry & Biotechnology, or Biology. The internship will consist of period of on-the-job training at a local company. Credit hours will be determined by the number of hours the student works each week and in consultation between the intern's supervisor and the course instructor. Internship assignments will be commensurate with the education and experience of the student, with an emphasis on work at the interface between the scientific and business components of the company. A written report describing the internship project is required.

CHEM 6487 Problem Seminar in Inorganic Chemistry: 1 semester hour

Prerequisite: Consent of the inorganic chemistry staff. Problems from the current literature, presentations and discussions by faculty, students and visiting scientists. Ph.D. students may take more than once for credit. Up to three credits may be applied to the M.S. degree program.

CHEM 6687 Problem Seminar in Organic Chemistry: 1-3 semester hours

Prerequisite: Consent of the organic chemistry staff. Problems from the current literature, presentations and discussions by faculty, students and visiting scientists. Ph.D. Students may take more than once for credit. Up to three credits may be applied to the M.S. degree programs.

CHEM 6787 Problem Seminar in Biochemistry: 1 semester hour

Prerequisite: Consent of the biochemistry staff. Problems from the current literature, presentations and discussions by faculty, students and visiting scientists. Ph.D. students may take more than once for credit. Up to three credits may be applied to the M.S. degree program.

CHEM 6812 Introduction to Graduate Study in Chemistry: 1 semester hour

Prerequisite: Consent of graduate advisor. Topics to be covered include: techniques of teaching of chemistry in colleges and universities, methods of instruction and evaluation; role and responsibilities of the Graduate Teaching Assistant in laboratory instruction; safety in the undergraduate laboratory, safety practices, emergency procedures; selection of a research project and thesis advisor.

CHEM 6822 Introduction to Graduate Research in Chemistry: 1 semester hour

Prerequisite: Consent of instructor. Topics to include: safety in the research laboratory, safety practices, emergency procedures, hazardous materials, waste disposal, radiation safety; research ethics, chemistry information retrieval, computer assisted information retrieval, types of databases, searching bibliographic data bases.

CHEM 6832 Strategies for Independent Research Proposal Development: 1 semester hour

Prerequisites: CHEM 6822 and consent of graduate advisor. Topics include: strategies for identification of research topics in chemistry and biochemistry, techniques for database literature search, critical analysis of existing research knowledge, introduction to standard grant proposal formats, technical aspects in preparation of a research plan and accompanying sections, use of bibliographical software, and overview and practice of the peer review process.

CHEM 6887 Graduate Student Seminar in Chemistry: 1 semester hour

Prerequisites: Graduate standing. Scientific presentations by students. One hour per week.

CHEM 6897 Chemistry Colloquium: 1 semester hour

This course consists of presentations of papers by faculty and invited speakers. It meets for one hour per week.

CHEM 6905 Graduate Research in Chemistry: 1-10 semester hours

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Communication and Media

General Information

The Department of Communication and Media reflects an area of study informed by art and science. Under the auspices of **Communication**, students explore the construction, delivery, and perception of purposeful messages and their consequences. Whether the intent is to inform, influence, or entertain, students use research and theory to improve effectiveness and achieve outcomes in interpersonal and mass-mediated messaging.

In addition, students will find a creative outlet in **Media Studies**, which focuses on the production of content and its critical and cultural significance. It encompasses the aesthetics of audio and visual media in all its forms. Students learn contemporary and historical concepts in a global context. Importantly, students can hone practical skills ranging from conceptual development to camerawork and post-production editing.

Whether students want to work on a public health campaign to reduce risky behaviors or a documentary designed to educate, Communication and Media offers excellent preparation for a rapidly changing world.

The Bachelor of Arts in Communication

The B.A. in Communication is a flexible degree program that allows the student to tailor their curriculum to meet specific interests and needs while simultaneously providing a strong foundation in the major specializations of the discipline. Students who seek this degree will, upon completion, understand how to communicate competently and effectively in a variety of contexts and mediums. In addition, students will develop a strong foundation in the principles underlying effective communication. Finally, students will demonstrate their competence through the internship and practicum requirements. Students may complete either a general communication degree or they may select one of four different emphasis areas as a focus for their studies: Interpersonal Communication, Mass Communication, Applied Visual Communication, or Strategic Communication.

Certificate in Health Communication

The Certificate in Health Communication will assist students looking to specialize in a growing field, learn valuable skills for the job market, and get hands-on experience in health organizations that will translate into jobs.

Certificate in Media Production

The Certificate in Media Production provides a sequence of courses designed to develop multi-channel and multimedia skills that can be used by students to record, edit, and produce media for artistic, personal, or commercial applications. Students will develop a portfolio of work that will reflect both independent and client-centered content. Students who complete the Certificate in Media Production will develop the knowledge and skills needed to be competitive in a rapidly changing media environment.

Certificate in Public Relations

The public relations certificate builds professionals with expertise in crafting messages, promoting public images and handling a crisis. It prepares students for success as they pursue a career in communication and public relations. The curriculum includes hands-on learning and real-world experiences designed to adhere to the requirements set forth by the Public Relations Society of America.

Other Certificate Programs

In addition to these offerings, the department supports a number of other interdisciplinary certificate programs. For more information, see Interdisciplinary Studies (p. 135).

Master of Arts in Communication

The M.A. in Communication is designed to offer a convenient, high-quality graduate education to students with a variety of interests and professional goals. For individuals who are interested in pursuing a doctorate in communication, we provide first-class preparation that can make students competitive at even the most prestigious institutions. Our graduate faculty trained at top-ranked universities, and are closely involved with mainstream scholarship and innovative research. For students who intend to apply communication knowledge and skills in the workplace, the practical and theoretical knowledge woven throughout the curriculum can facilitate the achievement of a broad range of personal and professional goals. We offer the opportunity to tailor students' programs of study to meet their interests and objectives. In addition, our graduate program offers workforce development to major corporations and organizations in the greater St. Louis area, providing an effective and economic alternative to an internal training and development infrastructure.

Degrees

Communication BA (p. 476)

- Applied Visual Communication Emphasis (p. 477)
- Interpersonal Communication Emphasis (p. 479)
- Mass Communication Emphasis (p. 480)
- Strategic Communication Emphasis (p. 481)

Communication MA (p. 483)

Communication Accelerated Master's (MA) Program (p. 484)

Minors

Communication Minor (p. 485)

Certificates

Health Communication Undergraduate Certificate (p. 580)

Media Production Undergraduate Certificate (p. 625)

Public Relations Undergraduate Certificate (p. 724)

Instructional Communication Graduate Certificate (ACP) (p. 391)

Affiliated Interdisciplinary Programs

Organizational Leadership BA, Corporate Communication Emphasis (p. 676)

Organizational BA, Health Communication Emphasis (p. 678)

Communication Courses

COMM 1030 Interpersonal Communication I (MOTR COMM 120): 3 semester hours

This course introduces students to the theories of interpersonal communication. It emphasizes the basic principles involved in one-to-one interactions. This course fulfills the University's general education communication proficiency requirement.

COMM 1040 Introduction to Public Speaking (MOTR COMM 110): 3 semester hours

This course introduces students to theories and techniques of organization, argumentation, persuasion, and delivery in public speaking. This course fulfills the University's general education communication proficiency requirement.

COMM 1041 Presentational Speaking: 3 semester hours

Theories and techniques of presenting information in various contexts, formats, and settings. Emphasis is placed on strategic coordination for message effectiveness in a team-based environment.

COMM 1050 Introduction to Mass Communication: 3 semester hours

Introduction to oral, print, and electronic media of communication, including emerging digital formats. The course covers the major theories of mass communication effects as well as the social, organizational, economic, political, and technological factors that shape the creation and reception of mass media messages.

COMM 1100 Introduction to Advertising: 3 semester hours

This course provides an introduction to the history, rhetoric, and aesthetics of advertising. It covers key areas such as account management, research, strategy, creative, media, and production.

COMM 1110 Introduction to Broadcasting and Digital Media: 3 semester hours

This course provides an introduction to the broadcasting and digital media industries. It also addresses topics including history, government regulations, technological changes, and social implications.

COMM 1150 Introduction to Public Relations: 3 semester hours

This course provides an introduction to contemporary persuasive social science principles, processes, and issues involved in the management of communications between an organization and its publics. An emphasis on ethics, law, and professional standards is highlighted.

COMM 1210 Fundamentals of Acting: 3 semester hours

This course develops personal communication and presentational skills through vocal, physical, and emotional exercises designed for the beginning actor. The course emphasizes relaxation, concentration, improvisation, script analysis, characterization and scene work exercises to develop elementary performance skills.

COMM 1369 Introduction to Health Communication: 3 semester hours

This course introduces the concept of health communication through interpersonal, organizational, and mass media health contexts. Topics may include patient-provider communication, issues of diversity and culture, social support, health entertainment, marketing, HR and PR in health, and careers in health communication.

COMM 1950 Finding an Internship in Communication and Media Fields: 1 semester hour

This course equips Communication majors with the necessary skills to secure an internship or practicum that aligns with their long-term, post-graduation goals. Students will identify internships relevant to their coursework and career goals, create resumes, write cover letters, develop interviewing skills, and more. The concepts of this course prepare students to secure an internship or practicum for the following semester.

COMM 2080 Advertising Copywriting: 3 semester hours

Same as ENGL 2080. This course offers students a hands-on approach for writing advertising material for print, broadcast, and digital media against tight deadlines in a professional setting.

COMM 2180 Public Relations Writing: 3 semester hours

Same as ENGL 2188. Prerequisites: COMM 1150 or ENGL 1100 or COMM 2380. This course is an introduction to the process of planning, producing, and evaluating messages in public relations. It examines various forms of contemporary public relations writing, with special emphasis on preparation of messages for different media and audiences, setting long-range and short-term goals and objectives, and identifying appropriate message channels.

COMM 2230 Small Group Communication (MOTR COMM 125): 3 semester hours

This course focuses on the development of communication skills needed in effective small group decision-making and problem-solving as well as on application of these skills to contemporary problems. This course fulfills the University's general education communication proficiency requirement.

COMM 2231 Communication in the Organization: 3 semester hours

Course integrates communication theories applicable to the structure and function of organizations. The effect of communication variables on departmental interface, member satisfaction and motivation, leadership and subordinate styles, and perception of the organization by the external environment.

COMM 2235 Professional Communication: 3 semester hours

This course seeks to prepare students to develop and apply the practical communication and self-development skills needed to excel in academic and workplace settings. Topics may include self- and relationship management, communicating effectively in professional settings, and career planning. Students will also become familiar with specific careers in the field of communication and media.

COMM 2240 Persuasive Communication: 3 semester hours

This course covers persuasive communication including theories, techniques, forms, functions, applications, potential, and limitations for individuals and organizations. Perspectives from both classical rhetoric and contemporary communication theory are addressed. This course fulfills the University's general education communication proficiency requirement.

COMM 2332 Intercultural Communication: 3 semester hours

This course examines culture as a variable in both interpersonal and collective communicative situations. There is emphasis placed upon opportunities and problems arising from similarities or differences in communication patterns, processes, and codes among various cultural groups.

COMM 2380 Introduction to News Writing: 3 semester hours

Same as ENGL 2180. This course focuses on news writing and the development of news stories. Enrollment in this course is encouraged for but not restricted to staff of The Current (student newspaper) and other student publications.

COMM 3130 Communication in Family, Dating, and Marriage: 3 semester hours

Prerequisite: COMM 1030. This course examines dating, courtship, and marriage relationships. It focuses on exploring the history and contemporary issues associated with intimate relationships.

COMM 3140 Feature Writing: 3 semester hours

Same as ENGL 3150. Prerequisites: ENGL 1100 or equivalent. The course involves the study and practice of freelance and staff-written magazine or newspaper feature articles with an emphasis on relationship between types of publication and article content, research methods, and writing style. It involves frequent short assignments such as journal entries, interviews, library projects, article critiques, and market reports that lead to production of full-length feature articles. It may not be taken on the satisfactory/unsatisfactory option. The course counts toward the English Certificate in Writing.

COMM 3150 Crisis, Disaster, and Risk Communication: 3 semester hours

Prerequisites: Junior standing or consent of instructor. Course will focus on three specialized areas within public relations: communication methods and infrastructure in relation to large-scale disaster management; organizational crisis communication; and public communication regarding environmental, chemical and other public risk issues.

COMM 3330 Research Methods in Communication I: 3 semester hours

Introduction to the fundamental tools of quantitative research in communication. Focus of the course is on reading and comprehending communication research reports rather than conducting quantitative research.

COMM 3337 Communication and Gender: 3 semester hours

Prerequisites: Junior standing or consent of instructor. This course explores the influence of gender upon contemporary American communication behavior. Topics may include semantic and syntactic variations in speech, gender-role development as process and product of communication, analysis of communication patterns and barriers within gender groups. Mass, public, interpersonal, and dyadic communication contexts are considered.

COMM 3355 Dangerous Messages: 3 semester hours

Prerequisites: Junior standing or consent of instructor. This course examines how communication can be used to promote as well as inhibit societal and individual well-being. Topics include alcohol and tobacco, drugs, sexual behavior, and others pertaining to health and risky behaviors. Stereotyping, diversity in media ownership and content, hate speech, and other topics with implications for the health of citizens individually and as a people may also be covered.

COMM 3368 Advanced Health Communication: 3 semester hours

Prerequisites: COMM 1369 or consent of instructor. This course focuses on how to use communication to promote health across interpersonal, organizational, and mass media contexts. Topics may include crisis communication, health interventions and campaigns, and social marketing among others.

COMM 3370 Social Media in Public Relations: 3 semester hours

Prerequisites: COMM 1150 or COMM 1100 or consent of instructor. The course presents an overview of how to use social media and blogging in contemporary public relations. Students will also learn how to evaluate and create a social media plan.

COMM 3395 Special Topics in Communication: 3 semester hours

In-depth study of topics pertaining to current research in the department. May be repeated up to six credit hours if topic is different.

COMM 4100 Communication Campaigns: 3 semester hours

Prerequisites: COMM 1150, COMM 2180 and junior standing, or consent of instructor. This course focuses on the design, analysis, and implementation of mass communication-based information campaigns by integrating research and theory from interpersonal communication, mass communication, and public relations. It provides an advanced study of an organization's public relations needs and includes researching the situation, analyzing audiences, and preparing strategic plans for approved clients.

COMM 4199 Applied Strategic Communication: 3-6 semester hours

Prerequisites: Senior standing and consent of instructor; enrollment limited to PR certificate students. This course allows students to gain advanced, practical work experience emphasizing strategic communication skills within a discipline-relevant organization. Work must be done under supervision of a working professional in the field and in consultation with a faculty member. Proposed sites must be approved by the department. This course may be repeated for a maximum of 6 credit hours.

COMM 4360 Applied Health Communication: 3-6 semester hours

Prerequisites: Senior standing with at least 12 hours of course work in Communication, consent of instructor required; enrollment limited to health communication certificate students. This course comprise advanced practical work experience emphasizing communication skills within a health organization. Experiences may include organizational and promotional activities, mass communication, public relations, research and writing, strategic communication, or training and development, all with a health communication focus. Internships are off-campus and proposed sites must be approved by the department. Work must be done under supervision of a working professional in the field, and in consultation with a faculty member.

COMM 4500 Seminar in Fundamental Communication Theory: 3 semester hours

Prerequisites: Senior standing. This course introduces students to the theoretical, methodological, and philosophy of science issues in the discipline of communication. It includes general, micro, contextual, and interdisciplinary (symbiotic) communication theories.

COMM 4600 Seminar in Fundamental Organizational Communication Theory: 3 semester hours

Prerequisites: COMM 2231 and senior standing. This course examines the function of communication in the workplace. Students will learn to evaluate, adapt, and apply various research-supported frameworks for understanding organizational communication and communication processes in organizations. Interpersonal sensitivity, communication skills, and ethical values within organizations are also examined.

COMM 4650 Seminar in Fundamental Interpersonal Communication Theory: 3 semester hours

Prerequisites: COMM 1030 and one 3000-level course from the Interpersonal Communication Emphasis Area. This course examines the theories and research pertaining to interpersonal communication. It introduces students to fundamental theoretical writings and current research literature in the field. They will evaluate, adapt, and apply research findings on several interpersonal communication topics, including information management in interpersonal contexts, relational uncertainty in interpersonal communication, deception detection, new technologies, and dating.

COMM 4700 Seminar in Fundamental Mass Communication Theory: 3 semester hours

Prerequisites: COMM 1050 and at least three credit hours of 3000-level courses from the Mass Communication Emphasis Area. This course examines the theories and research pertaining to media industries, content, and users. It introduces students to the fundamental theoretical writings and current research literature in the field. Students will evaluate, adapt, and apply research finding in mass communication topics such as the impact of technology on media content and usage patterns, media effects on society and on individuals, media representation patterns, and the reasons users select particular types of content.

COMM 4900 Directed Readings: 3 semester hours

Prerequisite: Consent of instructor. Supervised independent study focused on discipline-relevant content that expands on concepts and theories presented in communication courses. May be repeated for credit.

COMM 4905 Directed Readings in Health Communication: 3 semester hours

Prerequisites: Consent of instructor. Supervised independent study focused on discipline-relevant content in health communication that expands on concepts and theories presented in health communication courses. May be repeated once for credit.

COMM 4910 Supervised Research: 1-3 semester hours

Prerequisites: Consent of instructor. Supervised field, laboratory, or survey research experience that includes activities such as data collection, literature searches, qualitative or quantitative data analysis, survey or experiment administration, and other research related activities. May be repeated with consent of department.

COMM 4915 Supervised Research in Health Communication: 1-3 semester hours

Prerequisites: Consent of instructor. Supervised field, laboratory, or survey research experience in the area of health communication. Includes activities such as data collection, literature searches, qualitative or quantitative data analysis, survey or experiment administration, and other research related activities. May be repeated for up to 6 credit hours total with consent of department.

COMM 4920 Practicum in Applied Communication: 1-3 semester hours

Prerequisite: Junior standing, at least 12 hours of course work in Communication, and consent of instructor; open to Communication majors/minors. Practicum work experience with any discipline-relevant unit at UMSL including, but not limited to: the offices of students affairs, public relations, and research administration; the school newspaper or radio station; and intra-departmental activities. Work must be done on campus, under supervision of a working professional in the field, and in consultation with a faculty member. Repeatable, but no more than six hours total credit may be earned in practicum courses toward the 36-hour minimum required for the degree.

COMM 4950 Internship in Applied Communication: 3-6 semester hours

Prerequisites: Senior standing with at least 12 hours of course work in Communication, consent of instructor; open to communication majors only. Advanced practical work experience emphasizing communication skills with any discipline-relevant entity. Experiences may include organizational and promotional activities, mass communication, public relations, research and writing, strategic communication, or training and development. Internships are off-campus and proposed sites must be approved by the department. Work must be done under supervision of a working professional in the field, and in consultation with a faculty member. Repeatable, but not more than six hours total credit may be earned in internship courses toward the 35-hour minimum required for the degree.

COMM 5000 ACP - Elements of Public Speaking: 3 semester hours

Prerequisites: Graduate standing, special consent. This course focuses on the delivery of theory and research based public speaking content for teachers seeking certification to teach communication courses for the Advanced Credit Program.

COMM 5010 ACP: Elements of Debate: 3 semester hours

Prerequisites: Graduate standing, special consent. This course focuses on developing a comprehensive understanding of the theory and research typically taught in college level forensics and debate courses. Designed for teachers seeking certification to teach communication courses for the Advanced Credit Program.

COMM 5020 ACP - Persuasion and Influence: 3 semester hours

Prerequisites: Graduate standing, special consent. This course focuses on developing a strong background in the research and theory that underlies attempts to persuade and influence others through the use of effective communication. Designed for teachers seeking certification to teach communication courses for the Advanced Credit Program.

COMM 5050 ACP - Special Topics: 3-6 semester hours

Prerequisites: COMM 5000, COMM 5010, and COMM 5020, special consent. This rotating topic course focuses on developing knowledge of communication theory and research applicable to the context of teaching public speaking and debate. Topics may include such issues as nonverbal communication, conflict communication, and argumentation, among others. Designed for teachers seeking certification to teach in the Advanced Credit Program. May be repeated for a maximum of 6 credit hours.

COMM 5099 ACP - Observation and Implementation: 3 semester hours

Prerequisites: COMM 5000, COMM 5010, COMM 5020 and COMM 5050, special consent. Provides a capstone experience for teachers seeking to teach communication courses in the advanced credit program. While enrolled, participants will implement an ACP course in their school under the supervision of the Communication Department's advanced Credit Program Liaison.

COMM 6500 Seminar in Communication Theory: 3 semester hours

Prerequisite: Graduate standing. Examination of the theoretical, methodological, and philosophy of science issues in the discipline of communication. Examines general, micro, contextual, and interdisciplinary (sybiotic) communication theories. Required of all graduate communication students.

COMM 6510 Advanced Communication Research Methods I: 3 semester hours

Prerequisites: Graduate standing. Concerns the logic and forms of communication inquiry including an examination of various communication research and evaluation methods and their theoretical frameworks. Topics include communication research strategy and methodology, scientific process, derivation and test of hypotheses, methods of research design. Provides and orientation to graduate research including proposal development for thesis, internship and paper requirements, and includes a theory-based research project of the student's choice. Required of all graduate communication students.

COMM 6600 Seminar in Strategic Communication in Organizations: 3 semester hours

Prerequisite: Graduate standing. Examines the function of communication in the workplace. Students will study various frameworks for understanding organizational communication, implications of major organizational theories, and strategic communication processes in organizations. Interpersonal sensitivity, communication skills, and ethical values within organizations are also examined.

COMM 6630 Seminar in Interpersonal Communication: 3 semester hours

Prerequisites: Graduate standing. This course examines the theories and research pertaining to interpersonal communication. Students will evaluate, adapt, apply, and formulate theory and research findings to several interpersonal communication topics, including information management in interpersonal contexts, relational uncertainty in interpersonal communication, deception detection, new technologies, and dating.

COMM 6700 Seminar in Mass Communication: 3 semester hours

Prerequisites: Graduate standing. Examines the theories and research pertaining to media industries, content, and users. Topics include the impact of technology on media content and usage patterns, media effects on society and on individuals, media representation patterns, and the reasons users select particular types of content.

COMM 6800 Seminar in Health Communication: 3 semester hours

Prerequisites: Graduate standing. Examines the theories that researchers use to investigate health communication phenomena, as well as the application of those theories to understanding and enhancing health. Course topics include health campaigns and interventions, patient-provider communication, and cultural perceptions of health.

COMM 6830 Seminar in Special Topics in Communication: 3 semester hours

Prerequisite: Graduate standing. Selected topics in the study of communication. Review of the communication theory and methods appropriate to the topic. The course includes a research project. May be repeated if the topic is different.

COMM 6900 Directed Readings in Communication: 1-6 semester hours

Prerequisite: Graduate standing and consent of instructor. Independent study of published research and reports relating to a specific topic in communication. May be repeated for credit with permission of advisor.

COMM 6910 Supervised Research in Communication: 1-3 semester hours

Prerequisites: Graduate standing and consent of instructor. Primary research on specific topics in communication. May involve collaborative research with a faculty member on a topic of mutual interest or data collection/analysis for a project developed by the student under the guidance of a faculty member. May be repeated for credit with permission of advisor.

COMM 6920 Practicum in Computer-Mediated Communication: 1-3 semester hours

Prerequisites: Graduate standing and consent of program director. Applied practice or research in collaboration with a faculty member.

COMM 6950 Graduate Internship: 3-6 semester hours

Prerequisites: Graduate standing and approval of graduate coordinator. Individual on-site internship in organizational or mass communication. May be repeated.

COMM 6960 Thesis Research and Preparation: 1-10 semester hours

Prerequisites: Graduate standing and consent of instructor. Individual research for and preparation of the graduate thesis.

Media Studies Courses

MEDIA ST 1065 Internet Media: 3 semester hours

This course covers the principles of media design as they apply to the internet and other digital communication networks. Familiarity with online interfaces will be developed through analysis of the changing nature of communication technologies. Students will conceive and create their own projects. This course fulfills the University's general education information literacy requirement.

MEDIA ST 1070 Introduction to Cinema: 3 semester hours

This course offers students the opportunity to develop a better understanding and appreciation for film form, style, and structures through exploring various historical periods, genres, and film makers. It covers the history of cinema and its evolution, its role in society, and the methods through which cinema is created.

MEDIA ST 1198 Practicum in Media Studies: 1-6 semester hours

Prerequisites: Consent of instructor. Open to Media Studies majors or minors only; not open to students who have delayed grades outstanding. Practical work in a field related to media studies supervised by a faculty member. This course may be repeated for up to 20 credit hours.

MEDIA ST 2020 Acting for the Camera: 3 semester hours

This acting course prepares actors for work in front of a camera. Working with broadcast quality cameras, students will learn the art of language and expression. Students will learn the art and skill of communicating to an audience. Students also acquire the skills for working with other actors on camera, close-ups, working with props, continuity and hitting your mark.

MEDIA ST 2113 Media Production I: 3 semester hours

Study of the basic skills needed to create media packages. The class will provide students with practical experience in camera operation, directing, producing, switching, audio mixing, and lighting, as well as basic non-linear editing. Lab arranged.

MEDIA ST 2210 Video Production I: 3 semester hours

This course covers the basic theories and practice of remote video production. Producing and directing in the field will be examined and practiced. The course will focus on technical and aesthetic aspects of cinematic production. Lab arranged.

MEDIA ST 2211 Introduction to Digital Multimedia Production: 3 semester hours

Students will explore different state-of-the-art digital multimedia applications, including audio, video, and computer generated graphics, that are presently used in television, radio, CD, DVD, and online presentation. Current media related software such as QuickTime, Window Media, and Flash multimedia creation will be demonstrated and utilized to develop skill sets in those areas.

MEDIA ST 2225 Live Events Media: 3 semester hours

Techniques and aesthetics of recording live video events. Course will include practical application training for single- and multi-camera shoots of concerts, lectures, theatre, dance, weddings, and other special events.

MEDIA ST 2235 Media Theory: 3 semester hours

Prerequisite: COMM 1050. This course presents a theory-based explanation of the relationship between mass media and society. The topics covered include agenda-setting, violence and television, and other current issues from a critical perspective.

MEDIA ST 2260 Storytelling Through Sound: Podcasting and Audio Production: 3 semester hours

This course provides an introduction to audio production and podcasting. Students will explore each of the elements that come together, through the medium of sound, to enhance a story or conversation. Assignments will refine skills in everything from writing for audio and asking good questions to recording, editing and overall project strategy.

MEDIA ST 3025 Current Issues in Strategic Communication: 3 semester hours

Prerequisites: COMM 1100 or COMM 1150, junior standing or consent of instructor. The course covers current trends, topics, and controversies in advertising, public relations, and related fields. Students will analyze, evaluate, and critique current topics in group discussions. Students are expected to help select and research the topics as well as lead discussion with the support from the instructor.

MEDIA ST 3113 Media Production II: 3 semester hours

Prerequisite: MEDIA ST 2113. Advanced study of the skills needed to create media packages. The class will provide students with a continuation of practical training in camera operations, directing, producing, switching, audio mixing, and lighting, as well as more advanced post production techniques. Lab arranged.

MEDIA ST 3310 Video Production II: 3 semester hours

Prerequisite: MEDIA ST 2210. Study of advanced theories of media production. Refinement of production principles learned in MEDIA ST 2210. Exploration of complex program formats, and advanced non-linear editing techniques. Lab arranged.

MEDIA ST 3313 Advanced Video Editing: 3 semester hours

Prerequisites: Six (6) hours of television production. Study of advanced non-linear editing techniques, animation, and advanced graphics development. Exploration of state of the art editing formats. Lab arranged.

MEDIA ST 3318 Advanced Independent Video Production: 3 semester hours

Prerequisites: MEDIA ST 2210. This course will enable students to plan, script, shoot and edit advanced independent video productions for exhibition and competitive formats. Emphasis will be placed upon auteur conceptualization, production, and direction. May be repeated for up to a total of 6 credit hours.

MEDIA ST 3338 Advertising Technique: 3 semester hours

Same as MKTG 3738. Prerequisites: COMM 1100 or MKTG 3700 or consent of instructor. Techniques for creating advertising messages and campaigns to reach target audiences. Focus on the process of persuasion, importance of advertising in modern economics, rationale for company advertisement, evaluation of advertising effectiveness, and assessment of advertising myths and truths. Practical application of messages and campaigns will be stressed.

MEDIA ST 3355 Media Law and Regulation: 3 semester hours

Prerequisites: COMM 1050 or COMM 1110. This course addresses laws affecting the mass media. The topics covered include problems and issues in legal regulation of media content, ownership, access, and accountability as well as industry self-regulation and the influence of citizens' organizations.

MEDIA ST 3356 Global Media Systems and Trends: 3 semester hours

This course will survey major theories, global trends, and key stakeholders in the field of mass and digital media. It addresses issues regarding the transnational and transcultural flow of media content and communication technologies. Topics include the historical context and cultural implications of globalization, patterns of international media flow, and the roles of transnational media and communication organizations.

MEDIA ST 3398 Internship in Media Studies: 3-6 semester hours

Prerequisites: Senior standing; consent of instructor; open to Media Studies majors only; not open to students who have any delayed grades. Practical work at an off-campus agency, supervised by a professional in consultation with a faculty member. This course may be repeated for up to 20 credit hours.

MEDIA ST 3990 Directed Readings in Media Studies: 3 semester hours

Prerequisites: Consent of instructor; not open to students who have any delayed grades. Supervised independent study involving readings, conferences, papers, in one of the department's disciplines: advertising, radio, television, film, or journalism.

MEDIA ST 4040 Special Topics in Media Studies: 1-6 semester hours

Prerequisites: Junior, senior, or graduate standing and consent of instructor. Special topics with subject matter dealing with current issues, (theoretical or applied), in the discipline of media studies. Since the topics of MEDIA ST 4040 may change from semester to semester, the course may be repeated for up to 12 credit hours.

MEDIA ST 4400 Senior Project: 3-6 semester hours

Prerequisites: Senior status and consent of instructor. The capstone experience requires seniors to produce an original research project, a representative portfolio, or an intrinsic case study, which exemplifies their undergraduate study. Students will present their work to the instructor supervising the course, as well as program related-faculty. Repeatable up to 6 credit hours.

Computer Science

General Information

Degrees and Areas of Concentration

The Department of Computer Science offers many undergraduate and graduate degrees, certificates, and a minor.

At the undergraduate level, we offer the following degree programs

- B.S. (Bachelor of Science) in Computer Science
- B.S. in Computing Technology
- B.S. in Cybersecurity, Computer Science emphasis
- B.S. in Data Science, Computer Science emphasis

a minor in Computer Science, and the following certificates

- Artificial Intelligence
- Computer Programming
- Computer Programming Education
- Cybersecurity with the Department of Information Systems and Technology
- Data Science, with the Department of Mathematics and Statistics
- Internet and Web
- Mobile Apps and Computing

At the graduate level, we offer the following degree programs

- M.S. (Master of Science) in Computer Science
- M.S. in Cybersecurity, Computer Science emphasis
- Ph.D. (Doctor of Philosophy) in Mathematical and Computational Sciences, Computer Science option

and the following certificates

- Artificial Intelligence
- Cybersecurity with the Department of Information Systems and Technology
- Data Science
- Internet and Web
- Mobile Apps and Computing

The department also offers a dual BS/MS degree program in Computer Science.

Certificates

The certificate programs are designed for our undergraduate majors or graduate students, for students in other departments, and for non-students, to specialize in an area of interest. Certificates can be earned stand-alone, or they can be integrated into either an undergraduate or a graduate program. Some certificates are available online, and others can be taken in the evening, part-time or full-time.

Career Outlook

A degree in a computing-related field prepares well-motivated students for interesting and fulfilling careers. The demand for individuals well trained in computer science, computing technology, and cybersecurity is greater than the available supply. Furthermore, we offer specializations in artificial intelligence, web technologies, data science, and mobile apps.

Graduates from our programs are located throughout the country and they have a very strong local presence. They have careers in all sectors such as technology, banking, health care, engineering and manufacturing, at various levels and at places such as Google, Microsoft, Boeing, Mastercard, *etc.* Typically, our alumni are in technology or management, with some enjoying careers in education.

Department Scholarships

The Department of Computer Science offers many merit-based and need-based scholarships, available to departmental majors.

The Alumni Scholarship is a monetary award for outstanding undergraduate students open to all junior and senior department majors.

The Edward Z. Andalaft Memorial Scholarship is a monetary award for outstanding undergraduate department majors at the sophomore level or higher.

The Computer Science Scholarship is a monetary award for outstanding computer science majors with preference given to freshman and sophomore students. Applicants must have a grade point average of 3.5 or higher in courses taken in the department.

The Boeing Company Scholars Program in Computer Science is a monetary award for full-time (at least 12 hours) upper-level undergraduate students in computer science. Recipients must have a minimum GPA of 3.2 and must maintain a GPA of 3.0. Preference will be given to traditionally underrepresented populations.

Degrees

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Computing Technology BS (p. 489)

Cybersecurity BS, Computer Science Emphasis (p. 500)

Computer Science BS/MS Dual Degree Program (p. 488)

Computer Science MS (p. 488)

Computer Science MS Accelerated Master's Program (p. 486)

Cybersecurity MS, Computer Science Emphasis (p. 506)

Cybersecurity MS, Computer Science Emphasis Accelerated Master's Program (p. 507)

Mathematical and Computational Science PhD, Computer Science Emphasis (p. 609)

Minors

Computer Science Minor (p. 488)

Undergraduate Certificates

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Computer Programming Undergraduate Certificate (p. 485)

Computer Programming Education Undergraduate Certificate (p. 402)

Geographic Information Systems (p. 577)

Internet and Web Undergraduate Certificate (p. 602)

Mobile Apps and Computing Undergraduate Certificate (p. 626)

Graduate Certificates

Artificial Intelligence Graduate Certificate (p. 402)

Data Science Graduate Certificate (p. 516)

Internet and Web Graduate Certificate (p. 602)

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Affiliated Interdisciplinary Programs

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Computer Science Courses

CMP SCI 1000 Computer Science Experiences: 1 semester hour

This course is for recently declared undergraduate students majoring in Computer Science or Computing Technology. Topics may include resources that are available on campus and in the department, career opportunities, choosing the right degree, and exploration of concepts, skills and practices that are essential for successful careers. This course should be taken by freshmen and transfers within the first two semesters of declaring the major.

CMP SCI 1250 Introduction to Computing: 3 semester hours

Prerequisites: MATH 1030 with a B- or better, or MATH 1045 with B- or better, or MATH 1100 (can be taken concurrently), or MATH 1800 (can be taken concurrently), or a 70% on the proctored UMSL Math Placement obtained at most one year prior to enrollment in this course. This course provides an introduction to the concepts of computation, problem solving, and computer systems. It covers topics such as, fundamental programming constructs, basic data types, and modularization using a modern high level language. Problem solving skills are developed through a progression of programming projects.

CMP SCI 2250 Programming and Data Structures: 3 semester hours

Prerequisite: CMP SCI 1250. This course covers properties, implementation, and use of abstract data types such as lists, trees, stacks, and queues. It also covers procedural and data abstraction, use of interfaces, file processing, and basic algorithms for sorting and searching.

CMP SCI 2261 Object-Oriented Programming: 3 semester hours

Prerequisites: CMP SCI 2250 (may be taken concurrently). This course introduces object-oriented concepts, terminology, and notation (UML) using Java. It also covers encapsulation, classes, objects, inheritance, and the use of class libraries. Additional topics may include graphical user interfaces, applets, and related tools and technologies.

CMP SCI 2700 Computer Organization and Architecture: 3 semester hours

Prerequisites: CMP SCI 2250 (may be taken concurrently). This course introduces details of computer systems from architectural and organizational points of view. It covers data representation, basic digital logic circuits, memory types and hierarchies, I/O and storage devices, CPU architectures such as RISC, CISC, parallel, and multi-core.

CMP SCI 2750 Linux Environment and Programming: 3 semester hours

Prerequisites: CMP SCI 2250 and CMP SCI 2700 (CMP SCI 2700 may be taken concurrently). This course introduces Linux Operating System and focuses on command-line interactions, the file system, and shell scripting. Additional topics may include source control, symbolic debugging, and system programming in C.

CMP SCI 2890 Introductory Topics in Computer Technology: 1-3 semester hours

Prerequisites: CMP SCI 1250 or students who have taken another introduction to programming may enroll with consent of instructor. This course covers an introductory topic in computer technology relevant to the field and the interests of the instructor. This course may be taken for credit more than once so long as the topic discussed is different.

CMP SCI 3010 Web Full Stack Development: 3 semester hours

Prerequisites: CMP SCI 2250 (may be taken concurrently) or students with familiarity with basic data structures may enroll with consent of instructor. This course provides an overview of website development focusing on development tools along with modern frameworks and libraries. Development tools include Git, GitLab, and Docker. Students will create well-structured, easily maintained, standards-compliant, accessible JavaScript code. Client-side JavaScript libraries may include React and Redux. Server-side JavaScript frameworks include Node with Express. Client-server computing projects are a course requirement. Upon successful completion of the course students will understand how client-side code, server-side code, web servers, and databases function together.

CMP SCI 3130 Design and Analysis of Algorithms: 3 semester hours

Prerequisites: CMP SCI 2250, MATH 1320, and MATH 3000. This course addresses the design and analysis of fundamental algorithms in computer science. Studies basic sorting algorithms, priority queues, order statistics, search trees, and hash tables. Analysis techniques may involve time and space complexity analysis of both iterative and recursive algorithms, analysis of algorithm correctness, and amortized complexity analysis. Additional topics may include data compression, string manipulation, greedy algorithms, dynamic programming, and graph traversal.

CMP SCI 3200 .NET Framework: 3 semester hours

Prerequisites: CMP SCI 3010. This course introduces the .NET framework and related languages and technologies. Topics will include Visual Studio and C# for OOP and web applications. Additional topics may include ASP.NET with MVC, data access, and windows communication.

CMP SCI 3410 Video Game Design and Development: 3 semester hours

Prerequisites: CMP SCI 2261. This course covers major aspects of the design and development of video games, including world/level design, game UI design, game character design, game engine programming, 2D/3D modeling and rendering, game physics and animation. This is a project-based course in which students learn to apply acquired knowledge and skills to building a video game in a team environment.

CMP SCI 3411 Introduction to Data Visualization: 3 semester hours

Prerequisites: CMP SCI 1250. This course introduces students to the principles of effective data visualization. The course includes an introduction to data cleaning and analysis. Plotting tools such as Tableau, Matplotlib, and D3.js are also introduced. Topics covered may include graphical excellence, log scale, color, heat maps, network visualization, plotting scientific data, interactive plots, and plotting live stream of data. Credit cannot be granted for both CMP SCI 3411 and CMP SCI 5411.

CMP SCI 3702 Introduction to Cyber Threats and Defense: 3 semester hours

Prerequisites: CMP SCI 2250. This course introduces the importance of cybersecurity and covers its various components. Topics may include different types of malware, phishing, password attacks, spoofing, efficient encryption algorithms, firewalls, intrusion prevention/detection systems, and honeypots. Credit cannot be granted for both CMP SCI 3702 and CMP SCI 5702.

CMP SCI 3780 Software Security: 3 semester hours

Prerequisites: CMP SCI 2261, CMP SCI 2750, and CMP SCI 3010. This course introduces the basic software security principles and pitfalls, including topics such as buffer, integer and string problems, runtime errors, SQL and command injection. Additional topics may include data protection, secure file access, password and network security.

CMP SCI 3990 Undergraduate Internship: 1-3 semester hours

Prerequisites: Consent of instructor. This course is a computer science internship that provides a student field experience in an organization related to the profession. To be enrolled, students must be employed in an internship or co-op program and find an instructor to supervise the experience. Internship activities may vary by site, but will often require end-of-semester reporting. Typically 1 credit can be earned for about 100 work hours. A maximum of 3 credit hours of CMP SCI 3990 can be counted as major electives and a maximum of 6 credit hours of CMP SCI 3990 and CMP SCI 4880 combined can be counted as major electives.

CMP SCI 4010 Web Development with Java: 3 semester hours

Prerequisites: CMP SCI 3010 and either CMP SCI 2261 or INFSYS 3806; or graduate standing. This course covers fundamental topics of Java EE technology. Topics start with servlets and JSP. Additional topics may include JDBC, expression language, JSTL, security, Maven, Hibernate ORM framework, MVC pattern, REST web services, testing and source control for Java web applications.

CMP SCI 4011 Web Development with Advanced JavaScript: 3 semester hours

Prerequisites: CMP SCI 3010. This course provides a comprehensive overview of website development using the modern MEAN (MongoDB, Express.js, Angular, Node.js) stack architecture. Students will create web applications that make use of today's modern JavaScript engine. Other topics may include React, Sass (Syntactically awesome style sheets), and Pug template engine.

CMP SCI 4012 Introduction to Enterprise Microservice Development: 3 semester hours

Prerequisites: CMP SCI 2261 and CMP SCI 3010. This is a hands-on course providing students with an understanding of microservices and related technologies, with enough scope and depth to make the students ready to participate in real-world microservice application developments. Emphasis is placed on practical and effective knowledge and an in-depth technical learning experience suitable for any developer. The target audience is students who want to be involved in microservice application development. Credit cannot be earned for both CMP SCI 4012 and CMP SCI 5012.

CMP SCI 4020 Introduction to Android Apps: Android Fundamentals: 3 semester hours

Prerequisite: CMP SCI 2261. This course covers the fundamental programming principles, software architecture, and user experience considerations underlying handheld software applications and their development environments. The course involves in-depth, hands-on examples that are implemented on the Android Platform, along with discussions of security. Credit can not be granted for both CMP SCI 4020 and CMP SCI 5020.

CMP SCI 4030 Introduction to Intelligent Web: 3 semester hours

Prerequisites: CMP SCI 3010 and CMP SCI 3130. This course covers the application of artificial intelligence and other modern techniques to help construct, navigate, and experience the Web. Topics may include retrieval models, classification, mining, association, topology, and indexing algorithms such as PageRank and HITS. Credit cannot be earned for both CMP SCI 4030 and CMP SCI 5030.

CMP SCI 4151 Introduction to Statistical Methods for Data Science: 3 semester hours

Prerequisites: CMP SCI 1250, MATH 1900, and an introductory statistics course (ANTHRO 3220/SOC 3220, BIOL 4122, CRIMIN 2220, ECON 3100, MATH 1320, POL SCI 3000, or PSYCH 2201). This course covers statistical inference with emphasis on applications and computer simulation. Topics may include multivariate distributions, transformations and combinations of random variables, sampling distributions, maximum likelihood, bootstrap, order statistics, hypothesis testing, likelihood ratio tests, Monte Carlo methods, Bayesian inference, and sufficient statistics. Students may not receive credit for both CMP SCI 4151 and CMP SCI 5151.

CMP SCI 4200 Python for Scientific Computing and Data Science: 3 semester hours

Prerequisites: CMP SCI 1250 and (MATH 1100 or MATH 1800) and (ANTHRO 3220/SOC 3220 or BIOL 4122 or CRIMIN 2220 or ECON 3100 or MATH 1320 or POL SCI 3000 or PSYCH 2201) or graduate standing in computer science. This course covers programming using the Python language and related libraries. The course explores problem solving using Python's support of procedural, object-oriented, and functional approaches to programming. Topics may include NumPy arrays, visualization, Pandas DataFrames, and selected functions from statistical and scientific packages.

CMP SCI 4220 Introduction to iOS Programming and Apps: 3 semester hours

Prerequisites: CMP SCI 2261 or INFSYS 3806 or graduate standing. This course will use Swift for building iOS apps. It also introduces Xcode, Interface Builder, basic design patterns like MVC and delegation, and core libraries for Swift and iOS. Additional topics may include network communication, data persistence, basic animation, and mapping. This is a project-oriented class that will require significant use of a Mac with Xcode installed.

CMP SCI 4222 iOS Apps: 3 semester hours

Prerequisites: CMP SCI 4220 or consent of the instructor. This course focuses on building more sophisticated iOS apps. May include networking such as web services, Bluetooth and wifi connectivity, graphics and animation in 2-d and 3-d, autolayouts, OpenGL, advanced data sources such as plist and core data, source control and unit testing. May also discuss security topics. Credit not granted for both CMP SCI 4222 and CMP SCI 5222.

CMP SCI 4250 Programming Languages: 3 semester hours

Prerequisites: CMP SCI 2261 and CMP SCI 3010, or graduate standing. This course studies the principles, approaches, and trade-offs in modern programming languages, including a comparative study of syntax, semantics, and pragmatics. It also examines major programming paradigms: object-oriented, imperative, functional and logic.

CMP SCI 4280 Program Translation Project: 3 semester hours

Prerequisites: CMP SCI 2700, CMP SCI 2750, CMP SCI 3130, and CMP SCI 4250, or graduate standing. This course uses program translation as an example of a complex task, and focuses on managing and developing solutions for such complex programming tasks using modular incremental development and testing while applying proper standards. Translation topics may include finite automata, BNF, language semantics, and various translation models.

CMP SCI 4300 Introduction to Artificial Intelligence: 3 semester hours

Prerequisites: CMP SCI 3130. This course provides an introduction to artificial intelligence. The list of topics may include search, planning, knowledge-based reasoning, probabilistic inference, machine learning, natural language processing, and practical applications. Credit cannot be granted for both CMP SCI 4300 and CMP SCI 5300.

CMP SCI 4320 Introduction to Evolutionary Computation: 3 semester hours

Prerequisites: CMP SCI 2261, CMP SCI 2750 and CMP SCI 3130. This course introduces the concepts of nature-inspired problem solving with artificial evolution using selection, crossover, mutation and inheritance. It discusses applications of evolutionary algorithms, overviews the existing models and instances, and analyzes specific instances such as genetic algorithms, evolutionary programming, evolution strategies, and genetic programming. Credit not granted for both CMP SCI 4320 and CMP SCI 5320.

CMP SCI 4340 Introduction to Machine Learning: 3 semester hours

Prerequisites: CMP SCI 4342, or CMP SCI 2261 and CMP SCI 3130, or consent of instructor. This course provides an introduction to machine learning principles, algorithms and applications. Topics may include computational learning theory, VC Dimension, generalization, classification, regression, regularization, validation, and reinforcement learning. Credit cannot be granted for both CMP SCI 4340 and CMP SCI 5340.

CMP SCI 4342 Introduction to Data Mining: 3 semester hours

Prerequisites: CMP SCI 2261 and CMP SCI 3130, or CMP SCI 4200, or consent of the instructor. This course provides an introduction to data mining principles, algorithms, and applications. Topics may include data preprocessing, data transformation, similarity and dissimilarity measures, data representation, classification techniques, association analysis, cluster analysis, and anomaly detection. Credit cannot be granted for both CMP SCI 4342 and CMP SCI 5342.

CMP SCI 4370 Introduction to Biological Data Science: 3 semester hours

Prerequisites: CMP SCI 3130 or consent of instructor. This course provides an introduction into several key areas of biological data science, with a focus upon genetic data. Relevant background topics in genetics, current issues, and a variety of available resources will be explored. Upon successful completion of this course, the student will be able to evaluate algorithms for analyzing genetic data, including assessments of sources of errors and analysis of time and space complexity; address shortcomings in existing approaches; and implement efficient and effective software for exposing information hidden in genetic data. Credit cannot be granted for both CMP SCI 4370 and CMP SCI 5370.

CMP SCI 4390 Introduction to Deep Learning: 3 semester hours

Prerequisites: CMP SCI 3130 or consent of instructor. This course introduces mathematical foundations for deep learning, and follows with practical applications using selected domains such as image classification or protein predictions. It also covers dense neural networks, convolutional neural networks, recurrent neural networks, and other state-of-the-art networks. Credit cannot be granted for both CMP SCI 4390 and CMP SCI 5390.

CMP SCI 4410 Introduction to Computer Graphics: 3 semester hours

Prerequisites: CMP SCI 2250 and MATH 2450. This course covers the theoretical foundation and algorithms for computer graphics. Students learn the basics of graphics programming for modeling, rendering, and animation of 2D and 3D objects, using standard graphics API. A brief discussion of special graphics hardware, such as GPU, may be included. Credit cannot be granted for both CMP SCI 4410 and CMP SCI 5410.

CMP SCI 4420 Introduction to Digital Image Processing and Computer Vision: 3 semester hours

Prerequisites: MATH 1900, MATH 2450, CMP SCI 2750, and CMP SCI 3130. This course focuses on image analysis and visual perception. Students learn data structures and algorithms for image processing, region and texture analysis, image filtering, edge detection, contour following, and image enhancement in both spatial and frequency domain. Other topics may include color processing, coding for storage, retrieval, transmission, and image restoration. Credit cannot be granted for both CMP SCI 4420 and CMP SCI 5420.

CMP SCI 4500 Introduction to the Software Profession: 3 semester hours

Prerequisites: CMP SCI 2261, CMP SCI 3010, and MATH 3000. This course focuses on software development and on the skills required for success in the software profession. Topics related to software development may include software process, models and views, software architectures, documentation, and testing strategies. Topics related to the profession may include ethics, licensing, copyright, trademarks, and professional conduct. Individual and group projects, research, and presentations may be required in this capstone course.

CMP SCI 4610 Database Management Systems: 3 semester hours

Prerequisites: CMP SCI 3010 and MATH 3000; or graduate standing. This course focuses on database theory and applications, with emphasis on the relational model. Topics include database design, modeling, file systems, indexing, integrity constraints, relational algebra, normalization, transaction processing, and concurrency control. Students are exposed to emerging DBMS technologies and applications. Several programming projects will be required using a popular SQL server.

CMP SCI 4700 Computer Forensics: 3 semester hours

Prerequisites: CMP SCI 2750 or graduate standing. This course explores topics and methodologies for examining digital evidence, along with some principles of the investigative process. Topics may include memory, file system, operating system, network, and mobile device forensics. This course addresses both theory and hands-on aspects for conducting digital forensic examinations.

CMP SCI 4730 Computer Networks and Communications: 3 semester hours

Prerequisites: CMP SCI 2750 and MATH 1320, or graduate standing. The course provides an understanding of computer network fundamentals, design, management and security through the layered Internet architecture and the TCP/IP protocol stack. The topics may include common networking techniques and protocols, as well as more advanced concepts like cloud computing, software-defined networks, and virtual network functions.

CMP SCI 4732 Introduction to Cryptography for Computer Security: 3 semester hours

Prerequisites: MATH 1100 or MATH 1800 or consent of instructor. This course provides an introduction to cryptography as it applies to computer security. It describes modern cryptographic systems and potential attacks on against these systems. Topics may include both symmetric and asymmetric encryption algorithms, authentication, key exchange protocols, onion networks and blockchain technology, as well as potential attacks on these systems. Credit cannot be granted for more than one of CMP SCI 4732, CMP SCI 4780, and CMP SCI 5732.

CMP SCI 4750 Introduction to Cloud Computing: 3 semester hours

Prerequisites: CMP SCI 2750. This course provides an introduction to development and deployment of applications in the cloud space. Touches on different aspects of cloud computing such as IaaS, PaaS, and SaaS. Includes significant discussion on legal and security aspects of clouds in the marketplace. May also include public, private, and hybrid clouds, and Internet of Things. Credit not granted for both CMP SCI 4750 and CMP SCI 5750.

CMP SCI 4760 Operating Systems: 3 semester hours

Prerequisites: CMP SCI 2750 and CMP SCI 3130; or graduate standing. This course covers the structure of a generic operating system, considering in detail the algorithms for interprocess communication, process scheduling, resource management, memory management, file systems, and device management. It presents examples from contemporary operating systems and requires practical projects implemented within a modern operating system or simulator environment.

CMP SCI 4782 Information Security: 3 semester hours

Prerequisites: CMP SCI 2750 and, CMP SCI 3702 or INFSYS 3848, or consent of instructor. This course provides an overview of the cybersecurity profession and the various domains associated with it. Students will be introduced to various information risk management concepts and how it is interconnected to cybersecurity. A broad range of cybersecurity domains will be discussed along with practical applications of information risk management. Additional topics may include labs in select cybersecurity domains. Credit can not be granted for both CMP SCI 4782 and CMP SCI 5782.

CMP SCI 4792 Introduction to Mobile Computing, Networking, and Security: 3 semester hours

Prerequisites: CMP SCI 2750 and, CMP SCI 3702 OR INFSYS 3848, or consent of instructor. This course introduces fundamental concepts of mobile wireless networks, mobile edge computing, and security measures at the edge. It discusses challenges related to mobile edge computing systems in general and may include topics such as crowdsourcing/ crowdsensing systems, Quality of Experience (QoE) in real-time mobile services, Internet of Things, scalability, secure and verifiable computing, and vehicular and autonomous driving networks. Credit not granted for both CMP SCI 4792 and CMP SCI 5792.

CMP SCI 4794 Introduction to Internet of Things: 3 semester hours

Prerequisites: CMP SCI 4730 or consent of instructor. This course covers the cutting-edge techniques on the emerging edge cloud and wireless/mobile Internet of Things (IoT) systems. It covers the IoT reference architecture, integrated IoT security architecture, major threats and vulnerabilities with the IoT devices and edge cloud, and defense mechanisms. It includes hands-on labs on both the vulnerabilities and defense of the systems. Credit cannot be granted for both CMP SCI 4794 and CMP SCI 5794.

CMP SCI 4880 Individual Studies in Computer Science: 1-3 semester hours

Prerequisites: Consent of instructor. This course allows a student to pursue individual studies under the supervision of a faculty member. Topics may include learning new technology, software development, or participation in research activities. Students must arrangements for an instructor to supervise their work. A maximum of 6 credit hours of CMP SCI 3990 and CMP SCI 4880 combined can be counted as major electives.

CMP SCI 4890 Topics in Computer Science: 1-3 semester hours

Prerequisites: Consent of instructor. This course covers a special topic in computer science to be determined by recent developments in the field and the interests of the instructor. This course may be taken for credit more than once so long as the topic discussed in each semester is different.

CMP SCI 5012 Enterprise Microservice Development: 3 semester hours

Prerequisites: Graduate standing. This is a hands-on course providing students with an understanding of microservices and related technologies, with enough scope and depth to make the students ready to participate in real-world microservice application developments. Emphasis is placed on practical and effective knowledge and an in-depth technical learning experience suitable for any developer. The target audience is students with familiarity with full stack, Java and JavaScript who want to be involved in microservice application development. Students may not receive credit for both CMP SCI 4012 and CMP SCI 5012.

CMP SCI 5020 Android Apps: Android Fundamentals: 3 semester hours

Prerequisite: Graduate standing. This course covers fundamental programming principles, including software architecture and user experience considerations, which underlie handheld software applications and their development environments. The course involves in-depth, hands-on examples that are implemented on the Android Platform, along with discussions of security. Credit is not granted for both CMP SCI 4020 and CMP SCI 5020.

CMP SCI 5030 Intelligent Web: 3 semester hours

Prerequisite: Graduate standing. This course covers the application of artificial intelligence and other modern techniques to help construct, navigate, and experience the Web. Topics may include retrieval models, classification, mining, association, topology, and indexing algorithms such as PageRank and HITS. Credit cannot be earned for both CMP SCI 4030 and CMP SCI 5030.

CMP SCI 5130 Advanced Data Structures and Algorithms: 3 semester hours

Prerequisites: Graduate standing in Computer Science. This course covers the design of efficient data structures and algorithms, as well as an advanced analysis of the time and space complexities of iterative and recursive algorithms. Student will learn a variety of techniques including dynamic programming, greedy algorithms, various graph algorithms, and NP-completeness and approximation algorithms.

CMP SCI 5151 Statistical Methods for Data Science: 3 semester hours

Prerequisites: Graduate standing in Computer Science/Cybersecurity (Computer Science option) or, for non-Computer Science graduate students, consent of the instructor. This course covers statistical inference with emphasis on applications and computer simulation. Topics may include multivariate distributions, transformations and combinations of random variables, sampling distributions, maximum likelihood, bootstrap, order statistics, hypothesis testing, likelihood ratio tests, Monte Carlo methods, Bayesian inference, and sufficient statistics. Students may not receive credit for both CMP SCI 4151 and CMP SCI 5151.

CMP SCI 5222 Advanced iOS Apps: 3 semester hours

Prerequisites: CMP SCI 4220 or consent of instructor. Focuses on building sophisticated apps using iOS. Will cover recent developments in networking such as web services, Bluetooth and wifi connectivity, graphics and animation in 2-d and 3-d, autolayouts, OpenGL, advanced data sources such as plist and core data, source control and unit testing. May also discuss security topics. Credit not granted for both CMP SCI 4222 and CMP SCI 5222.

CMP SCI 5300 Artificial Intelligence: 3 semester hours

Prerequisites: Graduate standing. This course provides an introduction to artificial intelligence. The list of topics may include search, planning, knowledge-based reasoning, probabilistic inference, machine learning, natural language processing, and practical applications. Credit cannot be granted for both CMP SCI 4300 and CMP SCI 5300.

CMP SCI 5320 Evolutionary Computation: 3 semester hours

Prerequisites: Graduate standing in Computer Science. This course introduces the concepts of nature-inspired problem solving with artificial evolution using selection, crossover, mutation and inheritance. It discusses applications of evolutionary algorithms, overviews the existing models and instances, and analyzes specific instances such as genetic algorithms, evolutionary programming, evolution strategies, and genetic programming. Credit not granted for both CMP SCI 4320 and CMP SCI 5320.

CMP SCI 5340 Machine Learning: 3 semester hours

Prerequisites: Graduate standing in Computer Science/Cybersecurity (Computer Science option) or CMP SCI 4342 or CMP SCI 5342 or consent of the instructor. This course provides an introduction to machine learning principles, algorithms and applications. Topics may include computational learning theory, VC dimensions, generalization, classification, regression, regularization, validation, and reinforcement learning. Credit cannot be granted for both CMP SCI 4340 and CMP SCI 5340.

CMP SCI 5342 Data Mining: 3 semester hours

Prerequisites: Graduate standing in Computer Science/Cybersecurity (Computer Science option) or consent of the instructor. This course provides an introduction to data-mining principles, algorithms, and applications. Topics may include data preprocessing, data transformation, similarity and dissimilarity measures, data representation, classification techniques, association analysis, cluster analysis, and anomaly detection. Credit cannot be granted for both CMP SCI 4342 and CMP SCI 5342.

CMP SCI 5370 Biological Data Science: 3 semester hours

Prerequisites: Graduate standing in Computer Science or consent of instructor. This course provides an introduction into several key areas of biological data science, with a focus upon genetic data. Relevant background topics in genetics, current issues, and a variety of available resources will be explored. Upon successful completion of this course, the student will be able to evaluate algorithms for analyzing genetic data, including assessments of sources of errors and analysis of time and space complexity; address shortcomings in existing approaches; and implement efficient and effective software for exposing information hidden in genetic data. Credit cannot be granted for both CMP SCI 4370 and CMP SCI 5370.

CMP SCI 5390 Deep Learning: 3 semester hours

Prerequisites: Graduate standing in Computer Science. This course reviews a typical machine learning recipe, mathematical foundations for deep learning, and provides an introduction to deep learning. Topics include dense neural networks, convolutional neural networks, and recurrent neural networks. The course will cover building, training, and using deep neural networks for solving various machine learning problems like image classification and protein contact prediction. Credit cannot be granted for both CMP SCI 4390 and CMP SCI 5390.

CMP SCI 5410 Computer Graphics: 3 semester hours

Prerequisites: Graduate standing in Computer Science. This course covers the theoretical foundation and algorithms of computer graphics. Students learn the basics of graphics programming for modeling, rendering, and animation of 2D and 3D objects, using standard graphics API. A brief discussion of special graphics hardware, such as GPU, may be included. Credit cannot be granted for both CMP SCI 4410 and CMP SCI 5410.

CMP SCI 5411 Data Visualization: 3 semester hours

Prerequisites: Graduate standing. This course introduces students to the principles of effective data visualization. The course includes an introduction to data cleaning and analysis. Plotting tools such as Tableau, Matplotlib, and D3.js are also introduced. Topics covered may include graphical excellence, log scale, color, heat maps, network visualization, plotting scientific data, interactive plots, and plotting live stream of data. Students may not receive credit for both CMP SCI 3411 and CMP SCI 5411.

CMP SCI 5420 Digital Image Processing and Computer Vision: 3 semester hours

Prerequisites: Graduate standing in Computer Science. This course focuses on image analysis and visual perception. Students will learn data structures and algorithms for image processing, region and texture analysis, image filtering, edge detection, contour following, and image enhancement in both spatial and frequency domain. Other topics may include color processing, coding for storage, retrieval, transmission, and image restoration. Credit cannot be granted for both CMP SCI 4420 and CMP SCI 5420.

CMP SCI 5500 Software Engineering: 3 semester hours

Prerequisite: Graduate standing. Introduces software engineering as a discipline, discusses stages of the software life cycle, compares development models such as waterfall, prototyping and incremental/iterative, covers requirements analysis, effort and cost estimation, compares structured and object-oriented analysis and design methods. Discusses verification/validation, quality assurance, software reliability, testing methods, maintenance, documentation, project management and team structure, metrics, and available tools.

CMP SCI 5700 Computer Systems: 3 semester hours

Prerequisites: Graduate standing in Computer Science. This course focuses on parallel computing architectures, including RISC, pipelining, vector processing, SIMD, MIMD, and array processing. It introduces different memory and I/O subsystems, hardware description languages, and it demonstrates performance enhancement using different architectures studied.

CMP SCI 5702 Cyber Threats and Defense: 3 semester hours

Prerequisites: Graduate standing. This course introduces the importance of cybersecurity and covers its various components. Topics may include different types of malware, phishing, password attacks, spoofing, efficient encryption algorithms, firewalls, intrusion prevention/detection systems, and honeypots. Credit cannot be granted for both CMP SCI 3702 and CMP SCI 5702.

CMP SCI 5710 Modern Computing: 3 semester hours

Prerequisites: Graduate standing. This course covers technical concepts and tools in a modern computing environment such as file systems, command-line operations and productivity tools, communication with servers, software installation and deployment, basic data representation and computer organization/memory layers, virtualization and cloud.

CMP SCI 5732 Cryptography for Computer Security: 3 semester hours

Prerequisites: Graduate standing. This course provides an introduction to cryptography as it applies to computer security. It describes cryptographic code-making and code-breaking, and how they are integrated within larger security systems. Topics include symmetric encryption algorithms like AES, asymmetric encryption using prime number factorization and elliptic curves, message authentication codes, key exchange protocols and attacks on all these systems. Additional topics may include onion networks and blockchain technology, as well as possible attacks on those systems. Credit cannot be granted for more than one of CMP SCI 4732, CMP SCI 4780, and CMP SCI 5732.

CMP SCI 5750 Cloud Computing: 3 semester hours

Prerequisites: Graduate standing. Provides an introduction to development and deployment of applications in the cloud space. Touches on different aspects of cloud computing such as IaaS, PaaS, and SaaS. Includes significant discussion on legal and security aspects of clouds in the marketplace. May also include public, private, and hybrid clouds, and Internet of Things. Credit not granted for both CMP SCI 4750 and CMP SCI 5750.

CMP SCI 5782 Advanced Information Security: 3 semester hours

Prerequisites: CMP SCI 5702 or INFSYS 6828 or consent of instructor. This course provides an overview of the cybersecurity profession and the various domains associated with it. Students will be introduced to various information risk management concepts and how they are interconnected to cybersecurity. A broad range of cybersecurity domains will be discussed along with their practical applications in information risk management. Additional topics may include labs in select cybersecurity domains to further the learning process. Credit cannot be granted for both CMP SCI 4782 and CMP SCI 5782.

CMP SCI 5792 Mobile Computing, Networking, and Security: 3 semester hours

Prerequisites: CMP SCI 5702 or INFSYS 6828 or consent of instructor. This course introduces fundamental concepts of mobile wireless networks, mobile edge computing, and security measures at the edge. It discusses challenges related to mobile edge computing systems in general and may include topics such as crowdsourcing/crowdsensing systems, Quality of Experience (QoE) in real-time mobile services, Internet of Things, scalability, secure and verifiable computing, and vehicular and autonomous driving networks. Credit not granted for both CMP SCI 4792 and CMP SCI 5792.

CMP SCI 5794 Internet of Things: 3 semester hours

Prerequisites: CMP SCI 4730 or consent of instructor. This advanced course covers cutting-edge techniques for the emerging edge cloud and wireless/mobile Internet of Things (IoT) systems. It covers the IoT reference architecture, integrated IoT security architecture, major threats and vulnerabilities with IoT devices and edge cloud and defense mechanisms. It includes hands-on labs on both vulnerabilities and defense of the systems. Credit cannot be granted for both CMP SCI 4794 and CMP SCI 5794.

CMP SCI 5870 Computer Science Seminar: 1-3 semester hours

Prerequisites: Graduate standing. This is a seminar on various topics. Substantial student reading and participation is expected. It may be taken more than once for credit with the consent of the department.

CMP SCI 5880 Computer Science Independent Project: 1-3 semester hours

Prerequisites: Graduate standing and consent of the instructor. This course offers the student an opportunity to work on a supervised project, individually or in a group. A maximum of 6 credit hours can be counted toward the M.S. in Computer Science or in the Cybersecurity program from a combination of CMP SCI 5880, CMP SCI 5900, and CMP SCI 6900.

CMP SCI 5888 Cybersecurity Capstone: 3 semester hours

Prerequisites: INFSYS 6828 and one of either INFSYS 6858 or CMP SCI 5782. This course provides students an opportunity to participate in the full cybersecurity lifecycle in an applied setting using a project-based approach. Students from technical and non-technical backgrounds will work together in teams. Major tasks may include creating an information security management plan, conducting risk assessments, implementing technical and administrative controls to mitigate information security risks, and managing security operations with a focus on incident detection and response. Students may work on projects through an actual organization and demonstrate application of knowledge gained through all prior courses in the degree program. This course must be taken the last semester prior to graduation. Cannot receive credit for CMP SCI 5888 and INFSYS 6888.

CMP SCI 5890 Topics in Computer Science: 1-3 semester hours

Prerequisites: Graduate standing. This course offers various topics not offered on a regular basis. This course may be taken for credit more than once so long as the topic discussed in each semester is different.

CMP SCI 5900 Graduate Internship in Computer Science: 1-3 semester hours

Prerequisites: Consent of the instructor. This course is an internship that provides a student with field experience in an organization related to the profession. To be enrolled, students must be employed in a temporary capacity such as an internship or co-op program. If the instructor is not listed, the student must find an instructor to supervise the internship. Internship activities may vary by site but will require some reporting to the instructor. Typically, 1 credit can be earned for 100 work hours. A maximum of 3 credit hours can be counted toward the M.S. in Computer Science program or in Cybersecurity program, and a maximum of 6 credit hours can be counted from a combination of CMP SCI 5880, CMP SCI 5900, and CMP SCI 6900.

CMP SCI 5991 Professional Competency: 1-6 semester hours

Prerequisites: Graduate standing in Computer Science. This course will award competency-based credits to computer/IT professionals entering the professional option in the MS in the Computer Science program. Applicants or prospective applicants should contact the MS in Computer Science program director for guidance.

CMP SCI 6320 Advances in Evolutionary Computation: 3 semester hours

Prerequisites: CMP SCI 5320. This course focuses on some advanced topics in genetic and evolutionary computation (both theory and applications). Topics may include genetic algorithm variants, intelligent metaheuristics, evolutionary machine learning, differential evolution, swarm intelligence, learning classifier systems, and Markov models. A substantial part of the course will be based on selected topics from recent literature. This is a project-based course, with the project typically involving literature search and conducting and reporting research. Projects may involve developing specific applications or implementing a specific model.

CMP SCI 6340 Genetic Programming: 3 semester hours

Prerequisites: CMP SCI 5320. This course provides an in-depth exploration of Genetic programming, including advanced concepts such as scalability, evolution of modularity and regularity, and constrained evolution with CGP, STGP, or CFG-based GP. It may be reading, research, or application oriented.

CMP SCI 6390 Interpretable Machine Learning: 3 semester hours

Prerequisites: CMP SCI 5390 or CMP SCI 5340. This research course discusses classical, modern, and advanced methods for machine and deep learning interpretability. It focuses on the application, analysis, and evaluation of model-agnostic methods to interpret shallow and deep neural network models and their predictions.

CMP SCI 6410 Topics in Computer Graphics: 3 semester hours

Prerequisites: CMP SCI 4410 or CMP SCI 5410. This course covers various aspects of advanced graphics techniques, such as geometric modeling, rendering, shading, texturing, and computer animation. The course provides an in-depth study of recent advanced topics in computer graphics.

CMP SCI 6420 Topics In Image Processing and Computer Vision: 3 semester hours

Prerequisites: CMP SCI 5420. This course covers new developments in digital image processing, computer vision, and multimedia. Topics to be covered may include image databases, object tracking, and large-scale data visualization.

CMP SCI 6900 Thesis Preparation in Computer Science: 1-6 semester hours

Prerequisites: Completion of at least 12 graduate credits and approval of research topic by the instructor. This course is designed to help students in preparing a thesis in Computer Science. The student must identify the instructor through mutual interest and understanding of the research. A maximum of 3 credit hours of CMP SCI 6900 can be counted toward the M.S. in Computer Science or Cybersecurity program until the thesis is successfully defended. A maximum of 6 credit hours from a combination of CMP SCI 5880, CMP SCI 5900, and CMP SCI 6900 can be counted toward the M.S. in Computer Science or Cybersecurity program.

CMP SCI 7990 Ph.D. Dissertation Research in Computer Science: 1-9 semester hours

Prerequisites: Completion of comprehensive examinations. This course is used to pursue research work for a Ph.D. dissertation under the supervision of a faculty advisor. This course is available only to the students pursuing a Ph.D. under the Computer Science option.

Geographic Information Systems Courses***GIS 3390 Special Topics in Geographic Information Systems (GIS): 1-3 semester hours***

Prerequisites: Consent of the instructor. This course is an examination of specific geographic information system (GIS) topics of current relevance. This course may be repeated once if the topic is different.

GIS 4303 Advanced Geographic Information Systems and Sciences: 3 semester hours

Same as SOC 4501. Prerequisites: SOC 2501 or SOC 3501. This advanced course further explores Geographic Information Systems and Science (GIS). Students will learn advanced techniques to acquire geospatial information from a variety of sources; manage, interpret, employ and present geospatial data for a given purpose; and how to use geographic information system software for storage, manipulation, and analysis of geospatial data.

GIS 4990 Undergraduate Internship in Geographic Information System: 1-3 semester hours

Prerequisites: GIS 4303 or SOC 4501, or consent of instructor. This course is a Geographic Information System (GIS) internship that provides a student field experience in an organization related to the profession. To be enrolled, students must be employed in an internship or co-op program and find an instructor to supervise the experience. Internship activities may vary by site but will often require end-of-semester reporting. This course may be repeated once if the internship experience is different.

Criminology and Criminal Justice

General Information

Degrees and Areas of Concentration

The department offers courses leading to the Bachelor of Science, the Master of Arts, Accelerated Master's program, and Ph.D. in Criminology and Criminal Justice.

Internships

Majors are strongly encouraged to participate in CRIMIN 3280 Internship in Criminology and Criminal Justice, during their junior or senior year. The internship affords students the opportunity to gain experience in a criminal justice agency under the joint supervision of agency personnel and criminology and criminal justice faculty.

Minor in Criminology and Criminal Justice

The minor gives recognition to those students from other major areas who find that criminology and criminal justice courses fit their academic or professional needs and/or interests.

Chair's List

Each year, faculty members nominate undergraduates who have done outstanding work in one or more of their courses to the department's Chair's List. In addition to being nominated by a faculty member, the student must meet a cumulative grade-point average threshold for placement on the Chair's List. The list is featured on the department's website, and the Dean of Arts and Sciences is notified of their accomplishment.

Career Outlook

The orientation of the criminology and criminal justice faculty and of the degree program prepares the graduate to work professionally for local, state, and federal agencies concerned with maintaining public safety by the prevention of crime and apprehension and rehabilitation of offenders. The B.S. in criminology and criminal justice is also advantageous for careers with various social agencies, especially those connected with the juvenile court system, probation and parole, and local police. Many students use the B.S. in criminology and criminal justice as preparation for law school.

The interdisciplinary curricula unify a body of knowledge from criminology, social science, law, public administration, and corrections, and provide the student with an understanding of the assumptions, values, and processes of the justice system. Many pre-law students choose criminology and criminal justice as an undergraduate major because of the excellent preparation offered for law school. An internship program is offered for college credit. The liaison, supervision, and experience with public agencies that form an integral part of this program help the student arrive at a career decision and promotes early success.

Degrees

Criminology and Criminal Justice BS (p. 496)

Criminology and Criminal Justice MA (p. 497)

Criminology and Criminal Justice MA Accelerated Master's Program (p. 498)

Criminology and Criminal Justice PhD (p. 500)

Minor

Criminology and Criminal Justice Minor (p. 499)

Courses

CRIMIN 1100 Introduction to Criminology and Criminal Justice (MOTR CRJS 101): 3 semester hours

This course is an introduction to the basic concepts and approaches in the study of criminology and criminal justice. The major components of the criminal justice system are examined. This course fulfills the American History and Government general education requirement.

CRIMIN 1101 Crime and Criminal Justice Today: 1-2 semester hours

This course provides students insight into crime and the criminal justice system in contemporary America. All students, whether enrolled for one or two hours, will complete the same core course requirements. Those students enrolled for two hours will complete additional course work as outlined in the course syllabus.

CRIMIN 1110 Theories of Crime: 3 semester hours

This course provides an introduction to major theoretical approaches to the study of crime and justice.

CRIMIN 1120 Criminal Law: 3 semester hours

This course provides an analysis of substantive criminal law, evidence, and judicial procedure.

CRIMIN 1200 Foundations of Law: An Introduction to Legal Studies: 3 semester hours

Same as POL SCI 1200. As a broad liberal-arts approach to the study of law, this course is designed to familiarize students with legal ideas, legal reasoning, and legal processes. It also provides comparative and historical perspectives on law that will help explain legal diversity and legal change. Finally, it offers opportunities to explore some of the persistent issues in law and legal theory: for example, issues about the sources of law, the responsibilities of the legal profession, or the relative merits of the adversary system.

CRIMIN 2130 Criminal Justice Policy: 3 semester hours

This course provides an introduction to criminal justice policy making, planning, and implementation. This course fulfills the American History and Government general education requirement.

CRIMIN 2180 Alcohol, Drugs and Society: 3 semester hours

Same as SOC 2180. Prerequisites: SOC 1010 or PSYCH 1003. This course examines the medical, legal and social aspects of alcohol and drug use. Medical aspects considered include treatment approaches and the role of physicians in controlling such behavior. In the legal realm, past and present alcohol and drug laws are explored. Cultural and social influences on alcohol and drug use are discussed.

CRIMIN 2210 Research Methods in Criminology and Criminal Justice: 3 semester hours

This course provides an examination of basic methods of research design, measurement, and data collection in criminology and criminal justice. This course fulfills the Information Literacy general education requirement.

CRIMIN 2220 Statistical Analysis in Criminology and Criminal Justice: 4 semester hours

Prerequisites: CRIMIN 2210 (may be taken concurrently) and the university math proficiency requirement. This course is an introduction to techniques of quantitative data analysis. Both descriptive and inferential statistics are applied to problems in criminology and criminal justice. It includes a one hour lab. This course fulfills the Information Literacy general education requirement.

CRIMIN 2240 Policing: 3 semester hours

This course provides an overview of current and historical perspectives on the function of American policing. There is emphasis on the management of police organizations and relationships with the community.

CRIMIN 2250 Courts: 3 semester hours

This course provides an overview of current and historical perspectives on the function of the American courts. There is emphasis on the dynamics of courthouse justice, with special attention placed on the roles of the prosecutors, judges, defense attorneys, defendants, victims, and jurors regarding the decisions that impact the adjudication process.

CRIMIN 2251 Youth Gangs: 3 semester hours

This course provides an overview of research and policy concerning youth gangs. Definitional and methodological issues are examined, along with both qualitative and quantitative research. Topics may include the causes of gangs and gang involvement with focus on variations by race, gender, time period, and geography.

CRIMIN 2252 Crime and Punishment: 3 semester hours

Same as PHIL 2252. This course will address fundamental conceptual, ethical, and moral issues that arise in the context of the legal system. Topics may include punishment, pre-trial detention, the death penalty, acquittal of persons who are legally guilty, plea bargaining, moral obligation to obey the law, and laws restricting civil liberties.

CRIMIN 2260 Corrections: 3 semester hours

This course provides an examination of correctional philosophies and practices. There is emphasis on the history of corrections, the formal and informal organization of correctional facilities, inmate rights, and correctional alternatives.

CRIMIN 3209 Forensic Anthropology: 4 semester hours

Same as ANTHRO 3209. Prerequisites: ANTHRO 1005 or BIOL 1102 or consent of instructor. Students learn basic human dental and skeletal anatomy and the methods used by biological anthropologists and archaeologists to collect and analyze human skeletal remains, including how to age and sex skeletal remains, identify ethnic markers, determine stature and handedness, and identify the presence of trauma and/or pathology. Also covers the role of the forensic anthropologist in crime scene investigations and human rights issues. In the weekly lab section students will have an opportunity for hands-on application of techniques to skeletal remains.

CRIMIN 3230 Crime Prevention: 3 semester hours

Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an examination of situational, social, and legislative approaches to the prevention of crime and delinquency. There is emphasis on theories, implementation, and consequences of these approaches.

CRIMIN 3270 Juvenile Justice and Delinquency: 3 semester hours

Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an examination of formal and informal responses to juvenile delinquency. There is emphasis on theories of delinquency and the decision-making processes of police, court and probation officials.

CRIMIN 3280 Internship in Criminology and Criminal Justice: 3 semester hours

Prerequisites: Junior standing. This course consists of an internship in a criminal justice setting under faculty supervision. It may be repeated for a maximum of six credit hours.

CRIMIN 3290 Special Readings: 1-6 semester hours

Prerequisite: Consent of instructor. Individualized study, under regular faculty supervision, designed to meet particular educational needs of selected students.

CRIMIN 3305 Crime and Justice in a Globalized World: 3 semester hours

Prerequisites: ENGL 3100 (may be taken concurrently or waived for non-CCJ majors) or consent of instructor. This course will provide an analysis of crime and criminal justice systems in selected cultures around the world. It will emphasize the ways in which various cultures define and respond to criminal behavior. This course fulfills the Cultural Diversity requirement.

CRIMIN 3310 Computers in Criminal Justice: 3 semester hours

Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course will critically examine computer crime, cyber-criminology, and the ways in which technology and the Internet facilitate criminal and deviant behavior. Discussion will focus on the types of crime using computer technology, theories addressing digital criminals, and an overview of the criminal justice response to these issues.

CRIMIN 3330 Corporate, Organizational, and White-Collar Crime: 3 semester hours

Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an overview of what is known about corporate, organizational, and white-collar offending. The nature and extent of this type of offending will be discussed as well as its causes and social, political and economic consequences. Some topics may include definitional and measurement challenges, similarities and differences between business (suite) and traditional (street) crime, and enforcement strategies.

CRIMIN 3345 Constitutional Law and the Criminal Justice System: 3 semester hours

Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an analysis of the objectives of criminal law regarding the United States Constitution. It emphasizes the rights of persons suspected or convicted of crime within the institutional settings of the police, courts, and corrections.

CRIMIN 3405 Forensic Psychology: 3 semester hours

Same as PSYCH 3405. Prerequisites: PSYCH 1003 or CRIMIN 1100. This course is the application of scientific psychological knowledge to matters that come before a judge or jury using actual case studies. It will focus on criminal cases such as homicide and sex offender commitment and on personal injury cases. Topics may include psychological tests used and recommended by forensic psychologists, sex offender risk assessment, consultation with attorneys, and keys to being a forensic expert on the witness stand.

CRIMIN 4300 Communities and Crime: 3 semester hours

Same as SOC 4300. Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an analysis of the sources, consequences, and control of crime within communities. There is emphasis on social and ecological theories of crime, and on population instability, family structure, and the concentration of poverty as causes of crime.

CRIMIN 4320 Forms of Criminal Behavior: 3 semester hours

Same as SOC 4320. Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an examination of major types of criminal behavior including violent, property, public order, and organizational offenses. There is emphasis on theories of and responses to these crimes.

CRIMIN 4325 Gender, Crime, and Justice: 3 semester hours

Same as SOC 4325 and GS 4325. Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an analysis of the role of gender in crime and in the justice system. There is emphasis on gender differences in crime commission, criminal processing, and the employment of women in criminal justice agencies. Fulfills CRIMIN diversity requirement.

CRIMIN 4330 Violence Against Women: 3 semester hours

Same as GS 4330. Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course examines the nature, extent, causes, and consequences of various types of violence against women, including rape, sexual assault, stalking, and intimate partner violence. Criminal justice policy and practice regarding violence against women are also examined.

CRIMIN 4335 Probation and Parole: 3 semester hours

Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an analysis of alternatives to incarceration and postincarceration supervision. There is emphasis on diversion, restitution, and community reintegration.

CRIMIN 4340 Race, Crime, and Justice: 3 semester hours

Same as SOC 4340. Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an analysis of the involvement of racial minorities in crime and the criminal justice system. There is emphasis on group differences in offending, processing, victimization, and employment in criminal justice agencies. Fulfills CRIMIN diversity requirement.

CRIMIN 4345 War Crimes, Genocide, and Justice in the 20th and 21st Centuries: 3 semester hours

Same as SOC 4345, POL SCI 4345, MVS 4345. Prerequisite: ENGL 3100. This course provides advanced undergraduate and Master's level students a comprehensive overview of the subject of war crimes, crimes against humanity, genocide and legal responses to these crimes in the modern era. The goal of this course is to engage students in sustained, critical thought about these issues and to foster a deeper understanding of both the causes and consequences-legal, social and human-of these egregious crimes.

CRIMIN 4350 Victimology: 3 semester hours

Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an analysis of major perspectives on victimization. There is emphasis on patterns of victimization, the role of victims in the generation of crime, and the experience of the victim in the criminal justice system.

CRIMIN 4360 Sociology of Law: 3 semester hours

Same as SOC 4362. Prerequisites: ENGL 3100 or consent of the instructor. This course explores the interaction of legal, political and social forces in the US. It examines historical developments in law and politics in the US, including law and economics, crime policy, socioeconomic inequality, race relations, and state sanctioned punishment. The course also considers how America's federalist structure shapes law, politics and social relations. Last, it examines how legal and political institutions establish and shape power relations between social groups.

CRIMIN 4380 Special Topics in Criminology and Criminal Justice: 3 semester hours

Prerequisites: ENGL 3100, which may be taken concurrently, or consent of instructor. This course provides an in-depth study of a selected topic in criminology and criminal justice. This course may be repeated for credit if the topic differs.

CRIMIN 4390 Seminar in Criminology and Criminal Justice: 3 semester hours

Prerequisites: CRIMIN 2210, CRIMIN 2220, and ENGL 3100, or consent of instructor. In this capstone course, students demonstrate the ability to work independently, integrating theory and research in criminology and criminal justice in a major paper supervised by the instructor.

CRIMIN 4487 Philosophy of Law: 3 semester hours

Same as PHIL 4487. Prerequisites: CRIMIN 1100 or three hours of philosophy or graduate standing or consent of instructor. This course provides an intensive study of recent philosophical debate about such issues as the authority of law, legal equality and justice, legal responsibility, self-determination and privacy, and legal punishment.

CRIMIN 5415 Foundations of Criminological Theory: 3 semester hours

Prerequisites: Graduate standing. This course examines the history of criminological thought, incorporating the major works of such theorists as Bentham, Beccaria, Marx, Durkheim, Lombroso, Sutherland, and Merton.

CRIMIN 5533 Philosophy of Law: 3 semester hours

Same as PHIL 5533. Prerequisite: Graduate standing or consent of instructor. Examination of origins of law and the basis for legal obligation. Specific consideration of the justification of punishment, morality and law, and legal reasoning.

CRIMIN 6400 Proseminar: 3 semester hours

Prerequisite: Graduate standing. (must be taken in the first semester). A critical examination of theoretical, methodological and policy issues in criminology and criminal justice. Focus is on the nature of crime, policing, pretrial processes, adjudication and corrections.

CRIMIN 6405 Methods: 3 semester hours

Prerequisites: Graduate standing. This course examines basic methods for research design and data collection. Topics may include participant observation and interviewing, survey research, aggregate data analysis, and experimental design.

CRIMIN 6410 Statistical Applications in Criminology and Criminal Justice: 3 semester hours

Prerequisites: Graduate standing. This course examines elementary principles of quantitative analysis and their application to crime and justice problems. Topics may include univariate, bivariate and multivariate procedures for discrete and continuous data, and a comprehensive introduction to ordinary least squares regression.

CRIMIN 6420 Contemporary Criminological Theories: 3 semester hours

Prerequisites: CRIMIN 5415. This course examines contemporary explanations of crime and criminal justice. Theories covered include strain, control, culture, labeling, and conflict, as well as more recent attempts at theoretical and multidisciplinary integration.

CRIMIN 6430 Law and Social Control: 3 semester hours

Prerequisites: Graduate standing or consent of instructor. This course examines the relationship between law and other social institutions, the values and interests that are expressed in law and shaped by legal structures and processes, and law as an instrument of public policy, social control and social change.

CRIMIN 6438 Inequalities and Criminal Justice: 3 semester hours

Prerequisites: Graduate standing. This course examines the intersections between social inequality and the criminal justice system, including policing, adjudication and sentencing in the courts, community supervision, and incarceration. Additional focus is on the extent to which entry into the criminal justice system reflects existing social inequalities in American society, as well as to what extent the criminal justice system reproduces these inequalities. Last, this class includes an examination of how the criminal justice system intersects with other social institutions (e.g. labor market, housing, education).

CRIMIN 6440 Nature of Crime: 3 semester hours

Prerequisite: Graduate standing or consent of instructor. Examination of patterns and correlates of crime at the individual, situational, and aggregate levels. Topics include definitions of crime, offending topologies, and criminal careers.

CRIMIN 6441 Juvenile Delinquency: 3 semester hours

Prerequisite: Graduate standing or consent of instructor. Examination of youth crime and juvenile offenders. Topics include definitions of juvenile crime, and theories of juvenile crime causation in the U.S.

CRIMIN 6442 Communities and Crime: 3 semester hours

Prerequisite: Graduate standing or consent of instructor. Examination of the trends and sources of crime and social disorder across communities. The course emphasizes relationships among crime, neighborhood change, neighborhood responses to crime, and public policies.

CRIMIN 6443 Violent Crime: 3 semester hours

Prerequisite: Graduate standing or consent of instructor. Examination of the sources and patterns of violent offending across time and space. Topics include conceptions and typologies of violent crimes and offenders, victim-offender relationships, and efforts to predict and control violent offending.

CRIMIN 6448 Victimization: 3 semester hours

Prerequisite: Graduate standing or consent of instructor. Examination of the risks and consequences of crime for its victims. Issues considered include victim-offender relationships, characteristics of victims, the nature of the injuries they experience and criminal justice procedures that involve them.

CRIMIN 6450 Criminal Justice Theory and Policy: 3 semester hours

Prerequisites: Graduate standing. This course is an analysis of criminal justice as a network of decisions and complex organizations. Topics may include criminal justice theory, policy analysis, implementation, and evaluation.

CRIMIN 6452 The Police: 3 semester hours

Prerequisite: Graduate standing or consent of instructor. Historical, social and political analysis of policing in America. Examination of federal, state, county and municipal agencies.

CRIMIN 6465 Qualitative Research Design: 3 semester hours

Prerequisites: CRIMIN 6405. Examination of participant observation and informant and respondent interviewing. Topics include gaining access, sampling, data collection and analysis, and legal and ethical concerns.

CRIMIN 6470 Quantitative Research Design: 3 semester hours

Prerequisites: CRIMIN 6405, CRIMIN 6410, and CRIMIN 6480. Examination of experimental, longitudinal, and cross-sectional designs. Sources of data, sampling procedures, operational definitions, and issues of reliability are also discussed.

CRIMIN 6471 Evaluating Criminal Justice Interventions: 3 semester hours

Prerequisites: CRIMIN 6405 and CRIMIN 6410. This course examines a broad range of interventions designed to prevent crime or improve some aspect of the criminal justice system. The validity reliability, and feasibility of differing intervention designs are addressed. Several major criminal justice evaluations are discussed.

CRIMIN 6480 Multivariate Statistics in Criminology: 3 semester hours

Prerequisites: CRIMIN 6405 and CRIMIN 6410. Introduction to the general linear model with applications to multivariate problems in criminal justice and criminology. Topics include advanced ordinary least squares, causal modeling, time series analysis, simultaneous equations, and analysis of limited dependent variables.

CRIMIN 6485 Directed Readings/Research in Criminology and Criminal Justice: 1-6 semester hours

Prerequisite: Consent of instructor. Directed reading and research, under faculty supervision, designed to meet particular educational needs of selected students.

CRIMIN 6495 Internship in Criminology and Criminal Justice: 3 semester hours

Prerequisite: Graduate standing or consent of instructor. Supervised placements with criminal justice agencies. Designed primarily for students with limited field experience.

CRIMIN 6498 M A Thesis Research: 1-6 semester hours

Prerequisite: Graduate standing and consent of instructor.

CRIMIN 6550 Seminar in Criminology and Criminal Justice: 3 semester hours

Prerequisites: Graduate standing and CRIMIN 5415, CRIMIN 6400, and CRIMIN 6405 or consent of the instructor. Research and policy approaches to the study of criminology and criminal justice. Class may be repeated for credit when the subject matter is different.

CRIMIN 7499 Ph.D. Dissertation Research: 1-6 semester hours

This course is for dissertation research in the Department of Criminology and Criminal Justice. Content and meeting patterns are to be arranged.

Economics

Undergraduate Programs Overview

Bachelor of Arts (B.A.) in Economics

The B.A. in Economics is more "liberal arts" in its focus than the B.S. degree. The B.A. degree requires completion of the BA foreign language requirement of the College of Arts and Sciences.

Bachelor of Science (B.S.) in Economics

The B.S. in Economics provides more in-depth development of the analytical and quantitative skills used in economic analysis. Students are required to complete calculus, econometrics, and additional quantitative coursework. The B.S. also offers very strong students the option of pursuing the Dual B.S./M.A. program.

B.S./M.A. Dual Degree Programs in Economics

The B.S./M.A. dual degree programs in Economics are accelerated programs that allow students to complete a B.S. and a M.A. in Economics in five years. The programs are targeted at students who are comfortable with mathematics and have demonstrated success in undergraduate-level quantitative and analytical economics courses.

Bachelor of Science (B.S.) in Actuarial Science

Principles of Microeconomics, Principles of Macroeconomics, as well as a couple of quantitative courses offered by the department are part of the B.S. in Actuarial Science program. In addition, the Principles courses fulfill the VEE requirements in Economics. These courses have received approval of the Society of Actuaries (SOA). For more information see the Actuarial Science undergraduate program (p. 392).

Minor in Economics

The Department offers a minor in Economics to students who want to develop some knowledge in this field but wish to major in another discipline.

Certificate in Applied Econometrics and Data Analysis

This Certificate is designed to prepare students to perform applied econometric analysis in a variety of professional settings: banks, telecomm companies, consulting firms, etc. BS students can further distinguish themselves with this Certificate, which can be combined with the BS, the MA, or completed as a freestanding certificate.

Certificate in Actuarial Studies

Principles of Microeconomics, Principles of Macroeconomics help satisfy the prerequisites for the Certificate in Actuarial Studies and help fulfill the VEE requirements in Economics. These courses have received approval of the Society of Actuaries (SOA). For more information on the Certificate in Actuarial Studies, see the Actuarial Science undergraduate program (p. 392).

Courses in Geography

The department offers a number of courses in geography, both online and on campus.

Resources

A valuable campus resource available to economics students is the Economic Resources Center (ERC). The ERC serves as a University Computer lab, study, and meeting space. The ERC also provides peer tutors for undergraduate economics courses (especially for Principles of Microeconomics and Principles of Macroeconomics).

Graduate Programs Overview

Master of Arts (M.A.) in Economics

The M.A. in Economics is specifically designed for those seeking to work as professional economists. Students acquire knowledge and a versatile set of skills that are highly valued in the workplace. The M.A. program has an excellent track record in job placement and placement in top Ph.D. programs. A unique feature of the program is the large number of applied econometrics and quantitative courses offered. The program can accommodate prospective full-time students as well as those who wish to study part-time. Classes are small, and student-faculty interaction is encouraged.

About the Faculty

The economics faculty considers research an integral part of good teaching. Research projects in recent years have dealt with energy, public choice, industrial organization, property rights, wage discrimination, urban economic development, health economics, economics of science, economics of gender, poverty and welfare, economics of culture, and government regulations.

Career Outlook in Economics

Nearly every decision that a person, business, or government makes falls under the purview of economic analysis. In economics course work, students learn to think analytically and apply their knowledge to a broad range of topics and problems. These skills are highly valuable in our ever changing economy, as well as in everyday life. For this reason, those with economics degrees are in high demand in a wide number of occupations, whether in business or government. In addition, economics majors are especially sought after by law schools, M.B.A. programs and, of course, graduate programs in economics. Job prospects for those with economics degrees at both the undergraduate and graduate levels are expected to remain strong over the next decade. For additional information on the undergraduate program, contact the Director of Undergraduate Studies 516-5306 or 314-516-5353. Regarding the graduate program, contact the Director of Graduate Studies at 516-5553. Additional information is also available at the Department of Economics website.

Degrees

Economics BA (p. 524)

Economics BS (p. 525)

Economics BS/MA Dual Degree Program (p. 526)

Economics MA (p. 527)

Economics MA, Business Economics Emphasis (p. 528)

Economics MA, Accelerated Master's Program (p. 528)

Minor

Economics Minor (p. 529)

Certificate

Applied Econometrics and Data Analysis Undergraduate Certificate (p. 401)

Affiliated Interdisciplinary Programs

Actuarial Science BS (p. 392)

Actuarial Studies Undergraduate Certificate (p. 516)

Data Science and Analysis BS, Economics Emphasis (p. 512)

Data Science Undergraduate Certificate (p. 516)

Personal Finance Literacy Education Graduate Certificate (p. 680)

Economics Courses***ECON 1000 Economics in Everyday Life (MOTR ECON 100): 3 semester hours***

This course is an introduction to economic concepts, analysis, and issues for non-majors. ECON 1000 does not substitute for ECON 1001 or ECON 1002. Students who have already completed ECON 1001 or ECON 1002 may not take ECON 1000 for credit.

ECON 1001 Principles of Microeconomics (MOTR ECON 102): 3 semester hours

Prerequisite: MATH 1030. Introduction to the determinants of household demand, production and cost, and market prices. Applies the principles of individual decision-making behavior to understanding goods, services and resource markets.

ECON 1002 Principles of Macroeconomics (MOTR ECON 101): 3 semester hours

Prerequisite: MATH 1030 and ECON 1001. Introduction to the determination of levels of and changes in aggregate income, output, employment and prices. Applies economic principles of choice to the formulation and achievement of public policies that affect national employment, income distribution, and economic growth.

ECON 1900 Introductory Topics in Economics: 3 semester hours

This course provides an analysis of an introductory economic topic. May be repeated for credit when topic varies.

ECON 2010 The Business Firm: History, Theory, and Policy: 3 semester hours

Prerequisites: ECON 1000 or ECON 1001 or consent of instructor. This course presents a history of the development of modern business firms and examines the evolution of the economic theory of the firm. Special attention is paid to the role that firms play in fostering social and economic development. The ultimate objective of the course will be to provide students with a deeper understanding of firms so they can make better policy decisions as firm owners, managers, lawmakers, regulators, and voters.

ECON 2200 Monetary Policy in Historical Perspective: 3 semester hours

Prerequisites: ECON 1000 or ECON 1002, or consent of instructor. This course covers what monetary policy means, how it has been formed, its intellectual foundations and its prospects for future international practice. It examines historical episodes of monetary policy to understand how the economy affects monetary policy and how monetary policy in turn can have major consequences for world affairs.

ECON 2800 History of American Economic Development: 3 semester hours

Same as HIST 2800. Prerequisites: ECON 1000 or ECON 1001 or consent of instructor. This course presents an overview of American economic history. Topics may include the native American economies, the colonial and revolutionary period, the US constitution, slavery and the civil war, the shift from an agricultural to an industrial economy, the political and economic effects of the two world wars, and the growth of government in the postwar economy. This course fulfills the American History and Government general education requirement.

ECON 3001 Intermediate Microeconomics: 3 semester hours

Prerequisite: MATH 1030 and ECON 1001. Analysis of prices in terms of equilibrium of the business firm and consumer demand in markets of varying degrees of competition.

ECON 3002 Intermediate Macroeconomics: 3 semester hours

Prerequisites: MATH 1030, ECON 1001, and ECON 1002. This course examines national income and expenditure and the forces determining the level of economic activity. Special emphasis is placed on the theory of income determination and its application to public policy.

ECON 3003 Game Theory and Strategic Decision Making: 3 semester hours

Prerequisites: ECON 1001. When the best course of action depends on the decisions made by others, strategy becomes important. Game theory provides the tools for analyzing such strategic decision making. Strategic behavior is analyzed in the context of business, logistics, biology, war, government, politics, and everyday life. A wide variety of in-class experiments are used to illustrate key concepts.

ECON 3100 Economic Data and Statistics: 3 semester hours

Prerequisite: MATH 1030, ECON 1001, and ECON 1002. This course is an introduction to economic data sources, data interpretation, and statistical inference as used in economic analysis. It emphasizes the testing of economic hypotheses and the development and estimation of economic models. Students will be introduced to statistical software used in economics.

ECON 3200 Money, Banking and Monetary Theory: 3 semester hours

Prerequisites: ECON 1001 and ECON 1002. Factors influencing bank reserves and the money supply. Ability of the Federal Reserve System and the Treasury to control these factors. Introduction to monetary theory: integration of monetary phenomena with national income theory. Analysis of current policy issues.

ECON 3300 International Economic Analysis: 3 semester hours

Prerequisite: ECON 1001. Introduction to the theories of international trade and factor movements including determinants of trade, the effects of trade on sectors and on overall economic performance, trade restrictions, and balance of payments and exchange rates. Discussion of current institutions and economic developments in the global economy.

ECON 3600 Market Structure, Strategy, and Pricing: 3 semester hours

Prerequisite: ECON 1001. A theoretical and empirical analysis of the actions of firms under alternative forms of market organization. The role of economies of scale, product differentiation, mergers, and advertising in affecting industry structure and the impact of the resulting industry structure on pricing, output, promotion, and technology decisions of firms.

ECON 3610 Economics of Sports, Gaming, and Gambling: 3 semester hours

Prerequisite: ECON 1001. This course focuses on applications of fundamental economic principles to the world of sports, gaming, and gambling. It analyzes incentives present in sports and the rise of e-sports. Legal and illegal gambling are analyzed in regard to their effect on the local economy and impact of legalized gambling on sports. In addition to professional sports, NCAA, Olympic, and sports popular around the world are explored.

ECON 3900 Selected Topics in Economics: 1-3 semester hours

Prerequisites: ECON 1001 and ECON 1002. This course focuses on the analysis of a selected economic topic. The topic selected will vary from semester to semester. This course may be repeated if the topic is different.

ECON 4030 Managerial Economics: 3 semester hours

Prerequisites: ECON 3001; MATH 1800 or MATH 1100 recommended. Application of microeconomic theory to decision-making process in the business firm. Topics include pricing and profit strategy, cost analysis, decision making under uncertainty, technology, innovation, and productivity growth, and the structure and organization of firms. Problem-solving and case-study approach used.

ECON 4040 Booms and Busts in the Economy: Data and Theory: 3 semester hours

Prerequisites: ECON 3002 and ECON 3100. This course focuses on the empirical regularities in macroeconomics commonly referred to as the business cycle. Students explore the variability and co-movements of aggregate economic variables and consider alternative theoretical explanations of these phenomena. Students may not receive credit for both ECON 4040 and ECON 5040.

ECON 4100 Introduction to Econometrics: 4 semester hours

Prerequisites: ECON 1001 and ECON 1002; ECON 3100 or MATH 1320 or SCMA 3300; MATH 1800 or MATH 1100. An introduction to quantitative analysis of economic behavior. The ordinary least squares technique and the assumptions underlying it are developed. Methods designed to detect and correct for the violations of these assumptions are examined. Special emphasis is given to the practical application of the procedures discussed through the use of computer exercises.

ECON 4110 Applied Econometrics: 4 semester hours

Prerequisites: ECON 4100 or equivalent. Concepts, techniques, & advanced applications of econometrics. Emphasis on developing a critical understanding of the appropriateness and limitations of a variety of state-of-the-art techniques used to model economic or political processes. Topics will include joint tests of hypotheses, estimation of lagged effects, models of qualitative choice, simultaneous systems, and outlier diagnostics. This course includes laboratory work in quantitative economic analysis.

ECON 4120 Time Series Econometrics for Economics and Finance: 4 semester hours

Prerequisites: ECON 4100. This course considers applications of econometric methods to time series data. Emphasis is placed on model specification as it applies to macroeconomic or financial data. Topics covered include stationary and non-stationary time-series, seasonality, random walks, unit roots, Dickey-Fuller tests, vector autoregression, cointegration, ARCH/GARCH models, and general-to-specific modeling (ADLs). Specific applications to macroeconomics, international economics and/or financial markets are studied.

ECON 4130 Business and Economic Forecasting: 4 semester hours

Prerequisites: ECON 4100 or equivalent. Alternative forecasting methodologies for economic time series will be analyzed and discussed. The focus of the course will be: (1) the development of time-series (ARIMA) models and their application to forecasting; (2) the use of standard econometric models for forecasting; and (3) evaluation and comparison of these methods and the conditions under which each is the appropriate methodology. This course includes laboratory work in quantitative economic analysis.

ECON 4150 Mathematical Economics: 3 semester hours

Prerequisites: MATH 1800 or MATH 1100, ECON 3001. This course uses calculus and other mathematical tools to analyze economic phenomena. In addition to exploring techniques used to solve unconstrained and constrained optimization problems, the course also examines how matrix algebra is used in economic modeling. This course allows students to mathematically analyze economic models which receive graphical treatment in lower level courses. Students may not receive credit for both ECON 4150 and ECON 5150.

ECON 4160 Geospatial Analysis in the Social Sciences: 3 semester hours

Prerequisites: ECON 1001, junior standing or consent of instructor. Analysis of geospatial data relating to a variety of social phenomena using geographic information systems (GIS) software. Students will learn how geospatial analysis can be integrated into research projects and presentations (e.g., creating maps to present and analyze social, political, and economic data). Students will also learn how criminal activity, economic activity, voting patterns and other social behavior are spatially correlated with demographic data. As a culminating project, students will learn how to apply GIS techniques, including but not limited to sophisticated spatial modeling of social behavior.

ECON 4170 Fundamentals of Cost-Benefit Analysis: 3 semester hours

Prerequisites: ECON 3001 or equivalent. The purpose of this course is to provide a systemic and rigorous way of thinking about the measurement of benefits and costs when evaluating public projects, programs or regulations. Cost-benefit analysis has wide application, including: environmental resource use, highway construction projects, safety regulations, taxation of cigarettes, and investment in higher education. Given the prevalence of cost-benefit analysis in government budgetary processes, this course will develop critical appraisal skills to evaluate the appropriateness of these analyses.

ECON 4200 Monetary Theory and Policy: 3 semester hours

Prerequisites: ECON 3001. This course examines how monetary policy has affected the economy in the past and how it can improve economic performance in the future. Topics may include the definition of inflation, inflation policy, inflation rate targeting, the Bretton Woods gold standard, monetary regimes with metallic standards, the effect of money on oil and gold prices, the Phillips curve and its use in monetary and macroeconomics, and the origin of central banks and bank insurance policy. Students may not receive credit for both ECON 4200 and ECON 5200.

ECON 4400 Labor Economics: Theory and Public Policy: 3 semester hours

Prerequisites: ECON 3001 and ECON 4100. This course examines labor supply, labor demand, and market determination of wages. Topics covered include policy analysis, poverty and inequality, and labor market discrimination. This course draws upon the tools from intermediate microeconomics and econometrics. Students may not receive credit for both ECON 4400 and ECON 5400.

ECON 4550 Natural Resource Economics: 3 semester hours

Prerequisites: ECON 1001 or consent of instructor; junior standing. The relationship between human activity and the world's natural resources requires choices. This course uses an economics perspective to study these choices. This perspective uses the view of the environment as an asset for its starting point. Issues concerning the optimal and sustainable use of natural resources are examined in this context. Special emphasis is given to potential policy responses to environmental problems.

ECON 4900 Advanced Topics in Economic Analysis: 1-4 semester hours

Prerequisites: Consent of instructor. This course is the advanced study of a specific topic in Economics. Topics may vary from semester to semester. It may be taken for credit more than once if the topics are different.

ECON 4980 Special Readings: 1-6 semester hours

Prerequisite: Consent of instructor; grade point of 3.0 or higher in Economics. Unscheduled, independent directed readings on topics mutually acceptable to student and instructor. Maximum credit limited to six hours.

ECON 4990 Internship in Applied Economics: 1-6 semester hours

Prerequisites: ECON 3001, junior standing and consent of instructor. This course is an independent study involving work with an appropriate private firm or public agency. A maximum of six hours may be earned, only three of which may be applied to the Economics major.

ECON 4995 Internship in Actuarial Science: 1-3 semester hours

Same as MATH 4995. Prerequisites: Junior standing and consent of program director. Supervised off-campus training in a private or public sector position in which the student applies the knowledge and skills learned in their actuarial science coursework. The internship is monitored by a faculty member and the student must provide a written report at the end of the project. This course may be repeated for a maximum of 6 credit hours.

ECON 5001 Microeconomic Analysis: 3 semester hours

Prerequisites: ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; ECON 4150. Survey of Microeconomic comparative statistics. Detailed examination of demand and supply, product and factor markets. Partial equilibrium in competitive, imperfectly competitive and monopolistic markets.

ECON 5002 Macroeconomic Analysis: 3 semester hours

Prerequisites: ECON 3200; ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; and ECON 4150. Aggregate economic theory, including analysis of the determinants of income, output, employment, and prices. Employment and price-level effects of consumer and investment demand, the money supply and interest rates, and government policies.

ECON 5040 Business Cycles - Data and Theory: 3 semester hours

Prerequisites: ECON 3002 and ECON 3100. This course examines business cycles. Students explore the variability and co-movements of aggregate economic variables using graphical and statistical methods and consider alternative theoretical explanations of these phenomena. Students may not receive credit for both ECON 4040 and ECON 5040.

ECON 5052 Economics for Educators: 3 semester hours

Prerequisites: Graduate standing. This course covers markets and the economy. There will be special reference to the costs and benefits approach to personal decision-making. This course may not be used by Economics students to meet M.A. degree requirements.

ECON 5053 Personal Finance for Educators: 3 semester hours

Prerequisites: ECON 5052. This course covers personal finance decision-making. Topics include income, taxes, credit, debt, saving, investment, risk, and insurance. This course may not be used by Economics students to meet M.A. degree requirements.

ECON 5100 Econometric Theory and Methods: 3 semester hours

Prerequisites: ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; ECON 4100; ECON 4150 or equivalent. A rigorous review of statistical models and methods relevant to the estimation and testing of economic relationships. Emphasis on the theoretical underpinnings of techniques commonly used for multivariate regression analysis and hypothesis testing. Topics include ordinary least squares, generalized least squares, and instrumental variables estimation.

ECON 5110 Topics in Applied Econometrics: 3 semester hours

Prerequisites: ECON 4100, or ECON 5100 or SCMA 5300. Concepts and application of advanced econometric techniques. Students will develop a thorough understanding of the appropriateness and application of a variety of state-of-the-art techniques. Topics will include specification tests, polynomial distributed lags, discrete choice, pooled time-series cross-section, simultaneous equations and outlier detection.

ECON 5120 Advanced Topics in Time Series Econometrics: 3 semester hours

Prerequisites: ECON 4100 or equivalent and a solid foundation in statistics. Application of econometric methods to time-series data. Emphasis on model specification as it applies to macroeconomic or financial data. Advanced topics include: Stationary and nonstationary time-series, seasonality, random walks, unit roots, Dickey-Fuller tests, cointegration, ARCH/GARCH models, and general to specific modeling (ADLs). Specific applications to macro-economics, international economics and/or financial markets.

ECON 5130 Advanced Topics in Business and Economic Forecasting: 3 semester hours

Prerequisites: ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; ECON 4150; ECON 4100 or SCMA 5300. This course develops the alternative techniques which are used to forecast economic time series. Each forecasting technique will be evaluated in terms of its theoretical soundness and predictive track record. Students will also learn to use these techniques to differentiate among competing economic models.

ECON 5150 Mathematical Methods for Economics: 3 semester hours

Prerequisites: MATH 1100 or MATH 1800, ECON 3001. This course presents the mathematics used in economics at an advanced level. Subjects covered include multivariate calculus, linear algebra, comparative statics, and unconstrained and constrained optimization. Emphasis is placed on the interpretation of mathematical results in economic terms. Students may not receive credit for both ECON 4150 and ECON 5150. This course may not be used by Economics students to meet M.A. degree requirements.

ECON 5200 Advanced Monetary Theory and Policy: 3 semester hours

Prerequisites: ECON 3001. This course examines how monetary policy has affected the economy in the past and how it can improve economic performance in the future. Topics may include the definition of inflation, inflation policy, inflation rate targeting, the Bretton Woods gold standard, monetary regimes with metallic standards, the effect of money on oil and gold prices, the Phillips curve and its use in monetary and macroeconomics, and the origin of central banks and bank insurance policy. Students may not receive credit for both ECON 4200 and ECON 5200.

ECON 5400 Advanced Topics in Labor Economics: 3 semester hours

Prerequisites: ECON 3001 or BUS AD 5001, ECON 4100. This course examines labor supply, labor demand, and market determination of wages. Topics covered may include policy analysis, poverty and inequality, and labor market discrimination. Throughout the course, current public policy debates are examined using the theoretical models developed. The course also emphasizes research methods and data measurement issues. Students may not receive credit for both ECON 4400 and ECON 5400.

ECON 5550 Economics for Public Policy Analysis: 3 semester hours

Prerequisite: Graduate standing. This course focuses on the role of the government in the economy, with particular attention paid to the way government affects the allocation of resources and the distribution of income. This course covers microeconomic principles and key economic concepts used in public policy analysis. Practical application of theoretical concepts is emphasized. This course may not be used by Economics students to meet M.A. degree requirements.

ECON 5820 Monetary Economics and Banking: 3 semester hours

Prerequisites: Graduate standing and admission to a PMiAE Emphasis Area. This course covers factors influencing bank reserves, money supply creation and the ability of the Federal Reserve System and the Treasury to control the money supply. It provides an introduction to monetary theory and integrates monetary phenomena with national income theory. The course also applies the principles of monetary economics to current policy issues. Students may not receive credit for both ECON 3200 and ECON 5820.

ECON 5845 Strategic Decision Making and Game Theory: 3 semester hours

Prerequisites: Graduate standing and admission to PMiAE Emphasis Area. This course examines the use of game theory as a tool for analyzing and strategic decision making. Strategic behavior is investigated in the context of business, government policy, politics, and everyday life. A wide variety of in-class experiments are used to illustrate key concepts. Students may not receive credit for both ECON 3003 and ECON 5845.

ECON 5900 Advanced Topics in Economic Analysis: 3 semester hours

Prerequisite: Consent of the instructor. Study of a specific economics topic, which may vary from semester to semester. May be taken more than once if the topic is different.

ECON 5980 Directed Readings: 1-6 semester hours

Prerequisite: Consent of the instructor. Independent study through readings, reports, research projects, and conferences.

Geography Courses

GEOG 1001 Introduction to Geography (MOTR GEOG 101): 3 semester hours

This course is an introduction to geography as a social science, which involves the identification and explanation of order in the human landscape. The course will survey the social, political, economic, and psychological factors which influence geographic patterns, along with an introduction to the study of geography through the use of Geography Information System (GIS) software.

GEOG 1002 World Regions (MOTR GEOG 101): 3 semester hours

Survey of the major regions of the world. Designed to give the student an awareness of the character of each of these major regions through the interrelationships of the various attributes of place. Each semester the geographic perspective will be applied in greater depth to one significant country such as Afghanistan, Iraq, or North Korea.

GEOG 2001 Cultural Geography: 3 semester hours

This course examines the effect of geography on culture and cultural groups. Essential to the geographic perspective is identifying the effect on cultures of the current trend toward increasing globalization. Topics include language, religion, attitudes, and the effect of technology. The major goals are to increase awareness of the diversity of human cultures and to prepare students for a world of increasing intercultural communication and conflict. This course fulfills the Cultural Diversity requirement.

GEOG 4900 Advanced Readings in Geography: 3 semester hours

Prerequisite: Consent of instructor. This course will provide a more in-depth analysis of the various factors which influence geographic patterns employing methods appropriate to graduate level instruction. The topic selected will vary from semester to semester. This course may be taken for credit more than once as long as the topic discussed in each semester is different.

English

General Information

Degrees and Areas of Concentration

The English Department is a welcoming space that invites you to experiment with creative writing and learn how literacies, rhetoric, and language shape and are shaped by our worlds. It offers courses in traditional British and American literature as well as literatures of the world and two niche literatures, Irish literature and the literature of sport, both of which have national conferences that students may participate in. In English courses you will find diverse and interesting student colleagues and award-winning teachers.

The Department often cross-lists courses with Gender Studies, Museum Studies, and others, so that you can branch out into related fields and get English credit for doing so. It can open up the world of publishing to you through courses like Writers at Work and the annual undergraduate publication of LitMag, an award-winning, student-run literature and arts journal. Through the course in Literary Journal Editing, graduate students can gain professional experience via the department's affiliation with the prestigious literary journal, Boulevard Magazine. You may also study in Galway, Ireland with scholarships available to both undergraduate and graduate students through this English Department affiliated study-abroad program. Graduate student teaching assistantships offer the opportunity to gain experience as a writing consultant in the University's Writing Center and as an instructor in first-year writing courses.

The Department offers the following degrees and certificates:

- Minor in English
- Bachelor of Arts in English
- Writing certificates in Creative, Professional, and Technical Writing, the latter of which is offered online). These certificates are open to students from any major as well as returning students.
- Master's in English
- Master of Fine Arts in creative writing (fiction and poetry)

The Department also contributes courses toward the Bachelor of Science in Secondary Education and the Graduate Certificate in the Teaching of Writing. (Students interested in teaching English in grades 9-12 should work with their Education adviser to ensure that any English courses they take will satisfy both the BA in English and the BS in Secondary Education.)

Departmental Honors

Candidates for departmental honors in English must achieve a 3.2 average in English at graduation and complete an undergraduate or graduate seminar in English, the final paper for which must be acceptable to the instructor as an honors thesis.

Career Outlook

Completing a degree in English equips you with job skills that many and varied employers are looking for.

Equipped with excellent critical thinking, writing, and rhetorical skills, students with English degrees are well suited for any administrative, commercial, non-profit, or training position that requires analytic, interpretive, and communicative skills. They work as project managers; in

resume, proposal, grant and technical writing and literary journal positions; and occasionally as instructional designers. They find themselves in digital workplaces, especially in social media coordination as well as content creation, coordination, marketing; and they are sought after for game design positions and work in real estate and mortgage banking, and curate programs at art museums, and entrepreneurship.

They are well equipped for graduate study in English and Rhetoric/Composition, and other fields like public policy, library science, and law.

With graduate degrees, they may be qualified to teach in community colleges and other institutional settings.

Degrees

English BA (p. 567)

English MA (p. 569)

Creative Writing MFA (p. 495)

Minor

English Minor (p. 570)

Certificates

Creative Writing Undergraduate Certificate (p. 495)

Professional Writing Undergraduate Certificate (p. 701)

Technical Writing Undergraduate Certificate (p. 761)

Affiliated Interdisciplinary Program

Teaching of Writing Graduate Certificate (p. 761)

Courses

ENGL 1001 English Studies: 1-3 semester hours

This course covers topics that fall under the umbrella of English Studies, which may include literary study, creative writing, and language and writing studies. The course may be repeated for credit if the topics are substantially different.

ENGL 1030 Beginning Creative Writing: 3 semester hours

This course introduces students to the building blocks of creative writing and the writing workshop classroom. Students will explore how creative writers decide what material is best suited for a story, an essay, or a poem. Pairing creativity with critical thinking, the course offers basic writing practice and familiarizes students with primary concepts and techniques of craft (e.g. narrative, point-of-view, voice and style, character development, setting, imagery, and figurative language).

ENGL 1100 First-Year Writing (MOTR ENGL 200): 3 semester hours

This course integrates critical reading, writing, and thinking skills and studies actual writing practices. Sequenced reading and writing assignments build cumulatively to more complex assignments. Course activities may include formal and informal writing, drafting and revising, editing for correctness, synthesizing source material, and documenting sources accurately. This course fulfills the University's general education first-year writing requirement. It does not count toward the major in English.

ENGL 1110 First-Year Writing for International Students: 3 semester hours

Prerequisite: Essay proficiency test or a TOFEL score of 500 or above. This course is designed for any student whose first language is not English. It integrates critical reading, writing, and thinking skills and studies actual writing practices. Sequenced reading and writing assignments build cumulatively to more complex assignments. Course activities may include formal and informal writing, drafting and revising, editing for correctness, synthesizing source material, and documenting sources accurately. Special attention given to verb tenses, idioms, articles, and syntax. This course fulfills the University's general education first-year writing requirement. It does not count toward the major in English.

ENGL 1120 Introduction to Literature (MOTR LITR 100): 3 semester hours

The student is introduced to the various literary types, including poetry, drama, fiction, and the essay.

ENGL 1170 American Literary Masterpieces: 3 semester hours

An introduction to major authors, works, and themes in American Literature from the nineteenth century to the present.

ENGL 1800 Reading Life: 3 semester hours

This course teaches college-level reading in the Humanities. The course primarily covers written texts, but may also include various genres in music, television and film, and theater. The course may be counted towards the major or minor in English.

ENGL 1950 Topics in Literature: 3 semester hours

This course will introduce the student to selected literary topics and/or genres. Each semester the department will announce topics and course content. Topics such as alienation, justice, and the absurd, and genres such as science fiction and contemporary drama are typical possibilities.

ENGL 2020 Introduction to Creative Writing: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course is a creative writing survey and workshop focusing on the study of three genres-short fiction, poetry, and creative nonfiction. Students learn primary concepts and techniques of craft, including narrative, voice, character, setting, imagery, metaphor, point-of-view. Students will explore literary conventions specific to each genre, as well as universal qualities that make all writing effective for an audience. The course requires three different kinds of writing: brief analytic essays, open-ended exploratory exercises, and carefully-revised original work. This course fulfills the core requirement in Creative Writing and counts toward the Certificate in Writing.

ENGL 2030 Poetry Writing Jumpstart: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course provides new poets, would-be poets, and curious non-poets with exercises, experiments, and activities to explore two questions: what is a poem, and how does one get written? Students will read published poems and examine their use of imagery, metaphor, form, and other techniques, and experiment with those techniques in their own writing. This course satisfies the English core requirement for the Creative Writing area and counts toward the Certificate in Writing.

ENGL 2040 Fiction Writing Jumpstart: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course provides exercises, discussions, models, and practice for discovering short stories and the many ways to tell them. Students will read published short stories to learn how other writers have worked with point of view, distance, voice, plot, dialogue, setting, and characterization. Students will also write exercises and stories for workshop critique. Students who have taken ENGL 2060 may not take ENGL 2040 for credit. This course fulfills the English core requirement for the Creative Writing area and counts toward the Certificate in Writing.

ENGL 2080 Advertising Copywriting: 3 semester hours

Same as COMM 2080. This course offers students a hands-on approach for writing advertising material for print, broadcast, and digital media against tight deadlines in a professional setting.

ENGL 2110 Information Literacy: 3 semester hours

This course is designed especially for humanities and fine arts majors. It introduces students to the main components of information literacy, including digital, web, and media literacies as well as library databases. Students work with both digital and print materials to find, evaluate, and synthesize information while applying the critical thinking habits of questioning and reasoning. Frequent writing and multimedia assignments will provide practice in using various technologies to assemble and to share information. This course fulfills the University's general education information literacy requirement.

ENGL 2120 Topics in Writing: 3 semester hours

Prerequisite: ENGL 1100 or equivalent, or consent of instructor. This course will introduce the student to writing in specific areas. Possible topics are argumentation, reading and writing about public affairs, sports reporting and writing, and writing about science. A student may repeat the course once when topics are different. The course counts toward the Certificate in Writing.

ENGL 2125 Introduction to Technical Communication (MOTR ENGL 110): 3 semester hours

This course introduces students to the role of the professional technical communicator in business and industry. Students will explore methods of developing technical documents, including critical analysis, information design, and rhetorical expression.

ENGL 2160 Introduction to American Studies: 3 semester hours

Same as HIST 2160. This course introduces students to the multidisciplinary nature of American Studies and is a required course for those who wish to complete the minor in American Studies. It reviews the discipline from its origins in the 1930s, and it introduces students to St Louis' rich resources for American Studies.

ENGL 2180 Introduction to News Writing: 3 semester hours

Same as COMM 2380. This course focuses on news writing and the development of news stories. Enrollment in this course is encouraged for but not restricted to staff of The Current (student newspaper) and other student publications.

ENGL 2188 Public Relations Writing: 3 semester hours

Same as COMM 2180. Prerequisites: COMM 1150 or ENGL 1100 or COMM 2380. This course is an introduction to the process of planning, producing, and evaluating messages in public relations. It examines various forms of contemporary public relations writing, with special emphasis on preparation of messages for different media and audiences, setting long-range and short-term goals and objectives, and identifying appropriate message channels.

ENGL 2330 Poetry: The Greatest Hits: 3 semester hours

This course examines a selection of the most important poems written in English. Students will study poems to understand both their literary elements-form, metaphor, theme, and so on-and their cultural/historical context. Through a careful examination of poetry, students will sharpen their ability to read, discuss, and write about literary texts. This course satisfies the core curriculum requirement for the Literature in English area.

ENGL 2340 Introduction to Drama: 3 semester hours

A close study of major dramatic works in various modes, to introduce the student to the forms and techniques of dramatic literature.

ENGL 2350 Our Stories, Ourselves: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course provides an exploration of some of our most successful published narratives, discussing plot, point-of-view, dialogue, setting, characterization, distance, pacing, suspense, and more, as well as audience and themes. Students will read, discuss, and write about stories. This course satisfies the core curriculum requirement for the Literature in English area.

ENGL 2360 Hey, Have You Read _____?: 3 semester hours

Prerequisites: ENGL 1100 or equivalent, or consent of instructor. This course introduces students to approaches to reading literature in the 21st century. The course can focus on a specialty area, such as a genre, time period, or nationality, or on a theme transcending several specialty areas. Students will learn to read closely and begin to look at literature through various theoretical or cultural lenses. This course satisfies the English core requirement for the Literature in English area.

ENGL 2370 Drama: The Greatest Hits: 3 semester hours

Prerequisites: ENGL 1100 or equivalent, or consent of instructor. This course introduces students to some of history's most famous dramas both as literary forms and as cultural expressions. Plays will therefore be considered for themselves-for their genre, structure, and language-as well as for their social function, in an effort to better understand the complex communal values, settings, and crises which produced them. Students will read and discuss a wide variety of well-known plays from ancient Greece and Rome, the early modern English stage, and modern and contemporary culture. This course satisfies the English core requirement for the Literature in English area.

ENGL 2400 Rhetorical Ways with Words: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course focuses on the diverse purposes and uses of language and writing, encouraging students to consider these functions beyond solely academic and literary realms. Specifically, students will investigate how language and writing are connected to identity, power, community, and knowledge creation. To accomplish these broad goals, students will read critical scholarship from a variety of related disciplines. They may practice field-specific methods of inquiry and/or investigate local, regional, individual rhetorical and language practices and engage in print and/or multimodal composition. This course satisfies the English core requirement for the Language and Writing Studies area.

ENGL 2410 Literate Lives: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course raises definitional and exploratory questions: What is literacy? How does it change across time? Who has access to it? How can literacy both empower and marginalize people? To explore these complex questions, students will investigate the ways in which contemporary practices of literacy-reading, writing, listening, speaking, digital composing, and critical thinking-function in the lives of individuals, communities, and cultures. Students will interrogate current definitions of literacy, study scholarship about literacy, explore literacy myths, and reflect on how their own literate lives have been shaped. They may engage in field work and interact with local literacy communities. This course satisfies the core curriculum requirement for the Language and Writing Studies area.

ENGL 2810 Traditional Grammar: 3 semester hours

An introduction to the terms and concepts of traditional grammar, beginning with functions of the noun and forms of the verb in simple sentences, moving to more complex structures such as subordinate clauses and verbal phrases, and ending with the application of this material to issues of Standard English.

ENGL 2830 Introduction to English Language Variety: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course introduces students to the intersections of language and culture, including some of the many dialects of English. Students will learn about the social dimensions of language variation: why people from different cultural groups and regions use different versions of English, how they define themselves based on vocabulary, accent, and phrasing, and how these aspects of language change over time. This course satisfies the English core requirement for the Language and Writing Studies area.

ENGL 3030 Improving on the Blank Page: Writing Poetry: 3 semester hours

Prerequisite: ENGL 1100 or the equivalent or consent of instructor. This course digs into questions of form and technique in poetry. Students will study and practice form, prosody, figurative language, and other techniques for (to borrow from Chilean poet Nicanor Parra) improving on the blank page. This course may be repeated once for a total of 6 credit hours. It counts toward the Certificate in Creative Writing.

ENGL 3040 Lying to Tell a Truth: Writing Fiction: 3 semester hours

Prerequisites: One of the following: ENGL 1030, ENGL 2020, ENGL 2030, ENGL 2040; or consent of instructor. This course examines and provides examples of characterization, dialogue, point-of-view, distance, weight, plot, setting, and more. Students will read published short stories and discuss the idea of writing as discovery and exploration--that writers work out of curiosity and bewilderment and tell lies to arrive at a truth.

ENGL 3090 Turning the Kaleidoscope: How We Look at Texts: 3 semester hours

Prerequisites: ENGL 1100 or equivalent and 48 credit hours. This course introduces the use of literary theory in reading and writing about literary texts. Students will learn and practice conventions of writing in English studies, basic literary research, and MLA documentation. This course is strongly recommended for English majors specializing in literature or anticipating graduate study in English. It may not be taken on satisfactory/unsatisfactory basis. Counts towards the Certificate in Writing.

ENGL 3100 Junior-Level Writing: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 credit hours) and 48 credit hours. This course enhances analytical, communicative, persuasive, and explanatory capabilities in contemporary American English. It emphasizes academic reading, writing, research, and documentation. It fulfills the university's junior-level writing requirement and counts towards the Writing Certificate.

ENGL 3120 Business Writing: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and 48 credit hours. This course further develops the experienced writer's style and analytical capabilities to the level of sophistication necessary for business and professional settings. Writing assignments may include business correspondence, reports, resumes, proposals, analyses, presentations, marketing, promotional, and multi-modal materials, discussion postings and blogs, articles for in-house publications, and research and documentation. The course fulfills the University's junior-level writing requirement and may not be taken on a satisfactory/unsatisfactory basis.

ENGL 3130 Technical Writing: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and 48 credit hours.

This course introduces students to the major elements of industrial technical writing. Writing assignments may include technical definitions, abstracts and summaries, mechanism descriptions, instructions, process analyses, technical reports and proposals. The course also includes an introduction to research methods and documentation. This course satisfies the University's junior-level writing requirement and may not be taken on a satisfactory/unsatisfactory option.

ENGL 3150 Feature Writing: 3 semester hours

Same as COMM 3140. Prerequisites: ENGL 1100 or equivalent. The course involves the study and practice of freelance and staff-written magazine or newspaper feature articles with an emphasis on relationship between types of publication and article content, research methods, and writing style. It involves frequent short assignments such as journal entries, interviews, library projects, article critiques, and market reports that lead to production of full-length feature articles. It may not be taken on the satisfactory/unsatisfactory option. The course counts toward the English Certificate in Writing.

ENGL 3160 Writing in the Sciences: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and 48 credit hours. This course is designed to teach students how to write effectively in the sciences. Writing assignments may include short reports, proposals and a major project; projects may include a research or analytical report, a formal proposal or a procedures/instructions manual. The course includes an introduction to research methods and documentation. This course fulfills the University's junior-level writing requirement and may not be taken on the satisfactory/unsatisfactory option.

ENGL 3200 Composing Disability: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course offers students an understanding of disability as a complex and crucial part of the world and human experience. Students will approach disability as a matter of identity, language, writing, power, education, politics, literature, art, and more. More specifically, they will read disability studies critical theory, literary works, and personal narratives; create accessible multimodal projects; engage in scholarly and/or community-based research; and candidly discuss assumptions about disability. Through this work, students will assess the value and effect of different ways of thinking about disability and understand the core concepts of disability studies and its emergence as a field.

ENGL 3310 English Literature Before 1790: 3 semester hours

Prerequisite: ENGL 1100 or equivalent. This course examines the development of English literature from the Middle Ages through the eighteenth century. Students will be introduced to major literary movements and themes through the reading and analysis of representative works of selected major authors. This course fulfills the British Literature requirement for the major.

ENGL 3320 British Literature in the Long 19th Century: 3 semester hours

Prerequisite: ENGL 1100 or equivalent. This course meets the requirement for one 3000 level course in British literature. It surveys the arc of British literature from about 1790 into the early 20th century: the Romantic, Victorian, and Modernist eras.

ENGL 3330 Reformers, Revolutionaries, and Romantics in the British Romantic Era: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. Students read poetry and prose by several major writers of the British Romantic period. This course meets the requirement for one 3000 level course in British literature.

ENGL 3350 Slouching Toward Chaos: the Early 20th Century in British Literature: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. Students read poetry, drama, and fiction by major writers of the Modernist era of British literature. This course meets the requirement for one 3000 level course in British literature.

ENGL 3500 Special Studies: 1-3 semester hours

Prerequisite: A course in area of proposed work and consent of instructor. Individual work, with conferences adjusted to needs of the student. May not be used to meet specific English department distribution and language requirements. May be repeated for a maximum total of four hours credit.

ENGL 3510 World Literature Before 1650: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course surveys World Literature from the earliest times to 1650. Students will examine diverse literary works in a variety of genres and voices. The course will include literary works from diverse traditions throughout the world, excluding literature from the United States and England.

ENGL 3520 World Literature After 1650: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course surveys World Literature from 1650 to the present. Students will examine diverse literary works in a variety of genres and voices. The course will include literary works from diverse traditions from throughout the world.

ENGL 3530 Contemporary World Literature: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course covers selected World Literature from the 20th and 21st centuries with emphasis on non-European literatures. This course may include works from Europe, Latin American, the Middle East, Africa, and Asia; it excludes literature from the United States and England.

ENGL 3710 American Literature Before 1865: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course features representative selections from American authors from the early seventeenth century to the Civil War. This course fulfills the American Literature requirement for the major.

ENGL 3720 American Literature After 1865: 3 semester hours

Prerequisites: ENGL 1100 or equivalent. This course examines dramatic upheavals in society that have engendered continuous innovation in American literature since 1865. It will look closely at a variety of individual authors motivated by these artistic, cultural, political, and psychological disturbances; we will also pay close attention to specific literary movements, from Naturalism to Transrealism, energized by these societal changes. This course fulfills the American Literature requirement for the major.

ENGL 3800 Topics in Women and Literature (MOTR LITR 106): 3 semester hours

An examination of the role of women in literature, either as figures in literary works or as writers. Specific topics to vary from semester to semester. Since the topics of ENGL 3800 may change each semester, the course may be repeated for credit if the topics are substantially different.

ENGL 4030 Contemporary Critical Theory: 3 semester hours

This course is to acquaint students with a range of critical methodologies that have gained currency since the 1960's; topics may include formalist, structuralist, post-structuralist, Marxist, reader-response, psychoanalytic, feminist, cognitive, and evolutionary approaches to literature and culture.

ENGL 4060 Adolescent Literature: 3 semester hours

The course will expose students to the large variety of quality adolescent literature available for reading and study in middle and high school classes. It will also examine the relevance of a variety of issues to the reading and teaching of adolescent literature, among them: reader response; theory and practice; multi-culturalism; literacy; the relation of adolescent literature to "classic" literature the role of adolescent literature in interdisciplinary studies; adolescent literature as an incentive to extracurricular reading.

ENGL 4080 The Truth about Fiction: Biological Reality and Imaginary Lives: 3 semester hours

Prerequisites: ENGL 3100 or equivalent (may be taken concurrently). This course presupposes that works of literature center on the main phases, motives, and social relationships in the human life cycle, for instance, survival, growing up, establishing an identity, becoming part of a community, mating, parenting and family life, conflicts between communities, imaginative culture (religion, ideology, the arts), growing old, and dying. Readings include literary works along with psychological studies and literary theory and criticism that draw on biologically grounded research on human behavior.

ENGL 4130 A Machine Made of Words: Writing Your Best Poems: 3 semester hours

Prerequisites: ENGL 3030, ENGL 3040, or consent of instructor. This course examines in more detail the ways in which poets construct machines from words—that is, the way that the words of a poem provide its verbal, emotional, and intellectual energy. Through the examination and discussion of both contemporary published poetry and the work of students in the class, students will consider the question: how do poems use language to make sense of (or to defamiliarize) the world and our experience of it? The course counts toward the Certificate in Writing.

ENGL 4140 Polishing Your Stories: Producing a Publishable Short Story: 3 semester hours

Prerequisites: ENGL 3030, ENGL 3040, or consent of instructor. This course gives student writers tools and practice in rethinking and rewriting their stories. It is for students who are serious about writing stories that can be published in Litmag, Bellerive, or other journals. Students will produce drafts for workshop critique and will rewrite them, producing at least one that is polished enough for publication. The course counts toward the Certificate in Writing.

ENGL 4150 Creative Non-Fiction: 3 semester hours

Prerequisites: ENGL 3030, ENGL 3040, or consent of instructor. This course will examine the aesthetic and technical concerns of the writer of creative non-fiction. Students will read published essays and write their own to submit for workshops. This course counts toward the Certificate in Writing.

ENGL 4160 Special Topics in Writing: 3 semester hours

Prerequisites: ENGL 3100 or equivalent. Special topics in writing that are not covered in other 4000-level English courses. Since the topics of ENGL 4160 may change each semester, the course may be repeated for credit if the topics are substantially different.

ENGL 4162 Writers at Work: 3 semester hours

Prerequisites: ENGL 3100 or equivalent. This course introduces students to writing professions. Students will research various writing professions and practice different professional writing genres, such as corporate writing, public relations writing, blogging, magazine writing, copywriting, and editing. Students will work on portfolios that will help them to obtain writing internships or jobs. Readings will help students conduct a meta-analysis of their own writing and writing process.

ENGL 4180 Novel Beginnings: 3 semester hours

Prerequisites: ENGL 3030, ENGL 3040, or consent of instructor. This course teaches students to engage the reader when writing a Sci-fi / Fantasy / Thriller / Young Adult / Literary novel. Students will work on getting the balance right, on creating a compelling event, dimensional characters, an engaging plot, a setting that feels real, and a point-of-view strategy. Students learn about key ingredients that make a novel beginning interesting to a reader and present their novel beginnings in a workshop format for revision.

ENGL 4260 Chaucer: 3 semester hours

The course concentrates on the poetry of Geoffrey Chaucer, including the Canterbury Tales, early poetic works, and the Troilus and Criseyde. All readings are in the original Middle English.

ENGL 4360 Shakespeare's Friends and Rivals: 3 semester hours

Prerequisites: ENGL 3100 or equivalent or consent of instructor. This course studies the professional London stage from the 1580s to the 1620s with particular emphasis on the drama of Shakespeare's contemporaries. Though Shakespeare will not be the focus of this course, connections with his works will be discussed. Students will learn the conventions of dramatic genres and how to situate plays in their historical, cultural, and literary contexts. They will also explore how playwrights responded to the theater market in which they exhibited their dramatic wares and the extent to which they saw one another as rivals or collaborators.

ENGL 4370 Shakespeare: Tragedies and Romances: 3 semester hours

Prerequisites: ENGL 3100 or equivalent or consent of instructor. This course explores Shakespeare's tragedies and romances, with particular attention to their genre as well as their relation to the cultural issues of Shakespeare's time. Students will learn to see Shakespeare as a dramatic craftsman and explore the question of his contribution to English literature: whether he saw himself as an innovator or inheritor of well-known stories from the classical tradition, Britain's chronicle histories, scripture, and legend. Shakespeare's narrative poems, as well as modern film adaptations, may also be featured.

ENGL 4380 Shakespeare: Comedies and Histories: 3 semester hours

Prerequisites: ENGL 3100 or equivalent or consent of instructor. This course explores Shakespeare's comedies and histories, with particular attention to their genre as well as their relation to the cultural issues of Shakespeare's time, above all, the place of women and the importance of marriage and male friendship. Students will learn how Shakespeare's plays explore the rights of citizens and perhaps challenge accepted notions of political power. Students will also uncover Shakespeare's debt to ancient and contemporary forms of comedy as well as his innovative contributions to that dramatic form. The sonnets, as well as modern film adaptations, may also be brought into the discussion of these questions.

ENGL 4450 The Eighteenth-Century English Novel: 3 semester hours

The origins and early development of the English novel, from Defoe to Jane Austen.

ENGL 4550 Novels into Films: The Nineteenth Century: 3 semester hours

Prerequisites: ENGL 3090, ENGL 3320. Novels by Austen, Eliot, Wilde, Hardy, and others read in themselves and as interpreted in film. Comparisons of the representational and aesthetic techniques available to novels and film.

ENGL 4620 Selected Major American Writers II: 3 semester hours

American literature of the late nineteenth and early twentieth centuries: Dickinson, James, Twain, Cather, Frost, Dreiser and others.

ENGL 4630 African American Literature Prior to 1900: 3 semester hours

Prerequisites: ENGL 3100 or equivalent. This course examines the roots of the African American literary tradition with an emphasis on 18th- and 19th-century texts, though more contemporary work and other literary/cultural "forms" may be included. Study will focus on captivity/slave narratives, prose, antebellum and post-bellum essays, speeches, performances, and other relevant materials.

ENGL 4650 Modern American Fiction: 3 semester hours

The novel and short story in America since World War I. There may be some attention to British and continental influences.

ENGL 4660 African American Literature Since 1900: 3 semester hours

Prerequisites: ENGL 3100 or equivalent. This course examines the literary and cultural work of African Americans. It focuses on fiction, nonfiction, poetry, and short stories that express the major cultural, literary, and thematic concerns of African Americans writing in the 20th and 21st centuries. Students will become familiar with Black American sociocultural movements reflected in African American literary and cultural production.

ENGL 4740 Poetry Since World War II: 3 semester hours

Reading and analysis of contemporary poetry.

ENGL 4750 Modern British Fiction: 3 semester hours

Critical reading and analysis of British fiction of the twentieth century. There may be some attention to American and continental influences.

ENGL 4770 Modern Poetry: 3 semester hours

Critical reading and analysis of poetry of the late nineteenth and early twentieth centuries. Yeats, Eliot, Frost, Williams and others.

ENGL 4790 Rhetoric and Social Justice: 3 semester hours

Prerequisites: ENGL 3100 or equivalent or consent of instructor. This course introduces students to rhetoric as integral to language, communication, and meaning-making. Students will read rhetorical history and contemporary scholarship and theory, apply theories to various scenarios and artifacts, and become more thoughtful practitioners of rhetoric in their own lives. Specifically, the course introduces rhetoric through the lens of social justice, offering students an opportunity to use rhetorical theories and methods to understand better current social events, activist movements, practices of civic engagement, and corresponding media representations.

ENGL 4800 Introduction to English Linguistics: 3 semester hours

Prerequisites: ENGL 3100 or equivalent or consent of instructor. This course presents a survey of linguistics with an emphasis on what the field reveals about the English language. Topics may include the sounds of language, grammar, writing systems, language acquisition, language in society, language history, dialects, and usage.

ENGL 4810 Descriptive English Grammar: 3 semester hours

Prerequisites: ENGL 3100 or equivalent or consent of instructor. This course presents a descriptive study of modern English morphology and syntax (grammar) from the perspectives of traditional, structural, and transformational grammar.

ENGL 4820 History of the English Language: 3 semester hours

Prerequisites: ENGL 3100 or equivalent or consent of instructor. This course is a historical survey of the English language from its Indo-European roots through Old and Middle English to the present. Topics may include changes in sound, meaning, and grammar, as well as developments in American English, including regional and social dialects.

ENGL 4830 English Sociolinguistics: 3 semester hours

Prerequisites: ENGL 3100 or equivalent or consent of instructor. This course presents a survey of topics in sociolinguistics, the study of the relation between language and society, with some emphasis on language variation in English. The course offers both quantitative and qualitative approaches to topics such as social dialectology, variationist and third-wave sociolinguistics, ethnography of communication, and language in relation to education, ethnicity, gender, and sexuality.

ENGL 4860 Editing and the Production Process: 3 semester hours

Prerequisites: ENGL 3100 or equivalent; ENGL 2810 or ENGL 4810.

This course provides students an opportunity to perform professional-level copyediting and proofreading, navigate several industry-standard publishing style manuals, understand the basic stages of the book production process and editorial roles at various stages during that process, and recognize and question trends in the practice and execution (media, format) of copyediting. This course counts toward the Professional, Creative, and Technical Writing Certificates.

ENGL 4864 Technical Editing: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and junior standing. This course covers the principles and practices of technical editing, including usability, audience analysis, contextual editing, the conventions of scientific and technical communication, and the role of the editor in document development and publication. Students will also learn standard practices of copy editing and the use of style guides.

ENGL 4865 Content Strategy: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and junior standing. This course examines the practice of technical communication in content management system (CMS) environments and covers such subjects as single sourcing, topic-based writing, and adaptive content. Students will learn how to perform a content audit, engage in content modeling, create content templates, and use Framemaker or a similar tool to structure content.

ENGL 4866 Help Authoring: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and junior standing. This course addresses the technological and rhetorical skills necessary for creating effective online help systems, including context-sensitive help for computer applications.

ENGL 4867 Proposal Writing: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and junior standing. This course familiarizes students with many aspects of writing proposals for various purposes in academic, professional, and public spheres. It offers students opportunities to write documents to promote their academic, professional, or personal goals or those of their organization(s).

ENGL 4869 Usability Studies: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and junior standing. This course addresses the methods used by technical communicators to evaluate usability. It focuses on methods used to evaluate human interaction with communication tools and students will learn how to make products more suitable for human use.

ENGL 4871 Publishing: Writers, Editors, and Readers: 3 semester hours

Prerequisites: ENGL 3120, ENGL 3130, or consent of instructor. This course allows students to explore how the technological revolution has changed the way writers write, editors edit, and readers read. Topics covered may include the social and political implications of these technological advances in book, magazine, and online publishing. We will discuss how the roles of editors and writers have changed. Students will develop a semester writing or editing project that emerges out of this exploration. This course is for writers interested in having their work published and for anyone interested in working in the publishing field. This course counts toward the Professional, Creative, and Technical Writing Certificates.

ENGL 4872 Technical Presentations: 3 semester hours

Prerequisites: ENGL 3120, ENGL 3130, or equivalent. Students learn about different kinds of presentations given in professional contexts and the technologies used to produce them. They will learn to create powerful presentations that make memorable presentations. The course is asynchronous and 100% online, and is designed for graduate students preparing papers for conferences, and for technical and business professionals presenting to their bosses, colleagues, and clients. This course counts toward the Professional and Technical Writing Certificate.

ENGL 4874 International Dimensions of Technical Communication: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and junior standing. This course examines complexities of communication of technical information worldwide. It includes topics such as graphics, icons, symbols; user interface design; intercultural communication.

ENGL 4876 Research Methods in Technical Communication: 3 semester hours

Prerequisites: ENGL 1100 or equivalent (3-6 hours) and junior standing. This course addresses essential research methods in technical communication, including audience analysis, interviewing techniques, working with subject matter experts, and experimental research design.

ENGL 4890 Writing Internship: 3 semester hours

Prerequisites: ENGL 3100 or equivalent, and consent of instructor. This course allows students to work in a supervised internship to complete professional writing assignments. It is limited to students who are completing certificates in writing. It may be taken concurrently with the final course in the certificate sequence. A special consent form is required.

ENGL 4892 Independent Writing Project: 3 semester hours

Prerequisites: ENGL 3100 or equivalent, and consent of instructor. This course allows students to work individually with an instructor to complete an extensive creative writing or critical analysis writing project. It is limited to students who are completing their certificates in writing. It may be taken concurrently with the final course in the certificate sequence. This course is available on a limited basis only with the approval of the Coordinator and faculty sponsor. A special consent form is required.

ENGL 4895 Editing "Litmag": 3 semester hours

Prerequisites: ENGL 3100 or equivalent and at least two of the following: ENGL 1030, ENGL 2020, ENGL 2030, ENGL 2040, ENGL 3030, ENGL 3040, ENGL 4130, ENGL 4140, ENGL 4150, ENGL 4180. This course allows students to create "Litmag," the UM-St. Louis student literary magazine. It is primarily for students nearing the end of their certificates in writing. Students will call for submissions, read and select work to be published, and produce the magazine. They will handle issues like format, budget, proofreading, print run, advertising, distribution, and publicity. The course is offered only in the spring and culminates with the publication of "Litmag" in late April.

ENGL 4910 Studies in African Diasporic Literature, Performance, and Criticism: 3 semester hours

Prerequisites: ENGL 3100 or equivalent. This course focuses on the study of select topics in African and African American literature and criticism and Black diasporic texts. Topics may vary from semester to semester and may include such concentration areas as Black performance, transatlantic Black literature, captivity and freedom narratives, diaspora studies, and Black feminist writing, among others. May be taken more than once for credit if topics are different for a maximum of six credit hours.

ENGL 4925 The Short Story in World Literature: 3 semester hours

Students will read a wide variety of short fiction, from very brief pieces to novellas, including stories from all over the world and from several different centuries either in translation or in the original English. The course will also cover short theoretical works on narrative and critical commentaries on some of the fiction.

ENGL 4932 Female Gothic: 3 semester hours

Same as GS 4932. The course examines the historical development of the female gothic, a genre which employs narrative strategies for expressing fears and desires associated with female experience. From the late 18th century to the present, we will trace the persistence of the Gothic vision in fiction and film.

ENGL 4950 Special Topics In Literature: 3 semester hours

Special topics in literature that are not covered in other 4000-level English courses. Since the topics of ENGL 4950 may change each semester, the course may be repeated for credit if the topics are substantially different.

ENGL 5000 Introduction to Graduate Study in English: 3 semester hours

A course designed to prepare students for the professional study of English. The course will both familiarize students with basic bibliographic tools and scholarly methods and introduce them to issues that are of current critical interest to those engaged in the advanced study of literature. These issues include gender, textuality, reader-response, multiculturalism, feminism, psychoanalysis, cultural studies, literary history and the relationship of literature to philosophy, history, and science. Must be taken within the first twelve hours of graduate study.

ENGL 5100 Graduate Workshop in Poetry: 3 semester hours

Prerequisites: Open to students in the creative writing program and to others with permission of instructor. Consists of a writing workshop in which the poetry written by the students enrolled in the course is discussed and analyzed by the instructor and members of the class. Students taking this course will be expected to write original poetry throughout the course. May be repeated for maximum graduate credit of fifteen (15) hours.

ENGL 5110 Graduate Workshop in Fiction: 3 semester hours

Prerequisites: Open to students in the creative writing program and to others with permission of instructor. Consists of a writing workshop in which the fiction (short stories or chapters of a novel) written by the students enrolled in the course is discussed and analyzed by the instructor and members of the class. Students taking this course will be expected to write original fiction throughout the course. May be repeated for maximum graduate credit of fifteen (15) hours.

ENGL 5170 Techniques, Methods, and Effects in Fiction Writing: 3 semester hours

Prerequisite: Open to students in the MFA program and to others with consent of the instructor. This course analyzes the technical choices made by important contemporary fiction writers in the areas of point of view, tone, setting, form, and plot structure, and it examines the effects of those choices. Close consideration is given to fictional techniques that contribute to a story's characterization, tension, interest, reliability, drama, irony, and humor. The course is primarily for creative writers.

ENGL 5180 Form and Theory of Poetry: 3 semester hours

Prerequisites: Open to students in the MFA Program and other graduate students with consent of instructor. This course explores various aspects of traditional and contemporary poetry. The student will gain an understanding of formal poetry-rhyme and meter-as well as of traditional types of poetry, for example, the lyric and the narrative. Throughout the course, an emphasis will be maintained on free verse and a greater understanding of its practice. Students will read selectively in the poetry, theory, and critical approaches of various periods, for example, the romantic and the modern, and within various movements, such as the symbolist or confessional.

ENGL 5190 Literary Journal Editing: 3 semester hours

Prerequisites: Open to students in the MFA program who have had at least two graduate writing workshops and to others with consent of the instructor. In this course students serve as the first readers of all submissions to the university's literary magazine, Natural Bridge. Students will read and evaluate poems, short stories, and essays and recommend a body of work to the editorial board of the magazine. The editorial board will then consider the class consensus in its final selection of material for publication. In addition to this primary task of editorial selection, students will also be involved in the productions of an issue of the magazine. May be repeated for maximum graduate credit of nine hours.

ENGL 5200 MFA Readings: 3 semester hours

Prerequisites: Open to students in the MFA program and to others with consent of the instructor. This is an independent reading course. In consultation with an MFA faculty member, students choose works from the MFA Reading List and read them with the goal of broadening and sharpening their technical skills as writers. Students ordinarily choose works in one genre: poetry, the short story, or the novel. Each week the student reads and reports on at least one work. The course may be taken only once.

ENGL 5250 Studies in Middle English Literature: 3 semester hours

Special topics in English literature before 1500.

ENGL 5300 Renaissance Literature: 3 semester hours

Special topics in English literature from 1500 to 1660.

ENGL 5400 Eighteenth Century Literature: 3 semester hours

Studies in Augustan poetry and prose, including drama and fiction, with emphasis on background and major figures.

ENGL 5500 Nineteenth Century Literature: 3 semester hours

Special topics in English romanticism, in Victorian life and thought, and in the development of the novel and of poetry between 1797 and 1914.

ENGL 5650 Critical Studies in African Diasporic Texts: 3 semester hours

Prerequisites: Graduate standing or consent of instructor. This course examines theories around Black cultural production and emphasizes Black diasporic texts. Topics may vary from semester to semester and may include such concentration areas as Black feminist theory, queer of color critique, Black performance studies, Black Marxism, transatlantic Black Literature, postcolonial theory, African American theater, and captivity and freedom narratives, among others. May be taken more than once for credit if topics are different for a maximum of six credit hours.

ENGL 5700 Twentieth-Century American Literature: 3 semester hours

Selected American writers or topics from 1900 to the present.

ENGL 5800 Modern Linguistics: 3 semester hours

Prerequisite: A study of selected topics in the structure of the English language, combining readings in current linguistics publications with original research.

ENGL 5840 Theories of Writing: 3 semester hours

An analysis of major modern theories in composition.

ENGL 5850 Studies in Composition: 3 semester hours

The study of special topics in composition. Topics may include history of composition, psychology of writing, reader response theory, etc.

ENGL 5880 Writing in the Content Areas: 3 semester hours

Same as TCH ED 5880. Prerequisites: Graduate standing. This course emphasizes the importance of integrating writing instruction in classrooms across subject areas. Theories of writing and writing instruction will be explored, and students will discuss how to put the theories into practice in their classrooms. Students will learn to explore their own writing process while learning strategies that will help them to teach writing rather than just assign writing. The course examines the tools pre-service and in-service teachers will need to work with diverse learning communities, to utilize best practice in the teaching of writing, and to use writing as a tool for student learning in any content area. Students in this class will be held to professional writing and speaking standards. The course counts toward the Certificate in Writing.

ENGL 5890 Teaching College Writing: 3 semester hours

This course provides the opportunity for practical application of composition theory with an emphasis on improving teaching skills. Strongly recommended for graduate teaching assistants.

ENGL 5910 Studies In Poetry: 3 semester hours

Study of a few selected British and American poets.

ENGL 5920 Studies in Fiction: 3 semester hours

Study of a few selected British and American novelists and short story writers.

ENGL 5930 Studies In Drama: 3 semester hours

Study of a few selected British and American dramatists.

ENGL 5940 Seminar in Gender and Literature: 3 semester hours

Same as GS 5940. Gender studies in literature of different periods, types, and genres; satisfies area requirement (1-6) appropriate to its period, national literature, and genre.

ENGL 5950 Seminar in Special Topics: 1-3 semester hours

Special topics which are not covered in other graduate-level English courses.

ENGL 5970 Independent Reading: 1-3 semester hours

Directed study in areas of English for which courses are not available.

ENGL 6000 Thesis: 1-6 semester hours

Prerequisite: 3.5 graduate GPA. Thesis research and writing on a selected topic in English studies. May be taken over two semesters, three (3) hours each semester.

ENGL 6880 Leadership in the Teaching of Writing: 1-6 semester hours

Same as TCH ED 6880. Prerequisites: Graduate standing. This course is an intensive study of the writing process and the writing curriculum, designed for in-service teachers and writers interested in writing pedagogy. Readings of current theory and research are explored in relation to participants' experiences as writers and as teachers. May be repeated for credit, but no more than 6 hours may be applied toward the M.Ed. This course counts toward the Graduate Certificate in the Teaching of Writing.

ENGL 6890 Seminar in Professional Writing for Teachers: 3 semester hours

Same as TCH ED 6890. Prerequisites: TCH ED 6880 and consent of instructor. Capstone seminar for the Graduate Certificate in the Teaching of Writing. Participants will pursue the dual role of writer/ writing teacher by designing individual projects with one of these emphases: (1) research writing based on a classroom inquiry into the teaching of writing; (2) expository and creative writing based on an inquiry into the teacher's own evolution as a writer.

History

General Information

Students and Faculty in the History Department are curious and creative. We ask big questions about the past to understand the present and build the future. Faculty members bring our diverse backgrounds, experiences, and expertise to the courses we offer in African, African American, European, Latin American, Japanese, World, and United States history from ancient to modern times. Our students go on to thrive in a wide range of careers: business, museums and public history, education, libraries, law, management and more

Bachelor in History

The department offers a B.A. and minor in history. Students can complete the History major and minor online. Students can access internship and research opportunities through our partnerships with museums, archives, schools, and cultural organizations. Majors and minors build their skills in writing, research, communication, and analysis, and enjoy small, advanced level classes, ensuring they receive individual attention from faculty committed to their intellectual and professional development.

In cooperation with the College of Education, students can complete the B.S. Ed. in Secondary Education with Emphasis in History and Social Studies and the B.A. in History with Secondary Social Studies Teacher Certification.

Bachelor of Liberal Studies

A minor in history may be combined with a minor in another discipline and a capstone to form a Bachelor of Liberal Studies. The relevant capstones are either HIST 4999 or any HIST 4142/HIST 4143 level course. Since students taking HIST 4999 must have taken HIST 3199, it is suggested such students use this class to satisfy the Logic and Methodology requirement. Students can use the same course to satisfy the Logic and Methodology requirement of both minors, but cannot use the same science courses. Also, a Bachelor of Liberal Studies program is easily combined, in turn, with a major in any science as a double major. Employers appreciate this pathway as it provides graduates with a deeper historical and conceptual understanding of the science(s) they are studying.

Accelerated Master's Program

The Accelerated Master's Program in history allows students to complete the requirements for both a B.A. and M.A. in five years of full-time study. This program is intended for students of strong academic ability. In order to take full advantage of this accelerated program, students should work with their advisor to map out their program schedule in advance.

Certificates and Minors

Faculty collaborations on campus and in the community make the History Department a starting place for interdisciplinary certificates and minors in Anthropology, African American and African Diaspora Studies, American Studies, Global Health and Medicine, LatinX Studies, and East Asian Studies. Students can also minor in History or Anthropology.

Master's Programs

At the graduate level, the department offers an M.A. in History and an emphasis in Museums, Heritage, and Public History. The department also offers a graduate certificate in History Education and a graduate

certificate in Museums, Heritage and Public History. These certificates can be taken by themselves or in conjunction with the M.A. in History or M.Ed. in Secondary Education.

Career Outlook for Graduates

Study and research in history sharpens organizational and writing skills important to success in a variety of fields. Our graduates thrive in many careers: business, museums and public history, libraries, law, non-profits and advocacy, management, banking, foreign service, and education. Interest in local history has created employment opportunities in museum, archival, and preservation work that are growing faster than average. Whether they pursue a career directly in the field or in other professions, History alumni appreciate their training for its strong foundation in essential skills. For more information on the national outlook for history majors, see American Historical Association's Career Resources.

Degrees

History BA (p. 582)

- Public History and Museums in the Digital Age Emphasis (p. 584)

History MA (p. 586)

- Museums, Heritage and Public History Emphasis (p. 588)

History BA/MA Dual Degree Program (p. 585)

History MA Accelerated Master's Degree Program (p. 587)

Minors

African/African Studies Minor (p. 395)

Anthropology Minor (p. 399)

Global Health and Social Medicine Minor (p. 580)

History Minor (p. 589)

LatinX Studies Minor (p. 604)

Certificates

African American and African Diaspora Studies Certificate (p. 395)

East Asian Studies Certificate (p. 523)

History Education Graduate Certificate (p. 586)

Museums Heritage and Public History Graduate Certificate (p. 637)

Courses

Courses offered by the department can be found at the links below:

History (HIST)

Anthropology (ANTHRO)

History

Courses

HIST 1000 Introductory Topics in History: 3 semester hours

This course covers various special topics in history to be determined by the field, availability of instructors and interest of students. The course may be repeated for credit with the consent of the instructor.

HIST 1001 American Civilization to 1865 (MOTR HIST 101): 3 semester hours

This course considers the development of the Americas and the United States from the pre-Columbian era to the Civil War, with emphasis on the ideas and institutions that shaped U.S. Americans' experiences. Students will work with primary sources and additional materials to deepen understanding of the relationship between the U.S. and the world. Assignments further develop students' written communication skills. This course fulfills the American History and Government general education requirement.

HIST 1002 American Civilization 1865 to Present (MOTR HIST 102): 3 semester hours

This course examines the development of the modern United States from Reconstruction through the present. It considers the ideas, institutions, economic and social changes that shaped Americans' experiences. Students work with primary sources and additional materials to deepen understanding of the relationship between the U.S. and the world. The course further develops students' written communication skills. This course fulfills the University's general education American history and government requirement.

HIST 1003 African American History: 3 semester hours

This course surveys the experiences of African Americans from the period of the Trans-Atlantic slave trade to the late twentieth century. Topics may include the development of the slave trade and the institutionalization of slavery, slave culture and resistance, the role of African Americans during the Civil War and Reconstruction period, the rise of segregation and the disfranchisement of African Americans, the Depression and WWII eras, and protest movements since. This course fulfills the American History and Government general education requirement.

HIST 1007 Introduction to African and African American Studies: 3 semester hours

This course draws from history, literature, sociology, art, and economics to survey the impact of African migrations on the Americas. It highlights the movements, conditions, and experiences that have shaped the development of African American history, culture, and society. This course fulfills American History and Government General Education Requirement.

HIST 1010 U.S. Business History: 3 semester hours

This course explores key developments in the business and economic history of America from the founding to the present. It offers foundational knowledge of the history of American business, connecting it to key issues in American history. This course fulfills the American History and Government general education requirement.

HIST 1020 St. Louis: People, Place, and Food: 3 semester hours

In this course, students will explore the history of St. Louis's many residents and immigrants, its neighborhoods, cultural foodways, and political and race relations in the past to understand the region in the present. The class features community based learning through several field trips to historic sites, museums, neighborhoods, and restaurants, in addition to student completion of a digital storytelling project.

HIST 1021 The Body in Culture: 3 semester hours

Same as ANTHRO 1021. This course will compare uses of the body as a social signifier in Western and non-Western cultures. It will explore how culture shapes the images, uses and meanings of the human body. It concentrates on different historical and beliefs in five areas: how the body works; sex and gender; eating manners and food; pain and punishment; beauty and bodily mutilation. This course satisfies the Cultural Diversity requirement.

HIST 1030 Ancient Greece and the Roman Empire: 3 semester hours

This course surveys the history of ancient Greece and Rome in the context of the larger Mediterranean world. Topics may include politics and economy, war and society, and culture. The chronological span is from the establishment of the Minoan and Mycenaean civilizations (2000-1500 BCE) to the fall of the Western Roman Empire in the fifth century CE.

HIST 1031 From the Middle Ages to the Age of Revolutions (MOTR WCIV 101): 3 semester hours

This course covers the development of western European societies and traditions from the fall of the Western Roman Empire in the fifth century CE, through the Middle Ages to the Renaissance, and the Enlightenment to the end of the French Revolution in 1799. Themes may include politics and economy, war and society, and culture.

HIST 1032 Topics in European Civilization: 1715 to the Present (MOTR WCIV 102): 3 semester hours

This course covers the development of western European societies and traditions from 1715 to the present. Themes may include politics and economy, war and society, and culture.

HIST 1034 Introduction to Ancient Egypt and Its Civilization: 3 semester hours

Same as ANTHRO 1034. This course will survey ancient Egyptian history and culture from predynastic times to Greco-Roman rule, roughly 3000 BCE to 30 BCE. Students will discuss archaeological sites, mummification, religion, architecture, texts, and more. Through comparing ancient Egyptian culture with our own, students will explore what has changed in the world and what has endured for millennia.

HIST 1037 The Wonders of Greece: Introduction to Greek History and Culture: 3 semester hours

Same as ANTHRO 1037. Our democracy and culture have been heavily influenced by Greek civilization. This course will introduce students to the culture and civilization of Greece in order to provide a better understanding of our own society. The course will cover the political and military history, art, literature, philosophy, and science of Greece from prehistoric to modern times, with special emphasis on Greek civilization's enduring democratic and cultural ideals. The course will include screening of films and use of online resources.

HIST 1040 Sex and Gender Across Cultures: 3 semester hours

Same as ANTHRO 1041. This course considers womanhood, manhood, third genders, and sexuality in a broad cross-cultural perspective. It examines gender roles and sexuality within the broader cultural contexts of ritual and symbolism, family, marriage and kinship, economy, politics, and public life. This course will help students understand the cultural logics that separate females, males, and sometimes third genders into different groups in different societies. It also satisfies the Cultural Diversity Requirement.

HIST 1041 East Asian Civilization: 3 semester hours

The development of Asian civilization from earliest times to the Manchu conquest. The course fulfills the Cultural Diversity Requirement.

HIST 1043 Topics in East Asian History and Culture: 3 semester hours

This course introduces students to historical and cultural issues in different areas of East Asia, especially Japan, Korea, and China. Topics may include a survey of history, as well as more specialized areas of politics, culture, literature, art, gender or more contemporary issues. The regional emphasis is determined by the instructor. It may be taken more than once, provided the course topic is different. This course fulfills the Cultural Diversity requirements.

HIST 1062 Modern Africa: From Colonies to Nations: 3 semester hours

This course uses film, fiction, music, and historical sources to explore the history of twentieth century Africa, focusing on African experiences of the colonial and postcolonial periods. This course fulfills the Cultural Diversity Requirement.

HIST 1075 World History to 1500: 3 semester hours

A survey of the history of humankind to 1500 including the beginnings of civilization Mesopotamia, Africa, Asia and the Americas, the rise of Classical civilizations and the development of major transnational social, economic, political and religious networks.

HIST 1076 World History Since 1500: 3 semester hours

A survey of the history of humankind since 1500, emphasizing the growing interdependency of regional economic, political, and social systems. Topics will include imperialism, industrialization, and globalization.

HIST 1999 Big History: From the Big Bang to the Present: 3 semester hours

Same as INTDSC 1999. An introduction to the humanities, social science, and science disciplines through a sweeping overview of natural and human history from the Big Bang to the present. Course will include lectures from faculty in various Arts and Sciences units, films, and group discussions.

HIST 2000 Selected Topics in History: 3 semester hours

This course covers various special topics in history to be determined by the field, availability of instructors and interest of students. The course may be repeated for credit with the consent of the instructor.

HIST 2002 Introduction to Latinx Studies: 3 semester hours

This course introduces the experiences and conditions of U.S. Latinx of Caribbean, Latin American, and, especially, Mexican descent. Students will examine how people from Hispanic- and Indo-America are both incorporated into American culture, history, and occupational life and often marginalized as either outsiders or foreigners. The course studies how historical forces push and pull people from Latin America to the United States, where they create new U.S. ethnic, racial and local identities. Using films, novels/memoirs, music, and art as windows, students will identify patterns of identity formation, ethnic culture, community politics, labor struggles, and social mobility, and will map the heterogeneous mosaic of Latin American and Caribbean migrations and communities. This course fulfills the Cultural Diversity requirement.

HIST 2004 The Civil War Era: Slavery, Emancipation, and the Greater Reconstruction: 3 semester hours

Prerequisites: Sophomore standing or consent of instructor. This course examines one of the most significant experiences in U.S. history across three chronological units: American slavery and debates over it; historical explanations for U.S. slavery's demise; and the broader meaning and legacies of the Civil War and Reconstruction. Students will pay particular attention to Civil War St. Louis. This is a hands-on course with field trips and community engagement. This course fulfills the University's general education American history and government requirement.

HIST 2008 History of St. Louis: 3 semester hours

Prerequisites: Sophomore standing or the consent of the instructor. This course will provide an overview of the history of the St. Louis metropolitan region. Topics may include the St. Louis region before the Europeans, forces leading to the founding of the city, St. Louis as an "urban frontier," the Age of Steam on water and rail, the questions of slavery and the Civil War, St. Louis in the Gilded Age, the World's Fair, early efforts at city planning, impact of the automobile, St. Louis during the Depression and World War II, post-war suburbanization, urban renewal, and 21st century prospects. This is an experiential course requiring field trips and community engagement.

HIST 2017 African American History: From Civil Rights to Black Power: 3 semester hours

Prerequisites: Sophomore standing or consent of instructor. This seminar focuses on the activities, ideas, movement centers, and personalities that created the Civil Rights and Black Power movements in the U.S. from the 1950s through the 1970s. Some familiarity with the broad contours of U.S. History is presupposed. Special attention will be devoted to the roles of the African American masses, college students, and women, and to the points of conflict, cooperation, and intersection between African America and the larger American society.

HIST 2021 War and Violence in Modern Times: 3 semester hours

Same as MVS 2021. Prerequisites: Sophomore standing or consent of the instructor. This course examines the connections between warfare and resistance, gangs and poverty, and state and non-state officials as enactors of violence. It explores the effects of war and violence on the poor in Brazil and the United States, prisoners of war in Asia, and resistance fighters in Latin America and northern Africa. Students will watch films/short videos, read academic and newspaper articles, and listen to short podcasts to grapple with the issues underlying structures of violence.

HIST 2025 U.S. Foreign Relations and Military History: 3 semester hours

Same as MVS 2025. This course surveys the development of American land, sea, air, space, and cyber power from the start of the colonial era to the present, with an emphasis on the interrelationship between U.S. foreign and military policies and between diplomacy and force.

HIST 2026 Baseball and the Making of Modern America: 3 semester hours

This course uses the lens of baseball to aid in the development of a deeper understanding of the United States. It explores how social, cultural, economic, and political forces shaping the U.S. after the Civil War were reflected in the national past time. In the study of key trends and events in baseball history, students will learn how broader themes in U.S. history, such as industrialization and urbanization, race and ethnicity, imperialism, war, gender, and business impacted and were influenced by the sport. This course satisfies the Cultural Diversity requirement.

HIST 2028 Sex, Drugs, and Rock 'n Roll: The 1960s in Song, Fashion, Dating, and Protest: 3 semester hours

Prerequisites: Sophomore standing or consent of the instructor. This course examines the turbulent 1960s and the period's identification with sex, drugs, and rock 'n roll by looking historically at drugs, music, and changes in gender roles. It uses these histories to explore the cultural and political movements of the 1960s (1955 through 1973)-civil rights, black power, new left, antiwar, and feminist movements-along with the emergence of the counterculture, hallucinogenic drugs, the sexual revolution, and the whole hip scene. The class is discussion-based. There is a mid-term exam and several assignments, including a class presentation and papers on readings, music, and movies.

HIST 2030 U.S. Immigration: 1790 to the 21st Century: 3 semester hours

This course examines the history of free and forced newcomers to the U.S. and the laws that shaped their ability to immigrate. It looks at the conditions that newcomers faced and their subsequent struggles for political, social, and economic rights and freedoms. It explores the legal foundations that grounded the admission of certain newcomers and the exclusion or marginalization of others. This course fulfills the Cultural Diversity requirement.

HIST 2050 Museums, Monuments and American Life: Introduction to Public History: 3 semester hours

This course introduces students to the foundations, theory, and practice of public history, which is the study of whose history is preserved, remembered, and celebrated in American society. It explores how everyday people engage with history, the diverse venues in which history is presented and produced, and the efforts public historians must make in order to respectfully represent the histories of underrepresented groups. Students will acquire knowledge about the practices of public history and its professional opportunities, as well as the challenges faced by public historians today.

HIST 2066 Women and Gender in African History: 3 semester hours

Same as GS 2066. Using documentaries, popular culture, graphic histories, and more conventional sources, this course explores the history of Africa, highlighting African women's lives, experiences, and agency, and questioning the application of Western concepts of gender to an African setting. This course fulfills the Cultural Diversity Requirement.

HIST 2067 African History through Fiction and Film: 3 semester hours

Prerequisites: Sophomore standing or consent of the instructor. This course will examine modern African history with literature and film, focusing on works that have poignantly captured important events in African history such as slavery, colonialism, and independence.

HIST 2068 Aiding Africa: 3 semester hours

Same as POL SCI 2585. This course examines the history of economic development on the African continent. Students will learn about the local and the international encounters that development has fostered; they will explore how Africans have experienced and reformulated development in different contexts and time periods; and they will study the changing international policies on development, which have shaped the lives of Africans. This course satisfies the Cultural Diversity requirement.

HIST 2084 Crusades and Plagues: Europe in the High and Late Middle Ages: 3 semester hours

Prerequisite: Sophomore standing or consent of the instructor. Medieval society at its political, economic, and intellectual zenith; the crisis of the later Middle Ages; the Papal schism and the development of national particular churches within Catholicism; and the rise of estate institutions.

HIST 2094 World War II and the Cold War: 3 semester hours

This course studies the period from World War II to the "official" end of the Cold War in the late 1980s and early 1990s. Students will survey both World War II and the Cold War in Europe, Asia, Africa, North America, and South America. It uses specific examples from history to explain the diplomatic, political, military, and social history of this era in a global context.

HIST 2100 Careers with a History Degree: 1 semester hour

This course is an orientation to career opportunities for history majors. It is recommended for majors and minors and is open to students who are considering the field. It explores careers directly related to history and other sectors for which the degree is valuable, including business, law, education, communication and more. Students engage in activities that help them to identify their professional goals, network in the region, and become familiar with internships, minors, and certificates that enhance their degree.

HIST 2101 Hot Topics in History: 1-2 semester hours

In this course students examine a current issue in the news from an historical perspective. Topics vary each semester. It may be repeated as the topic changes.

HIST 2102 Introduction to Gender Studies: 3 semester hours

Same as GS 2102, SOC WK 2102, POL SCI 2102, and SOC 2102. This core class is required for all Gender Studies Certificate earners. This class introduces students to cultural, political and historical issues that shape gender. Through a variety of disciplinary perspectives in the humanities, social sciences, and natural sciences, the course familiarizes students with diverse female and male experiences and gendered power relationships.

HIST 2103 American Revolution, 1763 to 1789: 3 semester hours

This course examines the history of the American Revolution, from the explosive political crisis of the 1760s to the struggle over ratification of the Constitution. Students will consider the origins and conduct of the war, as well as the Revolution's far-reaching political, social, and economic consequences.

HIST 2104 Medicine in Culture and History: 3 semester hours

Same as ANTHRO 2104. In this course, students will explore the diverse beliefs and practices related to anatomy, disease, sexual reproduction, gender, sport, and food. Western biomedicine will be compared with traditional Chinese medicine and other non-Western traditions such as shamanic, Native American, Tibetan, and Ayurvedic systems. The clash between traditional and modern medical systems will also be examined. This course satisfies the Cultural Diversity Requirement.

HIST 2112 Democracy, Freedom, and Equality: Historical Role-Playing Games: 3 semester hours

This course uses historical game simulations built around key moments and texts from the past that explore issues of democracy, freedom, and equality in the U.S. In each simulation, students are assigned a role and develop their character for game sessions. The course offers students a rigorous academic experience in which they conduct historical research, work collaboratively, speak, and write extensively. The course may be repeated for credit once provided that the topic is substantially different. This course fulfills the American History and Government general education requirement.

HIST 2117 Greek History and Culture: 3 semester hours

Same as ANTHRO 2117. Greek civilization has had a deep impact on contemporary society in art; social, political, and economic organization; philosophy; law; medicine; and science. This course covers major aspects of Greek history and culture from antiquity to the present. It considers the major political and military events of Greek History, as well as important aspects of Greek culture, including sports and the history of the Olympic Games, literature, philosophy, and mythology.

HIST 2160 Introduction to American Studies: 3 semester hours

Same as ENGL 2160. Prerequisite: Sophomore standing or consent of the instructor. This course introduces students to the multidisciplinary nature of American Studies and is a required course for those who wish to complete the minor in American Studies. It reviews the discipline from its origins in the 1930s, and it introduces students to St Louis' rich resources for American Studies.

HIST 2185 Introduction to Religious Studies: 3 semester hours

Same as PHIL 2185. This course introduces students to the interdisciplinary study of religion. With an emphasis on research methods and perennial philosophical and historical topics, students will develop tools for investigating the various dimensions of worldview and gain exposure to many different religious traditions.

HIST 2199 Real History and Fake News: 3 semester hours

This course moves students beyond simplistic views of complex subjects of history, religion, politics, economics, and science. It uses the central theme of historical fact versus misinformation (e.g., fake news) as a way of providing a deeper understanding of how knowledge, both true and untrue, is produced and how it impacts larger societies as well as individual lives. The class will consider how one uses information to establish historical fact and its degree of certainty, and how to use it to build an argument. Students will also learn how to debunk false historical claims. The ultimate goal of the course is to help students develop the capacity to comprehend layered, nuanced, and complex notions of knowledge creation and truth verification.

HIST 2212 Greek Myths and Monuments: 3 semester hours

Same as ANTHRO 2212 and ART HS 2212. This course provides an overview of Greek myths and legends, as well as their reception in architecture, the visual arts, and literature. Particular emphasis will be given to: 1) the theology and the creation myths of the Greeks and how these relate to the Bible; 2) heroic myths from the Trojan War to Atlantis, and their historicity; 3) famous monuments, works of art, and texts from Greek and world literature, that advance our understanding of Greek myths and the culture that created them.

HIST 2219 Work and Working Peoples' History: 3 semester hours

This course examines the evolution of work and workers in the United States since the Early American Colonial period. The course traces the transformation from an agrarian, to an industrial, to a technological age with an emphasis on the changing demands that the workforce and society faced. This course explores the evolution of class culture in the United States with an emphasis on the political and economic conditions and how labor strategically responded to those evolving forces. Students will come to understand how when social change occurs there is impact on the workforce and workers.

HIST 2302 The LatinX Sixties: 3 semester hours

This class explores the history of this LatinX activism in the long decade of upheavals. It traces the barriers that LatinXs faced, how they confronted those barriers, the compromises they made and refused to make, and their successes, failures, and continued attempts. Students will learn the reasons behind youth activism, its impact on the civil rights struggles of the period, and its legacies in today's protests, where LatinX youth are leaders in the push for comprehensive immigration reform, anti-gun legislation, LGBTQ rights, and economic change.

HIST 2420 Maiko, Maids, and Masako: Women in Japanese Cultural History: 3 semester hours

Same as ANTHRO 2420. This course offers perspectives on famous Japanese women who have captured the public eye at various historical junctures. Students will learn to critically assess representations of these mythological, religious, occupational, and subcultural figures, as well as their linkage to notions of nationhood and modernity. This course satisfies the Cultural Diversity requirement.

HIST 2425 Food and Drink in Japan: A Cultural History: 3 semester hours

This course explores food and drink as core aspects of intimate and public life in Japan and as key elements of nationalism. It examines distinct class, ethnic, and regional dimensions of food and drink that have their own unique histories. Students will learn how food and drink encode a spectrum of historical meanings as well as great cultural hybridity. This course satisfies the Cultural Diversity requirement.

HIST 2430 Ghosts, Goblins, and Godzillas: 3 semester hours

This course explores the spirits, ghouls, and animal tricksters who populate the historic and modern Japanese imagination. Students will learn about the supernatural beings, and the exceptional humans who interact with or control them, who are found in centuries of Japanese religion, folklore, literature, and art, and are also frequent themes in modern art, film, anime and manga. This course satisfies the Cultural Diversity requirement.

HIST 2800 History of American Economic Development: 3 semester hours

Same as ECON 2800. Prerequisites: ECON 1000 or ECON 1001 or consent of instructor. This course presents an overview of American economic history. Topics may include the native American economies, the colonial and revolutionary period, the US constitution, slavery and the civil war, the shift from an agricultural to an industrial economy, the political and economic effects of the two world wars, and the growth of government in the postwar economy. This course fulfills the American History and Government general education requirement.

HIST 3000 Special Topics in History: 3 semester hours

Prerequisite: Junior standing or consent of instructor. This course covers various special topics in history to be determined by the field, availability of instructors and interest of students. The course may be repeated for credit with the consent of the instructor.

HIST 3030 Women, Gender, and Sexuality in Latin America: 3 semester hours

This course studies gender in Latin America from the eve of conquest by the Portuguese and Spanish in the fifteenth century to the present. It examines how ideas about gender affected the lives of Latin American men and women. This course additionally analyzes how gender and race contributed to the creation of a hierarchical social order. Finally, it discusses the exercise of authority within and outside households and its impact on private and public spaces.

HIST 3032 Modern China: From the Decline of the Qing Empire to the Global Age: 3 semester hours

Prerequisite: Junior Standing or consent of instructor. The economic, social, and political development of modern China.

HIST 3035 Gender and Sexuality in Modern U.S. History: 3 semester hours

This course will examine how gender has been historically constructed in the United States during the 20th and 21st centuries. It considers how women and men have understood their place in society, what social and cultural forces informed their understandings, and how these concepts changed over time. Students will critically engage with the categories of gender and sexuality as historical and cultural productions within the context of 20th century US politics, culture, and social movements.

HIST 3041 Topics in American Constitutional History: 3 semester hours

Same as POL SCI 3041. Prerequisites: Junior standing or consent of instructor. This course examines the origins and development of the principal institutions and ideas of the American constitutional systems. More specifically, topics may include, the role of the Constitution and the Supreme Court in the growth of the nation, important Supreme Court decisions, great American jurists and their impact upon the law, and historical background to current constitutional issues.

HIST 3065 From Ivory to Oil: Mining and Extraction in African History: 3 semester hours

Prerequisites: Sophomore standing or consent of the instructor. This course focuses on mining and its effects on economic and human development in twentieth century Africa. It examines specific case studies, which may include oil, diamonds, uranium, copper, and ivory to understand how African states and economies have been affected by valuable resources.

HIST 3092 War and Upheaval in Europe, 1900-1950: 3 semester hours

Prerequisites: Junior standing or consent of the instructor. This course is a social, political, economic, and cultural survey of Europe during the eras of two world wars. Topics may include the "Belle Epoque," the cataclysm of World War I, peace treaties, the rise of communism and fascist states, the Great Depression and collapse of democracy, World War II, the Holocaust, and the efforts at a postwar settlement.

HIST 3093 Europe in Peace and Prosperity, 1950-Present: 3 semester hours

Prerequisites: Junior standing or consent of instructor. This course surveys the main social, economic, political, military, and cultural trends in Europe from the end of World War II. Topics may include the postwar settlement, the development of the social welfare state, the establishment, development, and collapse of communism, and the various phases of the European Union.

HIST 3199 Introduction to Historical Inquiry: 4 semester hours

Prerequisites: ENGL 3100 (may be taken concurrently). This course is designed to develop historical thinking and research skills. Students will read historical sources, exploring the rhetoric of history, identifying perspectives in historical sources, and the process of formulating historical questions, and building research plans. Other topics covered may include proper citation procedures and historiography. The course is writing intensive and will involve primary source research at libraries and archives.

HIST 3214 Writing Systems of the World: 3 semester hours

Same as ANTHRO 3214. This course studies the writing systems from around the world leads to appreciation for one of humankind's most important technological inventions. Students will explore the origins and development of writing systems over time, the linguistic classification of writing, and the transmission of writing across languages and cultures. This course satisfies the Cultural Diversity requirement.

HIST 3218 Visual and Material Culture of Japan: 3 semester hours

Same as ANTHRO 3218. This course offers students the opportunity to research Japanese visual genres and material artifacts, from the iconography of Buddhism and fifteenth century pottery to postwar political cartoons, advertising posters, and etiquette comics. Students will discover how artifacts and images provide a means for communicating cultural meaning, while also reflecting aesthetics, humor, and cultural norms. This course satisfies the Cultural Diversity requirement.

HIST 3901 Capitalism in American History: 3 semester hours

Same as POL SCI 3901. This course offers students the opportunity to approach America's political economy with tools different from those offered by more quantitative economic constructs. Students will analyze market processes through a three dimensional approach that focuses not just on market competition but also on relationships of command; the exercise of power in firms, among nations, and between social groups; and on processes of historical change from the late colonial era through the twentieth century.

HIST 3999 Internship: 3 semester hours

Prerequisites: Consent of supervising instructor and institution offering the internship. This supervised practicum in a museum, historical agency, or other institution offers an opportunity for hands-on experience in public history. Contact the History Department undergraduate advisor for information on arranging an internship.

HIST 4001 Special Readings: 1-10 semester hours

Prerequisite: Consent of the instructor. Independent study through readings, reports and conferences.

HIST 4002 Collaborative Research: 3 semester hours

Prerequisite: Consent of instructor. Faculty-student collaboration on a research project designed to lead toward the publication of a jointly-authored article. The faculty member will direct the research.

HIST 4100 Inquiries in History: 3-5 semester hours

Prerequisites: HIST 3199. This course will develop historical thinking, writing, and communication skills through historical research. Students seeking a Degree with Distinction may enroll in the course for 5 credit hours and conduct an expanded research project.

HIST 4142 Inquiries in U.S. History: 3 semester hours

Prerequisites: HIST 3199. This course will develop historical thinking and writing skills through investigation in topics in National History.

HIST 4143 Inquiries in World History: 3 semester hours

Prerequisites: HIST 3199. This course will develop historical thinking and writing skills through investigation in topics in World History.

HIST 4999 Senior Seminar: 5 semester hours

Prerequisites: HIST 3199, presentation of three examples of formal written work submitted in prior upper-division courses in history, and consent of department. This course studies in historical methodology and historiography. Directed readings, research, and writing leading to the production of an original piece of historical scholarship. An exit interview is required. This course is required for majors seeking Degree with Distinction. It may not be taken for graduate credit.

HIST 5000 Advanced Selected Topics in History: 3 semester hours

Prerequisite: Graduate standing. Special topics in history. The course may be repeated for credit with consent of the instructor.

HIST 5142 Advanced Inquiries in U.S. History: 3 semester hours

Prerequisite: Graduate standing. This course will develop historical thinking and writing skills through investigation in topics in United States history.

HIST 5143 Advanced Inquiries in World History: 3 semester hours

Prerequisite: Graduate standing. This course will develop historical thinking and writing skills through investigation in topics in World history.

HIST 6000 The Historian's Craft: 3 semester hours

Prerequisites: Graduate standing. This course will introduce incoming students to graduate work, both in the field of history generally and to the M.A. program at UM-St. Louis in particular. It will familiarize them with the fields of historical study and the UMSL faculty who teach them, protocols of the profession, and methodologies of historical research, writing, and analysis. It will also help students learn about and prepare for careers outside the academy and/or Ph.D. programs in the field. Students may be required to attend colloquia off campus.

HIST 6001 Introduction to Public History and Cultural Heritage: 3 semester hours

Prerequisites: Graduate standing or consent of instructor. This seminar will introduce students to the theory and practice of public history and cultural heritage. Readings will acquaint students with these fields of study and offer commentary on a variety of strategies for making the past relevant for contemporary audiences.

HIST 6002 Material Culture in Historical Context: 3 semester hours

Prerequisites: Graduate standing and consent of instructor. This course will present various theoretical and methodological approaches to the study of material culture. It will explore how the interpretation of objects has contributed to the understanding (or misunderstanding) of past and present cultures. The course will also examine contemporary museum practice in the display of material culture. Students will be expected to make on-site observations at different types of local museums, and will conduct research into a category of material culture that appeals to their individual interests.

HIST 6003 Economics of Museums and Heritage: 3 semester hours

Prerequisites: Graduate standing and consent of the instructor. This course introduces students to the financial history of museums and heritage, explores debates about economic strategies for museums and heritage, and empowers museum professionals to work effectively with the chief financial/administrative officer of their museum or heritage site. Topics include: government policies toward museums and heritage, the economics of blockbuster exhibitions, debates concerning collections as an economic resource for museums and cities, daily financial management, best practices for using financial resources to achieve institutional mission and priorities, long-term strategic planning, the history and development of public-private partnerships, cultural philanthropy and donations.

HIST 6004 Writing for Museums: 3 semester hours

Prerequisites: Graduate standing and consent of Museum Studies program director. This course will develop skills for professionals working in museum settings who need to communicate effectively with multiple audiences through various platforms. Topics will include writing for proposals, object descriptions, interpretive texts, and digital storytelling.

HIST 6013 History Education in Schools and Communities: 3-5 semester hours

Prerequisites: Graduate standing or consent of instructor. This course explores the history of social studies and history curriculum, and how community histories intersect with and challenge history taught in schools. Readings explore key controversies in 20th century politics of history education and how various communities have sought to develop, explore, challenge, and redesign school and public understanding of the past and issues in teaching it in schools, cultural organizations, and community spaces.

HIST 6115 Historical Thinking in Research and Practice: 3 semester hours

Same as TCH ED 6115. Prerequisites: Graduate Standing or consent of instructor. In this hands-on course, students examine current research and effective teaching strategies that facilitate historical thinking while also broadening content knowledge. Students further design, implement, and assess educational materials and practices that foster historical thinking, reading, and writing.

HIST 6121 Directed Readings: 1-3 semester hours

Prerequisites: Consent of a member of the Doctoral Faculty. Directed research at the graduate level.

HIST 6122 Collaborative Research: 3-6 semester hours

Prerequisites: Graduate Standing and consent of instructor. Faculty-student collaboration on a research project designed to lead toward the publication of a jointly-authored article. The faculty member will direct the research.

HIST 6123 Thesis Seminar: 1-6 semester hours

Prerequisites: Graduate standing and consent of instructor. Thesis research and writing on a selected topic in history.

HIST 6124 Graduate Internship: 3 semester hours

Prerequisites: Consent of supervising instructor and institution offering the internship. Supervised practicum in a museum, historical agency, and other institution offering an opportunity for hands-on experience in public history.

HIST 6125 Practicum in Public History and Cultural Heritage: 3 semester hours

Prerequisites: Graduate standing or consent of instructor. In collaboration with a designated community partner, students will research and interpret the past for contemporary audiences. The course will combine traditional classroom sessions with hands-on training.

HIST 6126 Museum Studies Internship: 1-4 semester hours

Prerequisites: Graduate standing and consent of instructor. Professionally-supervised work experience in a museum setting. Requires a minimum of 50 hours of on-site attendance per credit hour and submission of a final paper.

HIST 6127 Museums and Communities: 3 semester hours

Prerequisites: Graduate standing and consent of the Director of Museum Studies. This course examines how museums and heritage institutions have sought to attract new audiences and broaden program offerings. It focuses on how these entities identify community characteristics and needs, create entry points for multiple audiences at museums, and build strong, long-term relationships with local partners. It considers difficult histories, conflict, and strategies to create space for diverse perspectives; the role of communications technologies in soliciting participation and promoting dialogue; and networks and the organizational skills for community development. Students will examine case studies of community-based museum programming and develop an engagement strategy around an exhibit.

HIST 6129 Emerging Museum Practices: 3 semester hours

Prerequisites: Graduate students in Museum Studies or Public History or consent of the Director of Museum Studies. This course examines emerging trends and models in the museum field. The museum's educational role in society is quickly changing. Learning is not only more collaborative but also more accessible beyond the walls of the museum. Through readings, activities, and exercises, students will explore the mechanics of partnerships with cultural organizations, creative individuals, and the local community, while considering how museums should function in society today. We will examine interdisciplinary programming via collaboration with the creative class; creating social/participatory experiences; making collections personally relevant to audiences; and engaging in the sharing city. We pay particular attention to the museum's responsibility to civic duty and sustainable practices.

HIST 6131 Museum Origins and Evolution: 3 semester hours

Prerequisites: Consent of Director of Museum Studies Program. This course traces the social and cultural history of museums from their origins in curiosity cabinets, princely collections, freak shows, and exhibitions, through their late 19th and early 20th century institutionalization, to present-day developments such as blockbuster exhibitions, community collaborations, masterpiece architecture, and the spread of museal and heritage institutions around the globe. Topics include colonialism, modernity, and the production of taxonomical knowledge; museums and nationalism; theories of culture, patrimony, and ownership; manufacture, marketing, and museums; the relationships between museums and academia; identity politics and culture wars; community-based initiatives; and virtual and digital museum spaces.

HIST 6132 Documentary Film for Museums and Public History: 3 semester hours

Prerequisites: Consent of Director of Museum Studies Program. This course will blend film studies, memory theory, and public history literature to analyze the role of documentary film as a form of public history and museum interpretation. Students will also learn the basics of film production and will produce a short documentary film project, although no prior experience with film production is necessary.

HIST 6133 Digital Public History: 3 semester hours

Prerequisites: Graduate standing or permission of the instructor. This course introduces and explores the key issues, analyses, critical debates, opportunities and potential drawbacks for public historians working in museums, archives, and community-based work using digital media for engagement and access. Students will gain facility in implementing digital strategies for museum and public history initiatives, including how to plan, manage, and assess the success of media projects.

HIST 6134 History Curatorship: 3 semester hours

Prerequisites: Graduate standing and consent of instructor. Principles and practices of curatorship, with a focus on historical collections. Curatorial responsibilities for object care. Role of curator in exhibit research, design, and implementation. Issues of inclusivity and shared authority. Historical shifts in curatorial practice, collecting, and museum missions.

HIST 6138 Museum Studies Capstone Project: 5 semester hours

Prerequisites: Consent of Director of Museum Studies Program. This course serves as a degree-culminating experience, as students will choose to either complete an internship or an exit project. It will support students as they fulfill this degree requirement and in preparing their portfolio and job-seeking materials as they seek post-graduation placement.

HIST 6139 Practicum in Exhibit and Program Development: 3 semester hours

Prerequisites: Consent of the instructor and graduate standing. Development of exhibits and related education programs. Students work as teams with museum professionals to develop and implement an exhibit concept that integrates design, education, and marketing from the onset. Methods in planning, flow charting, budgeting, team dynamics and related skills.

HIST 6142 Readings in U.S. History: 3-5 semester hours

Prerequisite: Graduate Standing. Directed readings and writing in selected topics and areas in United States History.

HIST 6143 Readings in World History: 3-5 semester hours

Prerequisite: Graduate Standing. Directed readings and writing on selected topics and areas in World History.

HIST 6145 Topics in Environmental History: 3-5 semester hours

Prerequisite: Graduate standing. This course is an interdisciplinary examination of the interactions people have had with the land and sea, the biophysical environment, over time. Satisfies the elective requirement outside the Biology Department for the Tropical Biology and Conservation Graduate Certificate Program. May be repeated provided the topic is different.

HIST 6146 Topics in Public History: 3 semester hours

Prerequisites: Consent of Museums, Heritage, and Public History Director. This course provides a focused engagement with topics relevant to the field of Public History. It will cover scholarly literature, applied work, professional debates, and incorporate project-based learning and professional reflective practices. This course may be repeated for credit with the consent of the instructor.

HIST 6152 Directed Readings in U.S. History: 1-3 semester hours

Prerequisites: Consent of a member of the graduate faculty. Directed readings and research at the graduate level.

HIST 6153 Directed Readings in World History: 1-3 semester hours

Prerequisites: Consent of a member of the graduate faculty. Directed readings and research at the graduate level.

HIST 6490 Archival Practice: 3 semester hours

Prerequisites: Graduate standing or consent of the instructor. This course examines issues related to evidence, memory, and power dynamics while defining the archival profession, principles, and core archival knowledge guiding professional practice. It explores the archival profession through original research centered on the social responsibilities of archivists.

HIST 6491 Appraisal and Archival Systems: 3 semester hours

Prerequisites: Graduate Standing or consent of the instructor. The course explores the core archival activity of appraisal through discussion of appraisal theory, documentation strategies, and microappraisal applications. Students learn strategies for collection preservation and access using ArchiveSpace, and relate the records continuum and lifecycle theories to the archival mission.

HIST 6492 Data Records and Management: 3 semester hours

Prerequisites: Graduate standing. This course allows students to examine societal record keeping and professional work to identify, manage, preserve, and provide multimedia records access for evidential, legal, leisure, and informational purposes. Students also study trust and transparency in records and apply archival ethics to digital archiving practice through project-based learning.

Anthropology

Courses

ANTHRO 1005 Introduction to Human Evolution: 4 semester hours

In this course, students apply evolutionary theory to analyze the biological and cultural evidence for human evolution and modern human biological variation from 65 million years ago to the present. Topics include cell biology, population genetics, the primate order, and the primate/hominin fossil records. In addition to 3 hours of lecture, 1 hour per week is spent in lab analyzing UMSL's primate and hominin cast collection. This course satisfies the Mathematics and Life/Natural Sciences General Education Explore Area.

ANTHRO 1011 Introduction to Cultural Anthropology (MOTR ANTH 201): 3 semester hours

Cultural anthropology is the study of human beings as creatures and creators of society. This course is an introduction to that study which aims to demonstrate how the basic concepts and techniques developed by cultural anthropologists help us to understand societies of various degrees of complexity, including our own. We will consider topics such as language, kinship, gender, ethnicity, economics, politics, religion, and social change in a broad comparative framework. Major goals are an increased awareness of the social and cultural dimensions of human experience, the diversity and flexibility of human cultures, and processes of intercultural communication and conflict. This course satisfies the Cultural Diversity requirement.

ANTHRO 1019 Introduction to Archaeology: 3 semester hours

Archaeology is a subfield of anthropology that studies past human societies from their material remains. Explores the development of archaeology as a scientific discipline. Archaeological methods and theories will be explained using case studies from the continents of Africa, Asia, Australia, Europe and the Americas. This course satisfies the Cultural Diversity requirement.

ANTHRO 1021 The Body in Culture: 3 semester hours

Same as HIST 1021. This course will compare uses of the body as a social signifier in Western and non-Western cultures. It will explore how culture shapes the images, uses and meanings of the human body. It concentrates on different historical and beliefs in five areas: how the body works; sex and gender; eating manners and food; pain and punishment; beauty and bodily mutilation. This course satisfies the Cultural Diversity requirement.

ANTHRO 1025 World Cultures: 3 semester hours

An ethnographic survey of the major culture areas of the world (Africa, North and South America, Europe and Oceania). This course satisfies the Cultural Diversity requirement.

ANTHRO 1030 Democracy and War: 3 semester hours

Using the world's first democracy in ancient Greece as a case study, this course will address questions about the origins of democracy, the key elements of a successful democratic government, the mechanisms by which democratic and non-democratic states go to war, the manner in which they cope with war and the psychological effects of war on warriors and civilian populations that will help us learn how our own democracy works and affects our lives.

ANTHRO 1033 World Archaeology: 3 semester hours

Discusses some of the greatest discoveries in archaeology from prehistoric cultures to ancient civilizations of Africa, Asia, Australia, Europe and the Americas. Archaeological examples may include early human origins at Olduvai Gorge in Tanzania, the pyramids of ancient Egypt, the Maya and Aztec of Mexico, the rise of civilization in Mesopotamia, England's Stonehenge, the Roman city of Pompeii, upper Paleolithic cave paintings in France and Spain, and American Indian pueblos of the Southwest. This introductory course is designed for non-anthropology majors, or for those who are considering the major. This course satisfies the Cultural Diversity requirement.

ANTHRO 1034 Introduction to Ancient Egypt and Its Civilization: 3 semester hours

Same as HIST 1034. This course will survey ancient Egyptian history and culture from predynastic times to Greco-Roman rule, roughly 3000 BCE to 30 BCE. Students will discuss archaeological sites, mummification, religion, architecture, texts, and more. Through comparing ancient Egyptian culture with our own, students will explore what has changed in the world and what has endured for millennia.

ANTHRO 1037 The Wonders of Greece: Introduction to Greek History and Culture: 3 semester hours

Same as HIST 1037. Our democracy and culture have been heavily influenced by Greek civilization. This course will introduce students to the culture and civilization of Greece in order to provide a better understanding of our own society. The course will cover the political and military history, art, literature, philosophy, and science of Greece from prehistoric to modern times, with special emphasis on Greek civilization's enduring democratic and cultural ideals. The course will include screening of films and use of online resources.

ANTHRO 1041 Sex and Gender Across Cultures: 3 semester hours

Same as HIST 1040. This course considers womanhood, manhood, third genders, and sexuality in a broad cross-cultural perspective. It examines gender roles and sexuality within the broader cultural contexts of ritual and symbolism, family, marriage and kinship, economy, politics, and public life. This course will help students understand the cultural logics that separate females, males, and sometimes third genders into different groups in different societies. It also satisfies the Cultural Diversity Requirement.

ANTHRO 1091 Introductory Topics in Anthropology: 3 semester hours

This course features special and current topics at the introductory level in the areas of social, cultural and physical anthropology and archaeology. The course examines the basic concepts and provides an understanding of the development of new trends and areas of study in the field of Anthropology. Topics will focus on the comparative study of non-Western cultures such as ecological practices in tribal societies; religious practices in prehistoric cultures; the roles of women across cultures; etc. Topics may vary and the course may be repeated provided topic is different. This course satisfies the Cultural Diversity requirement.

ANTHRO 1095 Brief Overview of the Four Fields of Anthropology: 1 semester hour

Through the use of videos, readings, and the online course management system, this course provides a brief overview of the four traditional fields of anthropology: biological, archaeological, cultural, and linguistic anthropology. This course is designed for video instruction and offers minimal direct interaction with the instructor.

ANTHRO 1271 Food and Drink: Anthropological Perspective: 3 semester hours

This course explores the social and cultural aspects of foods and drinks. Topics may include the origins of food production; the evolution of diets, foods, and production systems around the world; the interrelationships between food and identity, gender, race, and class; food and globalization; food politics and food justice movements; water scarcity; and the push for a sustainable future. This course satisfies the Cultural Diversity requirement.

ANTHRO 2100 Languages and World View: 3 semester hours

Same as FGN LANG 2100 and SOC 2200. This course investigates the extent to which linguistic and cultural background inform our understanding of the world. Experts on a variety of major Western and non-Western languages will introduce students to differences in ideas about time, space, human relationships, and other issues based on language. The course will also analyze common cultural misunderstandings among native speakers of English and speakers of other languages.

ANTHRO 2104 Medicine in Culture and History: 3 semester hours

Same as HIST 2104. In this course, students will explore the diverse beliefs and practices related to anatomy, disease, sexual reproduction, gender, sport, and food. Western biomedicine will be compared with traditional Chinese medicine and other non-Western traditions such as shamanic, Native American, Tibetan, and Ayurvedic systems. The clash between traditional and modern medical systems will also be examined. This course satisfies the Cultural Diversity Requirement.

ANTHRO 2106 Past, Present, and Future of Pandemics: 3 semester hours

This course focuses on anthropological, archaeological, and historical perspectives on the impact of infectious disease epidemics on culture and society through history and across cultures. Ancient and medieval examples may include Egypt, Greece, Byzantium, and China, including the 14th century Black Death. Examples from the modern era may include the destruction of Native American populations by European contact, the 1918 Spanish flu, the 2003 SARS pandemic, and the 2020 COVID-19 pandemic. This course satisfies the Cultural Diversity requirement.

ANTHRO 2109 Archaeological Field School: 3-6 semester hours

Prerequisites: Consent of instructor. Introduction to field methods in archaeology and to the techniques of recording, storing, analyzing, and reporting archaeological findings. Experience is gained through participation in a field research project including excavation and survey projects. Emphasis is placed upon research design and implementation and upon the use of archaeological data in describing and explaining human behavior.

ANTHRO 2117 Greek History and Culture: 3 semester hours

Same as HIST 2117. Greek civilization has had a deep impact on contemporary society in art; social; political; and economic organization; philosophy; law; medicine; and science. This course covers major aspects of Greek history and culture from antiquity to the present. It considers the major political and military events of Greek history, as well as important aspects of Greek culture, including sports and the history of the Olympic Games, literature, philosophy, and mythology.

ANTHRO 2120 Native Peoples of North America: 3 semester hours

A survey of Native Peoples of North America including the prehistory, ethnographic and linguistic groupings, social organization, and cultural systems of these cultures.

ANTHRO 2124 Introduction to Contemporary African Cultures: 3 semester hours

This introductory course focuses on multiple representations within contemporary African cultures and societies. Students have an opportunity to study and learn about African cultural expressions in belief systems, gender constructions, nationality and ethnicity, socioeconomic class systems, politics, environmental challenges, and cultural adaptations and change. This course satisfies the Cultural Diversity requirement.

ANTHRO 2134 Archaeology of The Inca, Aztec, and Maya: 3 semester hours

Provides an overview of human social and cultural developments in Mesoamerica and Andean South America from the first settlements over 20,000 years ago to the Spanish conquest. Focuses on events leading to and including the establishment of Classic Mayan and Aztec societies, and discusses changes that led to what was perhaps the largest nation on earth for its time, the Inca. This course satisfies the Cultural Diversity requirement.

ANTHRO 2150 Zombies, Vampires, and Monsters: The Supernatural in Popular Culture: 3 semester hours

Beliefs in the unseen world are universal. Zombies, vampires, and monsters are all elements of the supernatural in popular culture that we can analyze to discover deeper meanings about what it means to be human. This course will also cover magic, witchcraft, ghosts, possession, exorcism, and other beliefs and practices that reveal the views that humans have about their place in the world. This course will use anthropological concepts to make the familiar strange, and the strange familiar.

ANTHRO 2191 Special Topics in Non-Western Culture: 3 semester hours

This course focuses on a specific non-western culture, or geographically related groups of cultures. Ethnographic and/or archaeological cultures are chosen and their ecological economic, social, religious, cosmological, political, ethnic, linguistic and other cultural domains are examined. Students are exposed to basic concepts and knowledge for understanding diverse cultures in their historical and/or contemporary contexts of development and relationship. Topics will vary. This course satisfies Cultural Diversity Requirement.

ANTHRO 2192 Anthropological Perspectives on Western Culture: 3 semester hours

This course focuses on a specific Western culture or geographically-related group of cultures utilizing ethnographic and/or archaeological sources. Ecological, economic, social, political, ethnic, religious, linguistic and cultural domains will be examined. Students are exposed to basic anthropological concepts for understanding diverse cultures in their historical and/or contemporary contexts. Topics will vary.

ANTHRO 2212 Greek Myths and Monuments: 3 semester hours

Same as ART HS 2212 and HIST 2212. This course provides an overview of Greek myths and legends, as well as their reception in architecture, the visual arts, and literature. Particular emphasis will be given to: 1) the theology and the creation myths of the Greeks and how these relate to the Bible; 2) heroic myths from the Trojan War to Atlantis, and their historicity; 3) famous monuments, works of art, and texts from Greek and world literature, that advance our understanding of Greek myths and the culture that created them.

ANTHRO 2420 Maiko, Maids, and Masako: Women in Japanese Cultural History: 3 semester hours

Same as HIST 2420. This course offers perspectives on famous Japanese women who have captured the public eye at various historical junctures. Students will learn to critically assess representations of these mythological, religious, occupational, and subcultural figures, as well as their linkage to notions of nationhood and modernity. This course satisfies the Cultural Diversity requirement.

ANTHRO 3209 Forensic Anthropology: 4 semester hours

Same as CRIMIN 3209. Prerequisites: ANTHRO 1005, or BIOL 1102, or junior standing, or consent of instructor. Students learn basic dental and skeletal anatomy and the methods used by biological anthropologists and archaeologists to collect and analyze human skeletal remains, including how to determine age and sex of skeletal remains, identify ethnic markers, determine stature and handedness, and identify the presence of trauma and/or pathology. Also covers the role of the forensic anthropologist in crime scene investigations and human rights issues. In the weekly lab section students will have an opportunity for hands-on application of techniques to analyze skeletal remains.

ANTHRO 3214 Writing Systems of the World: 3 semester hours

Same as HIST 3214. This course studies the writing systems from around the world leads to appreciation for one of humankind's most important technological inventions. Students will explore the origins and development of writing systems over time, the linguistic classification of writing, and the transmission of writing across languages and cultures. This course satisfies the Cultural Diversity requirement.

ANTHRO 3218 Visual and Material Culture of Japan: 3 semester hours

Same as HIST 3218. This course offers students the opportunity to research Japanese visual genres and material artifacts, from the iconography of Buddhism and fifteenth century pottery to postwar political cartoons, advertising posters, and etiquette comics. Students will discover how artifacts and images provide a means for communicating cultural meaning, while also reflecting aesthetics, humor, and cultural norms. This course satisfies the Cultural Diversity requirement.

ANTHRO 3220 Quantitative Data Analysis in Social Science Research: 3 semester hours

Same as SOC 3220. Prerequisites: MATH 1020. This course examines issues and techniques of statistical analysis relevant to quantitative sociological research, such as elementary probability, measurements of central tendency and dispersion, measures of relationships including linear regression and correlation, inferential and nonparametric statistics. The course includes an introduction to computer-based statistical analysis.

ANTHRO 3235 Women in Sub-Saharan Africa: A Contemporary Perspective: 3 semester hours

Prerequisites: ANTHRO 1011, or introductory course in another social science, or consent of instructor. Examines important traditional concerns of anthropologists such as the nature of kinship obligation and privilege; gender as a basis for the division of labor; social organization for formal and informal networks; and ritual and ceremony. In addition we look closely at the changing role of African women, as related by African women testing the very limits of what is "socially and culturally acceptable." The roles women continue to play in politics, comprehensive development (i.e. cultural and economic), and evolving social structures are reviewed to gain an understanding of the historical and contemporary mandates for their social action. This course satisfies the Cultural Diversity requirement.

ANTHRO 3243 Marriage, Family, and Kinship: 3 semester hours

Same as SOC 3243 and GS 3243. Prerequisites: ANTHRO 1019, SOC 1010, or consent of the instructor. This course will examine the construction of kinship systems, marriages, families and other forms of intimate relationships from anthropological and sociological perspectives. The cross-cultural structure of this class will incorporate global case studies, including U.S. and European marriage and family structures. Students will have the opportunity to explore topics including love, dating, cohabitation, kinship calculation, alternative lifestyles, and divorce.

ANTHRO 3246 Medicine and Disease in the Ancient World: 3 semester hours

Prerequisites: ANTHRO 1005 or consent of the instructor. This course explores medicine and disease through case studies from civilizations of the ancient world such as Egypt, Greece, and Peru. Students will discuss how these cultures conceptualized disease, and, in turn, how they contended with illness. This course addresses different ways of identifying disease through medical texts, art, and human remains.

ANTHRO 3255 Oral History and Urban Culture in St. Louis: 3 semester hours

Prerequisites: ANTHRO 1011 or instructor's consent. This course involves students in background research and active fieldwork in urban anthropology within the metropolitan area. The focus will be on learning and applying oral history techniques in the city of St. Louis and its neighborhood. They will learn fieldwork methodologies and how to conduct social, cultural, and historical research in preparation for fieldwork. This includes learning to research, conduct, and process interviews. They will also learn to work in teams to construct a group project to be presented to the class.

ANTHRO 3290 Advanced Topics in Archaeology: 3 semester hours

Prerequisites: ANTHRO 1019, or consent of instructor. Selected topics in archeology with a strong theoretical and methodological approach. Requires substantial reading and writing. May be repeated with consent of department.

ANTHRO 3291 Current Issues in Anthropology: 3 semester hours

Prerequisites: ANTHRO 1011, or introductory course in another social science, or consent of instructor. Selected topics in social, cultural and physical anthropology, with emphasis on current issues and trends in the field of anthropology. May be repeated provided topic is different.

ANTHRO 4000 Ethnographic Field Research Methods: 3 semester hours

Prerequisites: ANTHRO 1011, SOC 1010, or consent of instructor. Ethnographic field research is the basis of cultural anthropological inquiry. This course emphasizes hands-on training in the collection and analysis of ethnographic data, including participant observation, taking and managing field notes, key informant interviewing, content analysis and the preparation of ethnographic field reports.

ANTHRO 4005 Special Research Methods in Cultural Anthropology: 1-3 semester hours

Prerequisites: ANTHRO 1011 or consent of instructor. Advanced instruction in specialized technical and analytical skills and methods used to conduct research in cultural anthropology and/or linguistic anthropology. May be repeated provided the topic is different.

ANTHRO 4021 Anthropology of Current World Issues: 3 semester hours

Prerequisites: ANTHRO 1011. This course enhances your understanding of world issues by using an anthropological lens. Students will learn about human adaptations and rationalities, and the way in which anthropology can shed new perspectives on current world issues including ethics, food and water crises, and racial, ethnic, and gender disparities.

ANTHRO 4200 Field Methods in Biological Anthropology: 3 semester hours

Prerequisites: ANTHRO 1005 or consent of instructor. Course material is based on human skeletal biology and bioarchaeology. The course focuses on 1) training a biological anthropologist; 2) bibliographic research; 3) research methods including skeletal pathology, geographic morphological variants, and developmental changes; 4) giving academic presentations and writing research reports. Students are required to conduct self-directed research on human skeletal remains.

ANTHRO 4205 Special Research Methods in Biological Anthropology: 1-3 semester hours

Prerequisites: ANTHRO 1005 or consent of instructor. Advanced instruction in specialized technical and analytical skills and methods used to conduct research in biological anthropology. May be repeated provided the topic is different.

ANTHRO 4307 Community Based Research in Anthropology: 3 semester hours

Prerequisites: Junior standing, ANTHRO 1011, and completion of junior-level writing requirement. This is an advanced course in qualitative/ethnographic modes of inquiry, building on research and analytical skills learned in previous courses. Some quantitative methods may supplement the research when appropriate. Students experience the process of discovery, representation, presentation, and justification based on fieldwork and/or archival research. The focus is on applying anthropological knowledge to practical issues faced by communities and institutions in the St. Louis area.

ANTHRO 4310 Laboratory Methods in Archaeology: 3 semester hours

Prerequisites: ANTHRO 1019, SOC 3220 or equivalent, or consent of instructor. An advanced laboratory analysis and curation methods class. The emphases are 1) mastery of general lab methods and procedures, and 2) development of independent analysis skills in one or more specialty areas such as lithics, ceramics, computer graphics, statistical methods, paleoethnobotany, experimental analysis, and soils.

ANTHRO 4314 The Archaeology of Death: 4 semester hours

Prerequisites: Junior standing. This course will survey some of the different ways people have buried their dead over time. Using archaeology as their foundation, students will explore what burials can tell us about culture and society. During field trips to local cemeteries, they will study current perceptions of death and future archaeological records. Students will conduct demographic analysis of both local and global cemeteries to help them understand the relationships between death, burial, and aging. In the weekly lab section students will learn digital analysis techniques and apply those techniques to data collected.

ANTHRO 4315 Anthropology Past, Present, and Future: 3 semester hours

Prerequisites: Senior standing, one of the following method courses: ANTHRO 4000, ANTHRO 4100, ANTHRO 4200, and consent of the instructor. The capstone course for anthropology majors, ideally to be taken in the final semester of the senior year. In this course, students will 1) explore where anthropology has come from and where it may be going; 2) discuss a series of topics that can be addressed from the perspectives of different subfields by examining different theoretical positions, methods, and types of data; 3) learn to apply the knowledge and skills gained in previous courses to their future, professional careers. Final senior exit projects will be presented orally to Anthropology faculty members.

ANTHRO 4316 Senior Research Project: 3 semester hours

Prerequisites: Senior standing and consent of the instructor. For undergraduates who have excelled in their coursework and wish to conduct original research. Students will work with a faculty member with expertise relevant to the research topic. This course offers students the opportunity to build upon strong research, analytic and writing skills. Completion of this course will result in the writing of a thesis, publication of an article, presentation at a professional meeting, or other work that exemplifies high achievement.

ANTHRO 4325 Internship in Cultural Anthropology: 1-3 semester hours

Prerequisite: Recommendation of major advisor. Students will be assigned an internship on recommendation of their advisor. Internships will consist of a period of study, observation, and training in an appropriate public or private institution, business, or government office. Cultural Anthropology internships are aimed at providing students with opportunities to learn to apply their knowledge of social and cultural process and diversity to practical situations in the market place of ideas, goods, and services. Specific placements will be selected to match student's interests and career goals.

ANTHRO 4326 Internship in Archaeology: 1-6 semester hours

Prerequisite: Recommendation of major advisor. Students will be assigned an internship on recommendation of their advisor. Internships will consist of a period of study, observation, and training in an appropriate public or private institution, business, or government office. Archaeology internships are aimed at providing students with opportunities to work with professional archaeologists in public and private research environments including laboratories and curation centers. Specific placements will be selected to match student's interests and career goals.

ANTHRO 4328 Internship in Museum Studies: 1-3 semester hours

Prerequisite: Recommendation of major advisor. Students will be assigned an internship on recommendation of their advisor. Internships will consist of a period of study, observation, and training in an appropriate museum or other exhibition oriented institution. Museum internships are aimed at providing students with opportunities to work with professional museologists to learn skills relating to areas such as exhibition, curation, public programming, research, and publication. Specific placements will be selected to match student's interests and career goals.

ANTHRO 4329 Internship in Biological Anthropology: 1-3 semester hours

Prerequisite: Recommendation of major advisor. This course is an internship that consists of a period of study, observation and training in an appropriate institution, lab, or research setting related to forensics, primate behavior and biology, human genetics, population, environmental policy, and other domains related to biological anthropology. Students will be assigned an internship on recommendation of their advisor. This course may be repeated for a maximum of 6 credit hours.

ANTHRO 4350 Special Study: 1-3 semester hours

Prerequisite: Consent of instructor. Independent study through readings, reports, or field research. No student may take more than a cumulative total of 6 hours of Special Study.

Interdisciplinary Programs

The university offers a number of interdisciplinary programs and courses. These programs combine course offerings from several departments so the subject is examined from a multidisciplinary approach. While most persons who earn certificates do so in the process of completing their undergraduate degree, non-degree seeking students may complete a certificate. Below are links to the descriptions of these interdisciplinary offerings:

Degrees

Actuarial Science BS (p. 392)

Biochemistry and Biotechnology BS (p. 404)

Cybersecurity BS

- Computer Science Emphasis (p. 500)
- Information Systems Emphasis (p. 502)

Data Science and Analysis BS

Emphasis Areas

- Biology (p. 510)
- Computer Science (p. 511)
- Economics (p. 512)
- Mathematics (p. 513)
- Social Science (p. 514)
- Supply Chain and Analytics (p. 515)

Interdisciplinary Studies BIS (p. 598)

Liberal Studies BLS (p. 605)

Organizational Leadership BA

Emphasis Areas

- Community Studies Emphasis (p. 675)
- Computing and Information Security Emphasis (p. 676)
- Corporate Communication Emphasis (p. 676)
- Criminal Justice Emphasis (p. 677)
- Executive Leadership Emphasis (p. 678)
- Health Communication Emphasis (p. 678)
- Individualized Emphasis (p. 679)
- Operational Excellence Emphasis (p. 679)
- Social Justice Emphasis (p. 680)

Certificates

Child Advocacy Studies Undergraduate Certificate (p. 472)

Cybersecurity Undergraduate Certificate (p. 509)

Entrepreneurship Undergraduate Certificate (p. 572)

Gender Studies Undergraduate Certificate (p. 577)

Geographic Information Systems Undergraduate Certificate (p. 577)

Minors

American Studies Minor (p. 396)

Child Advocacy Studies Minor (p. 472)

LatinX Studies Minor (p. 604)

Urban Studies Minor (p. 763)

Environmental Studies Minor (p. 572)

Courses

INTDSC 1000 Special Topics: 3 semester hours

Topics may vary from semester to semester, however, they will all focus in the cultural heritage of Great Britain with material taken from art, theater, literature, and selected topics in philosophy.

INTDSC 1003 University Studies: 1 semester hour

This course, required of all new freshmen in the College of Arts and Sciences, is designed to assist students in making the transition to the university experience and to UMSL by giving students the knowledge and tools needed to succeed as a scholar. The course will also familiarize students with the relationship between their education and their career and personal goals, and will assist in developing positive connections with faculty, staff, and peers at UMSL. Students will learn about faculty expectations, support services, and student life, as well as academic disciplines. The course counts toward the 120 credit hours needed for graduation.

INTDSC 1010 Information Research and Student Success: 1 semester hour

Students will use online library resources to learn search techniques for different types of information. Course content will be delivered through interactive, online tutorials and short, informative videos. Students will develop an understanding of academic research that will set a foundation for critical thinking skills. The course will help students in practical ways, such as for researching term papers, but also in more abstract ways, such as exposing them to the world of scholarship and academic knowledge.

INTDSC 1011 Introduction to Disability Studies: 3 semester hours

This course introduces the theory and scholarship of the interdisciplinary field of Disability Studies. Disability will be addressed as a matter of identity, culture, language, writing, power, education, politics, literature, art, and more.

INTDSC 1012 History of Disability: 3 semester hours

This course explores the history of disability from various perspectives, moving from antiquity to present day. Perspectives will include: the individual, society at large, the family, sexuality and disability, educational systems, and legal and ethical issues. Students will explore how these perspectives can drive public policy and service delivery systems. Students will gain knowledge and a foundational understanding of current legislation, Independent Living Philosophy, advocacy, empowerment, and self-empowerment that will enable them to create an organized and efficient independent living plan.

INTDSC 1030 Language and Communicative Arts Across the Disciplines: 3 semester hours

This course is designed to advance the academic skills of university-level students. This course consists of listening to academic lectures across the disciplines; reading texts and articles to supplement lectures; writing summaries, essays and responses to exam questions; understanding and editing grammar and sentence structure; phonetics and word stress patterns; presentation skills; and advancing skills in note-taking, critical thinking, and comprehension of advanced college-level vocabulary of various fields of study.

INTDSC 1234 Science Literacy: 3 semester hours

This course introduces students to terminology, concepts, and methods in the sciences. It will help them enhance their scientific literacy and creativity, so that they can communicate with confidence about how science pertains to their daily lives. Students will also explore how science has influenced American history and society and how it could impact our future.

INTDSC 1500 Prior Learning Assessment Portfolio Preparation: 1 semester hour

Prerequisites: Consent of the faculty coordinator for the BA in Organizational Leadership. This course is designed to help students identify areas of learning they may want to have evaluated for college-level equivalency. It will also guide students through the preparation and compilation of components that will be required for the evaluation of a portfolio of prior learning. This course is required for students to apply for Prior Learning Assessment (PLA) via portfolio review.

INTDSC 1700 Major and Career Exploration: 1 semester hour

This course is designed to provide students with the opportunity to learn and explore various majors and career paths within a structured setting. Both informative and interactive, the course will provide students with the opportunity to learn broadly about college majors and their relationship to the 'world of work,' while also researching specifically the options they are interested in pursuing. The course seeks to assist students with answering two questions, "What do I want to study?" and "How do I want to make a life for myself (and family)?" Components of the course will also educate students about the current and projected employment market, and how to further research pertinent career information.

INTDSC 1999 Big History: From the Big Bang to the Present: 3 semester hours

Same as HIST 1999. An introduction to the humanities, social science, and science disciplines through a sweeping overview of natural and human history from the Big Bang to the present. Course will include lectures from faculty in various Arts and Sciences units, films, and group discussions.

INTDSC 2001 Introduction to Organizational Leadership: 3 semester hours

Same as SOC 2001. This course surveys current research and case studies of leadership with a strong focus on self-awareness and introspection as drivers of organizational leadership success. It invites students to consider leadership as a process more than a product.

INTDSC 3010 Peer Mentoring: 1-3 semester hours

Prerequisites: Consent of instructor. The objective of this interdisciplinary course is to prepare and support undergraduate students working across campus as learning assistants, tutors, peer mentors, student leaders, etc. The course will support the development of general pedagogical knowledge of active learning, leadership and facilitation skills, and effective communication and listening skills, that they will use to facilitate learning in settings where students are working collaboratively, reviewing course content, or receiving supplemental instruction to guide their success. This course may be repeated for up to 6 credit hours.

INTDSC 4001 Organizational Leadership Capstone: 3 semester hours

Same as SOC 4001. Prerequisites: SOC 2001 or INTDSC 2001. This course will help students achieve and demonstrate proficiency in organizational leadership. Students will apply insights gained from previous coursework into individual and group projects that identify and address real-world leadership challenges.

Language and Cultural Studies

General Information

Degrees and Areas of Concentration

Language and Cultural Studies offers courses in French, Japanese, and Spanish, as well as a Dual Language Professional option, leading to the B.A. in Modern Language degree, and an emphasis in each of these languages for students seeking the B.S. Ed. in Secondary Education as well as the B.A. in Modern Language with Master's Level Coursework for Secondary Teacher Certification. In addition, the program offers courses in English for Academic Purposes.

Minors may also be earned in the department. For details, see the specific requirements which appear later in this section.

Study Abroad

Language students who have been at the University of Missouri-St. Louis at least one semester and have studied the language for at least one year may receive credits for formal study abroad. Students must present a list of language course descriptions from the institution abroad to receive prior consent of the department, and must present a transcript for evaluation upon return to receive credit for those courses. Exchange programs are available with many universities in foreign countries. For information, please contact the Study Abroad Office at <http://www.umsl.edu/services/abroad/>.

Alumni Scholarship

Qualified junior and senior language majors may apply for the Modern Language Alumni Scholarship, which is renewable each year on a competitive basis. For information, please contact Student Financial Aid at <http://www.umsl.edu/services/finaid/>.

Marcus Allen Memorial Scholarship

Qualified students of French may apply for the Marcus Allen Memorial Scholarship which is awarded on a competitive basis and must be used within one semester of the award. For information, please contact Student Financial Aid.

Baldini Family Scholarship

Qualified full-time students pursuing a Modern Language degree with teacher certification may apply for this scholarship which is awarded on a competitive basis and must be used within one semester of the award. For information, please contact Student Financial Aid.

Community College Scholarship

Qualified community college students may apply for the Modern Language Community College Scholarship to be used for educational fees toward enrollment in third semester or higher courses in French, Japanese, or Spanish. This scholarship must be used within one semester of the award. For information, please contact Student Financial Aid.

Allen B. and Helen S. Shopmaker Spanish Scholarship

Qualified full-time students pursuing a Modern Language degree with a concentration in Spanish may apply for this scholarship. For information, please contact Student Financial Aid.

Departmental Honors

Candidates for departmental honors in Modern Languages must meet the following requirements:

1. Achieve a GPA of 3.5 in the major for all hours attempted beyond the first two semesters. (Language Courses 1001 and 1002).
2. Maintain an overall GPA of 3.0.

Degrees

Modern Language BA, Dual Language Emphasis Professional (p. 627)

Modern Language BA, Japanese Emphasis (p. 632)

Modern Language BA, Spanish Emphasis (p. 634)

Modern Language BA, French Emphasis (p. 629)

Minors

French Minor (p. 575)

Japanese Minor (p. 602)

Spanish Minor (p. 748)

Modern Languages Minor (p. 637)

Courses

Courses offered by the department can be found at the links below:

American Sign Language (ASL)

English for Academic Purposes (EAP)

Foreign Language - Other (FGN LANG)

French (FRENCH)

Japanese (JAPAN)

Spanish (SPANISH)

Chinese

Courses

CHINESE 1001 Chinese I: 5 semester hours

Emphasis is placed upon the understanding, speaking, reading, and writing of Mandarin Chinese and upon the acquisition of the fundamentals of grammar and syntax.

CHINESE 1002 Chinese II: 5 semester hours

Prerequisites: Chinese I or equivalent. Emphasis is placed upon the understanding, speaking, reading, and writing of Mandarin Chinese. Continuation of the acquisition of the fundamentals of grammar and syntax.

CHINESE 2101 Intermediate Chinese I: 5 semester hours

Prerequisites: CHINESE 1002 or equivalent. Grammar review and continued development of language skills.

CHINESE 2190 Special Readings: 1-6 semester hours

Prerequisites: CHINESE 2102 or consent of the department. Independent study through readings, reports, and conferences.

CHINESE 2199 Special Topics: Language Immersion: Chinese: 1 semester hour

Prerequisites: CHINESE 2101 or concurrent enrollment in CHINESE 2101. Faculty-led experience designed specifically to enhance acquisition of the target language and culture. This course may be repeated for credit if the topics vary.

Foreign Language-Other

Courses

FGN LANG 1199 Special Topics: Language Immersion: 1-5 semester hours

Prerequisites: Consent of department chair. Study abroad experience designed specifically to enhance acquisition of the target language and culture. This course may be repeated for credit provided that the topic is different.

FGN LANG 1200 Languages and Identities: 3 semester hours

This course examines how language use impacts and reflects various aspects of human identity. Course materials include contemporary readings, videos, and case studies on language and identity in a variety of Western and non-Western cultures. This course fulfills the Cultural Diversity Requirement.

FGN LANG 2100 Languages and World View: 3 semester hours

Same as ANTHRO 2100 and SOC 2200. This course investigates the extent to which linguistic and cultural background inform our understanding of the world. Experts on a variety of major Western and non-Western languages will introduce students to differences in ideas about time, space, human relationships, and other issues based on language. The course will also analyze common cultural misunderstandings among native speakers of English and speakers of other languages.

FGN LANG 2110 Parlez-vous French Cinéma?: 3 semester hours

This discussion-based course focuses on diverse genres of contemporary French cinema. Through the lens of film, students will discover French culture by examining historical and social issues that have shaped French society. This course is taught in English, and films will be screened with English subtitles.

FGN LANG 2192 Service Learning in Foreign Languages: 1-3 semester hours

Prerequisites: Permission of course instructor and concurrent enrollment in a Foreign Language course (English as a Second Language, French, Japanese, or Spanish) at the 2000-level or higher. Taken concurrently with a qualifying foreign language course, students will participate in a community service experience that is academically integrated into the students' course of study. Community service in a local or international community organization, as approved by the course instructor, is required. Determination of the type of community service to be conducted and the number of hours required will be made in consultation with the instructor. May be repeated for a maximum of 6 credit hours.

FGN LANG 2199 Special Topics: Language Immersion: 1-5 semester hours

Prerequisites: Consent of department chair. Study abroad experience designed specifically to enhance acquisition of the target language and culture. This course may be repeated for credit provided that the topic is different.

FGN LANG 2294 Foreign Language Careers for the Global Market: 1 semester hour

This course introduces students to a range of careers in which knowledge of foreign languages and cross-cultural awareness are an asset. Through interactive workshops and guest presentations, students explore how to put their language skills to use in various fields, such as business, government service, education, STEM, travel, healthcare, and translation. Students engage in activities that help them to identify their professional goals and become familiar with internships and opportunities that enhance their marketability both locally and globally.

FGN LANG 2311 Special Topics in Language and Cultural Studies: 3 semester hours

This course investigates special topics related to language within its cultural, historical, and socio-political contexts. It is taught in English and requires no previous foreign language background. The course may be repeated for credit provided the topic is different each time.

FGN LANG 3199 Special Topics: Language Immersion: 1-3 semester hours

Prerequisites: Consent of department chair. Study abroad experience designed specifically to enhance acquisition of the target language and culture. This course may be repeated for credit provided that the topic is different.

FGN LANG 3294 Internship in Languages: 1-3 semester hours

Prerequisites: FGN LANG 2100 plus completion of 2000-level language requirements and consent of Internship Coordinator in Languages. This internship gives students of languages and cultures the opportunity to use their unique and developing skills at an appropriate agency, organization, or business, to gain valuable work experience, and to begin networking with organizations in the St. Louis region and beyond. Students will attend a minimum of three face-to-face meetings with the internship coordinator and write weekly journals and a final report about their experiences. Their course grade will reflect their work at the internship site as well as their written assignments for the course.

FGN LANG 4394 Advanced Internship in Languages: 1-3 semester hours

Prerequisites: FGN LANG 2100 plus completion of at least two 3000-level classes in a language and consent of the Internship Coordinator in Languages. This internship gives students of languages and cultures the opportunity to use their unique and advanced language skills at an appropriate agency, organization, or business in the St. Louis region and beyond. Students will attend a minimum of three face-to-face meetings with their internship coordinator and write weekly journals and a final report about their experiences. Their course grade will reflect their work at the internship site as well as their written assignments for the course.

FGN LANG 4589 Curriculum and Methods of Teaching Foreign Languages: 3 semester hours

Same as SEC ED 4589. This course is a study of the scope and sequence of the foreign language courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. The course emphasizes second language acquisition and socio-cultural theories of learning which undergird the approach, examination and analysis of foreign language teaching practices. Attention is also directed toward learning the techniques and research of the scholar in the field of foreign language. To be taken concurrently with Practicum I, SEC ED 4989.

FGN LANG 5311 Special Topics in Foreign Language Teaching: 3 semester hours

Prerequisite: Consent of the instructor. Designed for in-service foreign language teachers, this course focuses on the study of special topics in the field of foreign language learning with an emphasis on research applications to the improvement of practice. Topics may include technology for FL learning, the teaching of writing in the FL classroom, the teaching of reading in the FL classroom, proficiency-oriented instruction and assessment, second language acquisition for FL teachers, action research in the FL classroom. May be repeated for credit provided the topic is different. May be applied toward the Master's in Secondary Education with an emphasis in FL teaching.

French

Courses

FRENCH 1001 French Language and Culture I (MOTR LANG 101): 5 semester hours

Students will develop communicative skills in French, including listening, speaking, reading, and writing. Introduction to Francophone culture through discussion of readings and visual media. Intended for students with no previous French experience. Students with previous French experience are expected to contact the department for placement advising.

FRENCH 1002 French Language and Culture II (MOTR LANG 102): 5 semester hours

Prerequisite: FRENCH 1001 or equivalent. In this course, students will continue to develop communicative skills in French, including listening, speaking, reading, and writing. It involves continued exploration of Francophone culture through discussion of readings and visual media.

FRENCH 1199 Special Topics: Language Immersion: French: 1-3 semester hours

Prerequisites: FRENCH 1002 or consent of the instructor. This course is a faculty-led experience designed specifically to enhance acquisition of the target language and culture. It may be repeated for credit provided that the topic is different.

FRENCH 2101 French Language and Culture III: 3 semester hours

Prerequisites: FRENCH 1001 and FRENCH 1002 or the equivalent. In this course, students will further develop the four language skills through meaningful communicative interaction. Students will advance their understanding of Francophone culture through discussion of readings and visual media. Students who have successfully completed this course may advance to FRENCH 2170 and FRENCH 2180.

FRENCH 2115A Intensive French: 5 semester hours

Prerequisite: Special consent required. An intensive study of French language and culture. Students will develop communicative skills, including listening, speaking, reading, and writing. Completion of the course with a grade of C- or better will satisfy the foreign language requirement of the B.A. degree. Students who have successfully completed FRENCH 2115A, FRENCH 2115B, and FRENCH 2115C may advance to FRENCH 2170 and FRENCH 2180.

FRENCH 2115B Intensive French: 5 semester hours

Prerequisite: Special consent required. An intensive study of French language and culture. Students will develop communicative skills, including listening, speaking, reading, and writing. Completion of the course with a grade of C- or better will satisfy the foreign language requirement of the B.A. degree. Students who have successfully completed FRENCH 2115A, FRENCH 2115B, and FRENCH 2115C may advance to FRENCH 2170 and FRENCH 2180.

FRENCH 2115C Intensive French: 3 semester hours

Prerequisite: Special consent required. An intensive study of French language and culture. Students will develop communicative skills, including listening, speaking, reading, and writing. Completion of the course with a grade of C- or better will satisfy the foreign language requirement of the B.A. degree. Students who have successfully completed FRENCH 2115A, FRENCH 2115B, and FRENCH 2115C may advance to FRENCH 2170 and FRENCH 2180.

FRENCH 2170 Intermediate French Language and Culture: 3 semester hours

Prerequisites: FRENCH 2101 or equivalent. This course will help students advance in their development of the four language skills through meaningful communicative interaction. Students will further advance their understanding of Francophone culture. This course may be taken concurrently with FRENCH 2180.

FRENCH 2180 Readings in French: 3 semester hours

Prerequisites: FRENCH 2101 or equivalent. This course will introduce students to a variety of literary and non-literary texts in French. This course may be taken concurrently with FRENCH 2170.

FRENCH 2190 Special Readings in French: 1-3 semester hours

Prerequisites: FRENCH 2101 and consent of instructor. This course is an independent study on mutually acceptable topics through readings, reports, and conferences.

FRENCH 2199 Special Topics: Language Immersion: French: 1-3 semester hours

Prerequisites: FRENCH 1002, the equivalent, or consent of instructor. This course is a faculty-led experience designed specifically to enhance acquisition of the target language and culture. It may be repeated for credit up to a total of three times provided that the topic is different.

FRENCH 3199 Special Topics: Language Immersion in French: 1-3 semester hours

Prerequisites: Consent of the instructor. Study abroad experience designed specifically to enhance acquisition of the target language and culture. This course may be repeated for credit provided that the topic is different.

FRENCH 3200 French Grammar in Review: 3 semester hours

Prerequisites: FRENCH 2170 or FRENCH 2180. This course is designed to improve students' linguistic accuracy and ability to communicate clearly through study and practice of forms and structures of the French language. Students will analyze language and structures from a variety of authentic materials from French and Francophone cultures, with an emphasis on writing.

FRENCH 3205 French for Professional Communication: 3 semester hours

Prerequisites: FRENCH 2170 and FRENCH 2180, or consent of the instructor. This course teaches practical applications of French for professional communication, including conventions of correspondence, business etiquette, and travel.

FRENCH 3210 Introduction to French and Francophone Studies: 3 semester hours

Prerequisites: FRENCH 2170 and FRENCH 2180. This course focuses on the acquisition of essential terms and strategies for academic oral and written communication through the exploration of a selection of authentic materials from French and Francophone cultures. Topics may vary, and course may be repeated for credit if topics are different.

FRENCH 3211 Contemporary French Culture: 3 semester hours

Prerequisites: FRENCH 2170 and FRENCH 2180, or consent of the instructor. This course examines aspects of contemporary French culture, including history, geography, education, politics, and gastronomy, studied through a variety of authentic cultural materials.

FRENCH 3280 Introduction to French Literature: 3 semester hours

Prerequisites: FRENCH 2170 and FRENCH 2180. This course is designed to acquaint students with French literature from the Middle Ages through the present.

FRENCH 3290 Special Readings: 1-3 semester hours

Prerequisite: Consent of department. Independent study through readings, reports and conferences.

FRENCH 3301 Introduction to Translation in French: 3 semester hours

Prerequisites: FRENCH 2170 and FRENCH 2180. This course centers on comparative French/English syntax and stylistics. Students will investigate translation techniques and develop skills in translation. Students will work on several translation projects culminating in a portfolio.

FRENCH 3311 Introduction to Special Topics in French Culture: 3 semester hours

Prerequisites: FRENCH 2170 and FRENCH 2180. Selected topics in French or francophone culture taught in French. This course may be repeated once for credit provided that the topic is different.

FRENCH 4310 Advanced French and Francophone Studies: 3 semester hours

Prerequisites: FRENCH 3200 or equivalent. This course is designed to further improve students' acquisition of essential terms and strategies for academic oral and written communication through the analysis of a selection of authentic materials from French and Francophone cultures. Students will learn how to conduct research in French cultural studies. Topics may vary, and course may be repeated for credit if topics are different.

FRENCH 4311 Special Topics in French Culture and Literature: 3 semester hours

Prerequisites: Three French courses at the 3000 level or above. Selected topics in French/Francophone culture and literature. This course may be repeated for credit provided the topic is different each time.

FRENCH 4390 Advanced Independent Study: 1-3 semester hours

Prerequisite: Consent of instructor. Independent study through readings, reports and discussions.

FRENCH 4394 Advanced Internship in French: 1-3 semester hours

Prerequisites: FGN LANG 2100, completion of at least two 3000-level classes in French, and consent of the Internship Coordinator in French. This internship course gives students of French the opportunity to use their unique and advanced language skills at an appropriate agency, organization, or business in the St. Louis region and beyond. This course may be repeated for a maximum of 3 credit hours.

FRENCH 5199 Intensive Advanced Immersion Experience: French: 1-3 semester hours

Prerequisites: In-service teacher of the target language or enrollment in post degree completion program. This course is a faculty-led experience designed specifically to enhance acquisition of the target language and culture. Designed for in-service and pre-service/post-baccalaureate foreign language teachers, this course focuses specifically on enhancing oral proficiency in the target language and enriching cultural knowledge for purposes of classroom language instruction. The course may simulate a study abroad immersion experience or may be taught within the context of a study abroad program. This course may be repeated provided the topic is different for a maximum of 3 credits.

FRENCH 5311 Advanced Topics in French Culture and Literature: 3 semester hours

Prerequisites: Graduate standing or consent of instructor. This course includes selected topics in French/Francophone culture and literature. Students will be expected to conduct an independent research project. It may be repeated for credit provided the topic is different each time.

German

Courses

GERMAN 1001 Beginning Language and Culture German I: 5 semester hours

Introduction for students with little or no knowledge of German. Students will develop listening comprehension, speaking, reading, and writing skills and become familiar with the cultures and history of the German-speaking countries. The course is conducted mainly in German. GERMAN 1001, GERMAN 1002, and GERMAN 2101 together form the introductory German language sequence.

GERMAN 1002 Beginning Language and Culture: German II: 5 semester hours

Prerequisite: GERMAN 1001 or equivalent. Students will continue to develop listening comprehension, speaking, reading, and writing skills and to become familiar with the cultures and history of the German-speaking countries. The course is conducted mainly in German. GERMAN 1001, GERMAN 1002, and GERMAN 2101 together form the introductory German language sequence.

GERMAN 2101 Intermediate Language and Culture: German III: 3 semester hours

Prerequisites: GERMAN 1002 or equivalent. Students will advance their understanding of German-speaking cultures through discussions, readings, and written work. Through meaningful communicative interaction, students will further develop their language skills. The course is conducted mainly in German. GERMAN 1001, GERMAN 1002, and GERMAN 2101 together form the introductory German language sequence. Students who have successfully completed this course may advance to GERMAN 2170 or GERMAN 2180.

GERMAN 2170 Intermediate Practice in Speaking and Writing German: 3 semester hours

Prerequisites: GERMAN 2101 or equivalent. In this course students will strengthen their communication skills and grammar in spoken and written German. Students will work with authentic literary texts, news articles, film, and music. GERMAN 2170 and GERMAN 2180 together form the bridge between the introductory German language sequence (GERMAN 1001, GERMAN 1002, and GERMAN 2101) and the advanced culture and literature courses. The course is conducted in German.

GERMAN 2180 Intermediate Readings in German: 3 semester hours

Prerequisites: GERMAN 2101 or equivalent. In this course students will strengthen their communication skills and grammar in spoken and written German. Students will read and discuss authentic German texts. GERMAN 2170 and GERMAN 2180 together form the bridge between the introductory German language sequence (GERMAN 1001, GERMAN 1002, and GERMAN 2101) and the advanced culture and literature courses. The course is conducted in German.

GERMAN 2190 Intermediate Independent Study: 1-3 semester hours

Prerequisite: GERMAN 2170 and GERMAN 2180, and consent of instructor and department. In consultation with the instructor, students undertake independent work to further develop intermediate German language skills and to deepen their knowledge of culture and history. The course is conducted in German.

GERMAN 2199 Special Topics: Language Immersion: 1 semester hour

Prerequisites: GERMAN 1002. Faculty-led experience designed specifically to enhance acquisition of German language and culture. This course may be repeated for credit if the topics vary. The course is conducted in German.

GERMAN 3202 Introduction to German Film: 3 semester hours

Prerequisite: Two years of college German or equivalent. Viewings and critical analysis of selected films produced in the German language. The course is conducted in German.

GERMAN 3211 Topics in German Culture: 3 semester hours

Prerequisites: Two years of college German or equivalent. Discussion of significant topics in German culture. This course may be repeated for credit if the topics vary. The course is conducted in German, or in English when cross-listed with another department.

GERMAN 3290 Advanced Independent Study I: 1-3 semester hours

Prerequisite: GERMAN 3201, GERMAN 3202, GERMAN 3208, GERMAN 3210, and consent of instructor and department. In consultation with the instructor, students undertake independent work to transition from intermediate to advanced German language skills and to deepen their knowledge of culture and history. The course is conducted in German.

GERMAN 4311 Special Topics in German Culture: 3 semester hours

Prerequisites: At least two 3000 level German courses or consent of instructor and department. Discussion of significant topics in German culture. This course may be repeated for credit if the topics vary. The course is conducted in German, or in English when cross-listed with another department.

GERMAN 4390 Advanced Independent Study II: 1-3 semester hours

Prerequisite: GERMAN 3201, GERMAN 3202, GERMAN 3208, and GERMAN 3210, and consent of instructor and department. In consultation with the instructor, students undertake independent work to further develop advanced German language skills and to deepen their knowledge of culture and history. The course is conducted in German.

GERMAN 4394 Advanced Internship in German: 1-3 semester hours

Prerequisites: FGN LANG 2100, completion of at least two 3000-level classes in German, and consent of the Internship Coordinator in German. This internship course gives students of German the opportunity to use their unique and advanced language skills at an appropriate agency, organization, or business in the St. Louis region and beyond. This course may be repeated for a maximum of 3 credit hours.

Japanese

Courses

JAPAN 1001 Japanese I: 5 semester hours

Emphasis is placed upon the understanding, speaking, and writing of Japanese and upon the acquisition of the fundamentals of grammar and syntax.

JAPAN 1002 Japanese II: 5 semester hours

Prerequisites: JAPAN 1001 or equivalent. Emphasis is placed upon the understanding, speaking, reading, and writing of Japanese. Continuation of the acquisition of the fundamentals of grammar and syntax.

JAPAN 1005 Practicum in East Asian Calligraphy: 1 semester hour

This course is an introduction to the art of calligraphy in East Asia. Emphasis is placed on writing kana (Japanese syllabaries) and kanji (Chinese characters) correctly with a calligraphy brush and ink. Students practice writing basic strokes and characters and create their own calligraphic works.

JAPAN 1011 Anime Nation: Popular Culture in Japan: 3 semester hours

A look at postmodern samurai, preteen ninjas, praying at shrines and other elements of J-pop culture. This online course uses various clips and full-length animated features to introduce and explore topics such as family life, school life, shared values, contemporary social issues, fashion, and metaphysics. Critical texts, essays, and narrated presentations provide background for analysis and appreciation.

JAPAN 2101 Intermediate Japanese I: 5 semester hours

Prerequisite: JAPAN 1002 or equivalent. Students will advance their understanding of Japanese culture through discussions, readings, and written work. Language skills will be further developed through meaningful communicative interaction.

JAPAN 2102 Intermediate Japanese II: 5 semester hours

Prerequisites: JAPAN 2101 or equivalent. Continuation of JAPAN 2101.

JAPAN 2150 Classical Japanese Literature in Translation: 3 semester hours

An exploration of Classical Japanese literary masterpieces and the world from which they arose. All required readings will be in English translation. This course may be repeated for credit with different literary works as a topic.

JAPAN 2170 Kanji: A Radical Approach: 3 semester hours

Prerequisites: JAPAN 2101 or equivalent. This course will systematically introduce the most common radicals and other key components of kanji (Chinese characters). Students will learn how to use radicals to interpret unfamiliar kanji, categorize them, and more efficiently commit them to memory. The principles learned in this course can be used to facilitate students' individual kanji-learning goals, which may include mastery of the 2136 joyo kanji.

JAPAN 2190 Special Readings: 1-3 semester hours

Prerequisites: JAPAN 2101 or consent of the department. This course is an independent study for Japanese through readings, reports, and conferences.

JAPAN 2191 Special Topics in Japanese Culture: 3 semester hours

A topically organized introduction to Japanese culture and society. May be repeated for credit when the topic varies.

JAPAN 3201 Intermediate Japanese III: 4 semester hours

Prerequisites: JAPAN 2102 or equivalent. In this course, students will continue to advance their understanding of Japanese culture through discussions, readings, and written work. Language skills will be further developed through meaningful communicative interaction.

JAPAN 3202 Intermediate Japanese IV: 4 semester hours

Prerequisites: JAPAN 3201 or equivalent. In this course, students will continue to advance their understanding of Japanese culture through discussions, readings and written work. Language skills developed in JAPAN 3201 will be further developed in this course through meaningful communicative interaction.

JAPAN 3210 Japanese Culture and Society: 3 semester hours

This faculty-led study tour enhances acquisition of the target culture and language through guided experiential learning. Pre-departure lectures introduce various aspects of Japanese society and culture, including history, pop culture, and business. In-country activities include follow-up lectures, language study, trips to sites of historical significance, and company and museum visits. The course is conducted in English and is designed for students of various disciplines. This course may be repeated once for credit.

JAPAN 3211 Topics in Japanese Culture: 3 semester hours

Prerequisites: JAPAN 2102, or concurrent enrollment in JAPAN 3201. This course advances communication and presentation skills through discussions of significant topics in Japanese culture. It is conducted in Japanese. This course may be repeated for credit if the topics vary up to three times.

JAPAN 3280 Readings in Japanese: 3 semester hours

Prerequisites: JAPAN 3201 or equivalent, or concurrent enrollment in JAPAN 3202. This course develops language skills through reading and discussion of a variety of literary and non-literary texts in Japanese.

JAPAN 3290 Special Readings: 1-3 semester hours

Prerequisites: JAPAN 2190 or consent of instructor. Independent study through readings, reports and conferences.

JAPAN 4301 Advanced Japanese I: 3 semester hours

Prerequisite: JAPAN 3202 or equivalent. This course develops students' existing linguistic knowledge and communicative skills in both spoken and written Japanese. Students will use authentic materials such as newspaper articles, essays, short stories, television programs, and films as the basis for discussion. This course may be repeated for credit a limited number of times if the topics vary.

JAPAN 4302 Advanced Japanese II: 3 semester hours

Prerequisite: JAPAN 4301 or equivalent. Building on JAPAN 4301, this course continues to develop students' linguistic knowledge and communicative skills in both spoken and written Japanese. Students will use authentic materials such as newspaper articles, editorials, essays, short stories, television programs and films for the basis of discussion. This course may be repeated for credit a limited number of times if the topics vary.

JAPAN 4380 Advanced Readings in Japanese: 3 semester hours

Prerequisites: JAPAN 4301 or equivalent, or concurrent enrollment in JAPAN 4302. This course continues the development of advanced language skills through reading and discussing various literary and non-literary texts in Japanese.

JAPAN 4390 Special Readings: 1-3 semester hours

Prerequisites: JAPAN 3290 or consent of instructor. Independent study through readings, reports and conferences.

JAPAN 4394 Advanced Internship in Japanese: 1-3 semester hours

Prerequisites: FGN LANG 2100, completion of at least two 3000-level classes in Japanese, and consent of the Internship Coordinator in Japanese. This internship course gives students of Japanese the opportunity to use their unique and advanced language skills at an appropriate agency, organization, or business in the St. Louis region and beyond. This course may be repeated for a maximum of 3 credit hours.

Spanish

Courses

SPANISH 1001 Spanish Language and Culture I (MOTR LANG 103): 5 semester hours

This first Spanish course is designed to encourage the development of communicative proficiency through an integrated approach to the teaching of all four language skills - listening and understanding, reading, writing, and speaking. It encourages development of communicative proficiency through an interactive task-based approach, provides students with an active and rewarding learning experience as they develop their language skills and cultural competency, and fosters awareness of the Spanish-speaking world through authentic cultural materials and information. SPANISH 1001, SPANISH 1002, and SPANISH 2101 together form the introductory Spanish language sequence. Note: Intended for students with no previous Spanish experience. Students with previous Spanish experience are expected to contact the department for placement advising.

SPANISH 1002 Spanish Language and Culture II (MOTR LANG 104): 5 semester hours

Prerequisite: SPANISH 1001 or equivalent. This second Spanish course is designed to continue the development of communicative proficiency through an integrated approach to the teaching of all four language skills - listening and understanding, reading, writing, and speaking. It encourages development of communicative proficiency through an interactive task-based approach, provides students with an active and rewarding learning experience as they strengthen their language skills and cultural competency, and fosters awareness of the Spanish-speaking world through authentic cultural materials and information. SPANISH 1001, SPANISH 1002, and SPANISH 2101 together form the introductory Spanish language sequence.

SPANISH 1099 Introductory Topics: Language Immersion: Spanish: 1-3 semester hours

This course is a faculty-led immersion experience designed specifically to enhance acquisition of the target language and culture for students that have not completed prior coursework in Spanish. This course may be repeated once if the topics vary, for a maximum of 6 total credit hours.

SPANISH 1199 Special Topics: Language Immersion: Spanish: 1-3 semester hours

Prerequisites: SPANISH 1001 or equivalent. This course is a faculty-led immersion experience designed specifically to enhance acquisition of the target language and culture for students who have completed a first course in Spanish. This course may be repeated once if the topics vary, for a maximum of 6 total credit hours.

SPANISH 2101 Spanish Language and Culture III: 3 semester hours

Prerequisites: SPANISH 1002 or equivalent. This third Spanish course is designed to further develop communicative proficiency through an integrated approach to the teaching of all four language skills - listening and understanding, reading, writing, and speaking. It continues the development of communicative proficiency through an interactive task-based approach, provides students with an active and rewarding learning experience as they strengthen their language skills and cultural competency, and fosters awareness of the Spanish-speaking world through authentic cultural materials and information. Students will complete a final project that demonstrates the knowledge acquired through the basic language sequence. SPANISH 1001, SPANISH 1002, and SPANISH 2101 together form the introductory Spanish language sequence. Successful completion fulfills the foreign language requirement for Bachelor of Arts candidates.

SPANISH 2172 Spanish Composition: 4 semester hours

Prerequisites: SPANISH 2101 or SPANISH 1199 or equivalent. This course will develop students' ability to communicate effectively in Spanish with an emphasis on the processes of writing and drafting, revising, and editing through collaborative activities. It prepares students for the kind of reading, writing, and oral discourse required in upper-level Spanish courses.

SPANISH 2180 Readings in Spanish: 4 semester hours

Prerequisites: SPANISH 1199 and SPANISH 2101, or equivalent. This course is intended to improve students' reading skills in Spanish through an assortment of written texts of various literary genres and non-fiction works from Latin America and Spain. Students collaborate in the activities of verifying comprehension, analyzing texts, and stating and defending a position. Selected aspects of Spanish grammar are reviewed. This course includes an online component.

SPANISH 2190 Special Readings: 1-4 semester hours

Prerequisites: SPANISH 2101 and consent of department. This course is an independent study through readings, reports and conferences. This course may be taken twice for credit.

SPANISH 2199 Special Topics: Language Immersion: Spanish: 1-3 semester hours

Prerequisites: SPANISH 2101 or equivalent. This course is a faculty-led experience designed specifically to enhance acquisition of the target language and culture. It may be repeated for credit if the topics vary, for a maximum of 3 credits.

SPANISH 3199 Special Topics: Language Immersion: Spanish: 1-3 semester hours

Prerequisites: 2 of the following 3 courses: SPANISH 2172, SPANISH 2180, SPANISH 2199; or equivalent. Faculty-led experience designed specifically to enhance acquisition of the target language and culture. This course may be repeated for credit if the topics vary for a maximum of 3 credits.

SPANISH 3212 Hispanic Cultures and Civilizations: Spain, Spanish America, and the United States: 3 semester hours

Prerequisites: 2 of the following 3 courses: SPANISH 2172, SPANISH 2180, SPANISH 2199; or equivalent. This course explores key events and themes of the cultures and civilizations of the Spanish speaking communities of Spain, Latin America and the United States.

SPANISH 3220 Introduction to Spanish Translation and Interpreting: 3 semester hours

Prerequisites: 2 of the following 3 courses: SPANISH 2172, SPANISH 2180, SPANISH 2199; or equivalent. This course introduces students to the theory and practice of translation and interpreting in professional settings. It combines translation/interpretation theory with hands-on practice using a variety of activities from specialized areas, including medical and legal professions. This course has a community-based component.

SPANISH 3261 Spanish for the Professions: 3 semester hours

Prerequisites: 2 of the following 3 courses: SPANISH 2172, SPANISH 2180, SPANISH 2199. This course explores different professions in the Hispanic world, including health, law, media, and business. Students focus on vocabulary and specific professional skills culturally appropriate for the Hispanic communities in Latin America, Spain, and the United States. Emphasis is placed on both the acquisition of professional language as well as intercultural competence.

SPANISH 3271 Advanced Spanish Conversation: 3 semester hours

Prerequisites: 2 of the following 3 courses: SPANISH 2172, SPANISH 2180, SPANISH 2199; or equivalent. This course helps students develop their oral skills in Spanish at the advanced level.

SPANISH 3282 Introduction to Hispanic Literature: A Survey Course: 3 semester hours

Prerequisites: 2 of the following 3 courses: SPANISH 2172, SPANISH 2180, SPANISH 2199; or equivalent. This course surveys major contexts, movements and styles of Peninsular and Spanish American literatures. Writings from the early Hispano-Arabic period through the modern Peninsular period and pre-Conquest through contemporary Spanish American literature will be studied.

SPANISH 3290 Special Readings: Spanish: 1-3 semester hours

Prerequisite: Consent of department. Independent study through readings, reports and conferences.

SPANISH 3311 Introduction to Special Topics in Hispanic Culture: 3 semester hours

Prerequisites: 2 of the following 3 courses: SPANISH 2172, SPANISH 2180, SPANISH 2199; or equivalent. Selected topics in Hispanic culture taught in Spanish. This course may be repeated twice for credit provided that the topic is different each time.

SPANISH 3326 Introduction to Hispanic Linguistics: 3 semester hours

Prerequisites: 2 of the following 3 courses: SPANISH 2172, SPANISH 2180, SPANISH 2199; or the equivalent. Students will develop an understanding of the basic aspects and tools of analysis in the primary areas of linguistics as applied to the Spanish language, including phonetics and phonology, morphology, syntax, semantics, pragmatics, and sociolinguistics.

SPANISH 4172 Introduction to Creative Writing in Spanish: 3 semester hours

Prerequisites: At least two Spanish courses at the 3000 level or consent of instructor. This course will be presented in two parts. First, students will read literature samples and discuss theory for creative writing; and second, they will explore their own creativity by writing poetry, essays and short stories through exercises and examples given by the instructor.

SPANISH 4173 Special Topics in Creative Writing: 3 semester hours

Prerequisites: At least two Spanish courses at the 3000 level or consent of instructor. SPANISH 4172 is recommended but not required. This course will focus on one specific genre of creative writing per semester. The genre will vary from semester to semester, and will include, but not be limited to, poetry, essays, memoirs, and fiction. A variety of Hispanic authors' works will be explored in order to familiarize students with diverse styles and voices. This course may be repeated for credit if the topics vary.

SPANISH 4199 Special Topics: Language Immersion: 1-3 semester hours

Prerequisites: At least two Spanish courses at the 3000 level or consent of instructor. This course is a faculty-led experience designed specifically to enhance acquisition of the target language and culture. It may be repeated for credit if the topics vary, for a maximum of 3 credits.

SPANISH 4311 Special Topics in Hispanic Culture: 3 semester hours

Prerequisites: At least two Spanish courses at the 3000 level or consent of instructor. This course examines selected topics in Hispanic culture and is taught in Spanish. It may be repeated for credit provided the topic is different each time.

SPANISH 4312 Special Topics in Hispanic Literature: 3 semester hours

Prerequisites: At least two Spanish courses at the 3000 level or consent of instructor. This course examines selected topics in Hispanic literature and is taught in Spanish. It may be repeated for credit provided that the topic is different each time.

SPANISH 4324 Spanish Sociolinguistics: 3 semester hours

Prerequisites: At least two Spanish courses at the 3000 level or consent of instructor. SPANISH 3326 is recommended but not required. This course examines how Spanish is used within its social context. Key theoretical and methodological concepts from the field of sociolinguistics are discussed as applied to the Spanish language. Topics may include language and identity, speech style, gender and language use, language attitudes, languages in context, bilingualism, and language change. Students will be introduced to phonological, morphosyntactic, and discursive features subject to sociolinguistic variation across the Spanish-speaking world. The course is taught in Spanish.

SPANISH 4329 History of the Spanish Language: 3 semester hours

Prerequisites: At least two SPANISH courses at the 3000 level; SPANISH 3326 is recommended. This course will serve as an introduction to the history of the Spanish language. Students will study the transformation of the language as it spread across the globe throughout history.

SPANISH 4390 Special Readings: 1-3 semester hours

Prerequisite: Consent of instructor. Independent study through readings, reports and conferences.

SPANISH 4500 Spanish for the Sciences: 3 semester hours

Prerequisites: Two Spanish courses at the 3000 level or consent of instructor. This course will focus on scientific and environmental questions, debates, and discourses in the Spanish-speaking world. Students will work with a variety of socio-historical situations to help frame issues such as biodiversity, water scarcity, oil spills, wildfires and ecotourism. While the course will largely focus on scientific and environmental writing, another component will be the consideration of cultural responses to scientific and environmental problems, including documentaries, podcasts, poetry and visual art. The course will offer students a broad range of voices currently participating in scientific and environmental discourses in order to think comparatively about some of the most pressing issues facing humanity today. All course work will be conducted in Spanish.

SPANISH 5172 Introduction to Creative Writing in Spanish: 3 semester hours

Prerequisites: Graduate standing or consent of the instructor, and advanced proficiency in Spanish. This course, in two parts, allows students, first, to read literature samples and receive theory for creative writing and, second, to explore their own creativity by writing poetry, essays, and short stories through exercises and examples given by the instructor.

SPANISH 5173 Advanced Special Topics in Creative Writing: 3 semester hours

Prerequisites: Advanced proficiency in Spanish and graduate status; SPANISH 5172 is recommended but not required. This course will focus on one specific genre of creative writing per semester. The genre will vary from semester to semester, and will include, but not be limited to, poetry, essays, memoirs, and fiction. A variety of Hispanic authors' works will be explored in order to familiarize students with diverse styles and voices. This course may be repeated for credit if the topics vary.

SPANISH 5199 Intensive Advanced Immersion Experience: 1-3 semester hours

Prerequisites: Graduate standing or consent of the instructor, and advanced proficiency in Spanish. This course is designed for in-service and pre-service/post-baccalaureate foreign language teachers. It focuses specifically on enhancing oral proficiency in the target language and enriching cultural knowledge for purposes of classroom language instruction. The course may simulate a study abroad immersion experience or may be taught within the context of a study abroad program. It may be repeated, provided the topics vary, for a maximum of 3 credits.

SPANISH 5311 Advanced Topics in Spanish Culture: 3 semester hours

Prerequisites: Graduate standing or consent of the instructor, and advanced proficiency in Spanish. This course examines selected topics in Spanish culture and involves an independent student research project. It may be repeated for credit with a different topic. The language of instruction is Spanish.

SPANISH 5312 Advanced Topics in Hispanic Literature: 3 semester hours

Prerequisites: Graduate standing or consent of the instructor, and advanced proficiency in Spanish. This course focuses on selected topics in Hispanic literature. It may be repeated for credit, provided that the topic is different each time. The language of instruction is Spanish.

SPANISH 5324 Advanced Spanish Sociolinguistics: 3 semester hours

Prerequisites: Graduate standing or consent of the instructor, and advanced proficiency in Spanish. This advanced course in Spanish linguistics examines how Spanish is used within its social context. Key theoretical and methodological concepts from the field of sociolinguistics are discussed as applied to the Spanish language. Topics include language and identity, speech style, gender and language use, language attitudes, languages in contact, bilingualism, and language change. The social context and implications of Spanish in the United States are also addressed. Students will complete a sociolinguistic research study design and presentation. Course taught in Spanish.

SPANISH 5329 Advanced History of the Spanish Language: 3 semester hours

Prerequisites: Graduate standing or consent of the instructor, and advanced proficiency in Spanish. This course will explore the history of the Spanish language. Students will study the transformation of the language as it spread across the globe throughout history. Students will be responsible for completing a research project.

SPANISH 5500 Advanced Spanish for the Sciences: 3 semester hours

Prerequisites: Graduate standing or consent of the instructor, and advanced proficiency in Spanish. This course will focus on scientific and environmental questions, debates, and discourses in the Spanish-speaking world. Students will work with a variety of socio-historical situations to help frame issues such as biodiversity, water scarcity, oil spills, wildfires, and ecotourism. While the course will largely focus on scientific and environmental writing, another component will be the consideration of cultural responses to scientific and environmental problems, including documentaries, podcasts, poetry, and visual art. All coursework will be in Spanish. This course will offer students a broad range of voices currently participating in scientific and environmental discourses in order to think comparatively about some of the most pressing issues facing humanity today. Students will lead a class discussion about a particular theme relevant to their field of study.

Mathematics, Physics, Astronomy and Statistics

Degrees and Areas of Concentration

The Department of Mathematics, Physics, Astronomy and Statistics offers superb course work leading to the following degrees:

- B.A. in Mathematics
- B.S. in Mathematics with emphasis areas of
 - Data Science
 - Fiscal Mathematics
- B.A. in Physics
- B.S. in Physics with emphasis areas of
 - Astrophysics
 - Engineering Physics
 - General Physics
 - Biophysics
- B.A. or B.S. in Physics or Mathematics with Master's Level Coursework for Secondary Teacher Certification
- B.S. in Secondary Education with emphasis areas of
 - Mathematics
 - Science-Physics
- M.A. in Mathematics

Fellowships and Scholarships

The Department Mathematics, Physics, Astronomy and Statistics offers a number of scholarships and awards.

Mathematics Majors

- The Alumni Scholarship is awarded to outstanding undergraduate students and is open to all junior and senior mathematics majors.
- The Edward Z. Andalafte Memorial Scholarship is awarded to outstanding undergraduate mathematics majors at the sophomore level or higher.
- The Raymond and Thelma Balbes Scholarship in Mathematics is awarded to students at the sophomore level or higher who are pursuing a degree in mathematics, have an overall GPA of at least 3.0 and a GPA of at least 3.2 in mathematics and who have completed three semesters of calculus.
- The Joseph M. and Mary A. Vogl Scholarship in Mathematics is a need based monetary award for undergraduate mathematics majors.

Physics Majors

- Physics & Astronomy Alumni Scholarship is available to new physics majors with outstanding ACT or SAT scores or continuing physics majors with outstanding academic records.
- The Richard D. Schwartz Scholarship is available to full-time junior/senior physics majors in good academic standing with financial need.
- The Don C. and Susan P. Winter Endowed Scholarship in Physics & Astronomy is available to physics majors with a minimum ACT score of 24 or who have a minimum GPA of 3.0.
- The Feldman-Cheng Endowed Scholarship is available to physics majors in good academic standing.
- The Pierre Laclède/Physics & Astronomy Alumni Scholarship for undergraduate physics majors is available to physics majors who are also accepted into the Pierre Laclède Honors College.

- The Junior Alumni Award is awarded to physics majors who attain a 3.5 average or better in Physics 2111 and 2112. The award is given to the student in the semester they enroll in Physics 3200. Transfer students must take Physics 2112 on this campus to be eligible for this scholarship.
- The Senior Alumni Award is given to the outstanding physics major at the senior level with the highest GPA among the senior class.
- The Jeffrey Earl Award is given to an outstanding graduating senior every May.
- Undergraduate Research Awards are available for undergraduate physics majors who conduct a research project with a faculty mentor. Students receiving this award are required to enroll for at least one credit hour of Physics 3390 and present their research results at the campus Undergraduate Research Symposium in April.
- Teaching Assistantships with stipends may also be available to qualifying students to prepare them for the independent effort required in industry or graduate school.
- NASA Research Internships for the summer and academic year are available for students interested in astrophysics through the NASA/Missouri Space Grant Consortium.

Departmental Honors

The Department of Mathematics, Physics, Astronomy and Statistics will award departmental honors to those B.A. and B.S. degree candidates in Physics with an overall grade point average of 3.2 or better. They must also successfully complete at least 3 credits of PHYS 3390 (Research).

Career Outlook

For Mathematics Majors

A degree in mathematics prepares well-motivated students for interesting careers. Our graduates find positions in industry, government, and education. The demand for individuals well trained in statistics, data science, and mathematics is greater than the available supply. In addition, a number of graduates in mathematics have elected careers in business, law and other related fields where they find logical and analytical skills valuable.

Graduates in mathematics from UMSL are located throughout the country, and they also have a strong local presence. They have careers in banking, health care, engineering and manufacturing, law, finance, public service, management, and actuarial management. Many are working in areas such as systems management, information systems and data management, scientific computing, cryptography, and scientific positions in the armed services. Others have careers in education, especially at secondary and higher levels.

For Physics Majors

Many of our students have been successful in subsequent graduate studies in astrophysics and meteorology, as well as physics. Our alumni have pursued graduate studies and earned doctorate degrees at institutions such as Cornell University, MIT, University of Wisconsin, University of Chicago and Washington University. Students who have elected for careers in industry are now working in a variety of settings for such firms as Emerson Electric, Hewlett Packard, IBM, Boeing, MEMC Electronic Materials (now SunEdison), the National Geospatial-Intelligence Agency, and Google. Several former students are currently teaching physics in high schools around the St. Louis area.

Undergraduate Degrees

Mathematics BA (p. 613)

Mathematics BS (p. 616)

Emphasis Areas:

- Data Science (p. 618)
- Fiscal Mathematics (p. 619)

Mathematics BA or BS/MA Dual Degree Program (p. 615)

Physics BA (p. 686)

Physics BS

Emphasis Areas:

- Astrophysics (p. 687)
- Biophysics (p. 689)
- Engineering Physics (p. 691)
- General Physics (p. 692)

Graduate Degrees

Mathematics MA (p. 621)

Emphasis Area:

- Data Science (p. 622)

Mathematics MA Accelerated Master's Program (p. 622)

Physics MS (p. 694)

Mathematical and Computational Science PhD

Emphasis Areas:

- Mathematics (p. 610)
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Physics PhD (p. 695)

Minors

Mathematics Minor (p. 623)

Physics Minor (p. 694)

Statistics Minor (p. 752)

Affiliated Interdisciplinary Programs

Actuarial Science BS (p. 392)

Actuarial Science Undergraduate Certificate (p. 393)

Data Science Undergraduate Certificate (p. 516)

Secondary Education BSEd, Mathematics Emphasis (p. 728)

Secondary Education BSEd, Physics Emphasis (p. 738)

Astronomy Courses

ASTRON 1001 Cosmic Evolution Introductory Astronomy (MOTR ASTR 100): 3 semester hours

This course presents an overview of astronomy from the planets to the Big Bang. Topics include the celestial motions, planets and the formation of the solar system, stars and stellar evolution, galaxies, and cosmology. Students will be introduced to the latest discoveries and how they affect our understanding of the universe.

ASTRON 1001L Introductory Astronomy Laboratory: 1 semester hour

Prerequisite: ASTRON 1001 (may be taken concurrently). An introductory Astronomy laboratory to accompany ASTRON 1001. The format is a 2-hour laboratory session per week to enhance lecture material.

ASTRON 1011 Planets and Life in the Universe: 3 semester hours

Man's concept of the solar system from Stonehenge to Einstein; geology and meteorology of the planets of our solar system, with particular attention to results from the space program; exobiology--study of the possibilities of life on other worlds and the best method of communicating with it. Three lecture hours per week.

ASTRON 1012 The Violent Universe and the New Astronomy: 3 semester hours

A nontechnical course focusing on recent results which larger telescopes and the space program have made available. Pulsars, x-ray stars, and black holes; radio astronomy, our galaxy, and interstellar molecules; exploding galaxies and quasars; origin of the expanding universe. Three lecture hours and one observing session per week.

ASTRON 1050 Introduction to Astronomy I (MOTR ASTR 100): 3 semester hours

Prerequisites: MATH 1030 and MATH 1035. A survey of the history of astronomy from the ancient times to present. Theories for the formation and evolution of the solar system and the general features of the solar system and planetary motions are discussed. The physical concept of gravity is presented. The detailed properties of the planets, comets, and asteroids are reviewed, concentrating on recent results from space missions.

ASTRON 1051 Introduction to Astronomy II: 3 semester hours

Prerequisites: MATH 1030 and MATH 1035. A survey of astronomy beyond the solar system. Topics include stars and stellar evolution, neutron stars, and black holes. The physical concept of light and the design of telescopes is discussed in detail. The structure of the Milky Way Galaxy and the large scale structure of the universe are explored. Dark matter, quasars, and active galactic nuclei are discussed in the context of theories for the formation and evolution of the universe. Course does not need to be taken in sequence with ASTRON 1050.

ASTRON 4301 Astrophysics: 3 semester hours

Prerequisite: PHYSICS 3231 or consent of instructor. A moderately technical introduction to astrophysics. Topics will include: physics of stellar interiors and atmospheres; interpretation of stellar spectra; stellar evolution; radio astronomy; and cosmology.

ASTRON 4322 Observational Astronomy: 4 semester hours

Prerequisite: ASTRON 1050, ASTRON 1051 and PHYSICS 3231. Tools of the astronomer: telescopes, spectroscopy, photoelectric photometry. Students will work on a number of projects which will enable them to develop expertise in obtaining, reducing, and analyzing astronomical observations. Student night observing will be an important part of the course. This course is primarily for persons who are astronomy or physics majors or who have some equivalent background.

ASTRON 5322 Intermediate Observational Astronomy: 4 semester hours

Prerequisites: ASTRON 1050, ASTRON 1051, and PHYSICS 3231; or graduate standing. This course covers the tools of the astronomer: telescopes, spectroscopy, photoelectric photometry. Students will work on a number of intermediate projects, which will enable them to develop expertise in obtaining, reducing, and analyzing astronomical observations. Student night observing will be an important part of this course. This course is primarily for astronomy or physics majors. Students may not receive credit for both ASTRON 4322 and ASTRON 5322.

Atmospheric Science Courses***ATM SCI 1001 Elementary Meteorology: 3 semester hours***

Prerequisites: MATH 1020 or equivalent. This course covers atmospheric phenomena, weather, and climate. Topics include temperature, pressure, and moisture distributions in the atmosphere and dynamical effects such as radiation, stability, storms, and general circulation.

ATM SCI 1001L Elementary Meteorology Laboratory: 1 semester hour

Prerequisite: Must be concurrently enrolled in ATM SCI 1001. An introductory meteorology laboratory to accompany ATM SCI 1001. The lab exercises consist of current weather studies to enhance the material in ATM SCI 1001.

ATM SCI 1002 Earth Climate Studies: 3 semester hours

Prerequisite: MATH 1020 or equivalent. This course covers the physical foundations of the Earth's climate system, scientific evidence for climate change and its causes, and the effects of climate change on the ecosystem of the Earth. This course satisfies the information literacy general education requirement.

Geology Courses***GEOL 1001 General Geology: 3 semester hours***

This course looks at earth materials and processes, including geological aspects of the resource/energy problem.

GEOL 1001L General Geology Lab: 1 semester hour

This geology laboratory involves identification of common rocks and minerals.

GEOL 1002 Historical Geology: 3 semester hours

This course is a study of changes in geography, climate, and life through geological time. This study includes the origin of the continents, ocean basins, and mountains in the light of continental drift.

GEOL 1002L Historical Geology Lab: 1 semester hour

Prerequisites: GEOL 1002 (may be taken concurrently). This course is a Geology laboratory, which primarily involves the description and identification of fossils.

GEOL 1053 Oceanography (MOTR PHYS 110): 3 semester hours

The atmospheric and ocean circulations; the chemistry and geology of the deep sea; and their effects on the distribution of marine organisms.

Mathematics Courses***MATH 1020 Contemporary Mathematics (MOTR MATH 120): 3 semester hours***

Prerequisites: A satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course. This course presents methods of problem solving, centering on problems and questions which arise naturally in everyday life. Topics may include aspects of algebra, the mathematics of finance, probability and statistics, exponential growth, and other topics chosen from traditional and contemporary mathematics which do not employ the calculus. It is designed for students who do not plan to take calculus and may not be used as a prerequisite for other mathematics courses. Credit will not be granted for MATH 1020 if credit has been granted for MATH 1310, MATH 1800, MATH 1100, MATH 1102, or MATH 1105. Concurrent enrollment in MATH 1020 and any of these courses is not permitted. This course fulfills the University's general education mathematics proficiency requirement.

MATH 1021 Choice and Chance: 3 semester hours

Same as PHIL 1021. Prerequisites: A satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course. This course provides an introduction to inductive logic and the theory of probability in an organized and systematic way, so as to give students tools for more effective decision-making. We will introduce the probability calculus, basic concepts of utility theory, decision theory and different approaches to understanding probability. This course is designed to be accessible to students of all levels. This course fulfills the University's general education mathematics proficiency requirement.

MATH 1025 Geometry in the Real World: 3 semester hours

Prerequisites: A satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course. This course presents topics in geometry designed to enrich the student's understanding of mathematics. Geometry as it applies to the physical world and such fields as art, music, nature, motion, architecture and city planning will be examined. This course is designed to be accessible to students of all levels. This course fulfills the University's general education mathematics proficiency requirement.

MATH 1026 The Music of Math: 3 semester hours

Prerequisites: A satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course. This course presents topics in mathematics as they relate to music. Fundamental concepts of music such as intervals, scales, chords, tuning will be explored by developing an understanding of their mathematical underpinnings. An ability to read music in treble and bass clef is strongly recommended. This course fulfills the University's general education mathematics proficiency requirement.

MATH 1030 College Algebra (MOTR MATH 130): 3 semester hours

Prerequisites: A satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course, or approval of the department. This is a foundational course in math. Topics may include factoring, complex numbers, rational exponents, simplifying rational functions, functions and their graphs, transformations, inverse functions, solving linear and nonlinear equations and inequalities, polynomial functions, inverse functions, logarithms, exponentials, solutions to systems of linear and nonlinear equations, systems of inequalities, matrices, and rates of change. This course fulfills the University's general education mathematics proficiency requirement.

MATH 1035 Trigonometry: 2 semester hours

Prerequisites: MATH 1030 (may be taken concurrently) or a satisfactory score on the UMSL Math Placement Examination obtained at most one year prior to enrollment in this course. This course is a study of the trigonometric and inverse trigonometric functions with emphasis on trigonometric identities and equations.

MATH 1045 PreCalculus (MOTR MATH 150): 5 semester hours

Prerequisites: A satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course. This course is intended for students planning to take MATH 1800. It covers a range of topics including polynomials, logarithms, and complex numbers; functions and their graphs; systems of equations and inequalities; trigonometry; and more. fulfills the University's general education mathematics proficiency requirement. This course fulfills the University's general education mathematics proficiency requirement.

MATH 1100 Basic Calculus: 3 semester hours

Prerequisites: MATH 1030 or MATH 1045 or a satisfactory score on the UMSL Math Placement Examination obtained at most one year prior to enrollment in this course. This course introduces plane analytic geometry and basic differential and integral calculus with applications to various areas. No credit for Mathematics majors. Credit not granted for both MATH 1800 and MATH 1100.

MATH 1105 Basic Probability and Statistics: 3 semester hours

Prerequisites: MATH 1030 or MATH 1040 or MATH 1045 or a satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course or consent of the department. This course is an introduction to probability and statistics. Topics may include probability, descriptive statistics, discrete and continuous random variables and their distribution functions, sampling and sampling distributions, confidence intervals, and one-variable hypothesis testing. Credit will not be granted for more than one of MATH 1310, MATH 1320, and MATH 1105.

MATH 1150 Structure of Mathematical Systems I: 3 semester hours

Prerequisites: 45 hours of college credit and a satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course OR successful completion of MATH 1030 no more than 2 years prior to enrollment in this course. This course examines topics including problem solving, patterns, sets, numeration systems, whole numbers and operations, positive rational numbers and operations, and an introduction to variables and equations, with an emphasis placed on using multiple techniques for each of the aforementioned topics.

MATH 1320 Introduction to Probability and Statistics: 3 semester hours

Prerequisites: MATH 1030 or MATH 1045 or consent of instructor. The course will cover basic concepts and methods in probability and statistics. Topics may include descriptive statistics, probabilities of events, random variables and their distributions, sampling distributions, estimation of population parameters, confidence intervals and hypothesis testing for population means and population proportions, chi-square tests. A student may not receive credit for more than one of MATH 1310, MATH 1320 and MATH 1105.

MATH 1800 Analytic Geometry and Calculus I: 5 semester hours

Prerequisites: MATH 1030 and MATH 1035, or MATH 1045, or a satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course, or consent of instructor. This course provides an introduction to differential and integral calculus. Topics may include limits, derivatives, related rates, Newton's method, the Mean-Value Theorem, Max-Min problems, the integral, the Fundamental Theorem of Integral Calculus, areas, volumes, and average values.

MATH 1900 Analytic Geometry and Calculus II: 5 semester hours

Prerequisite: MATH 1800. This course covers analytical geometry and additional aspects of calculus. Topics may include inverse functions, integration techniques, further applications of integration, parametric and polar equations, and infinite series, including Taylor series of functions.

MATH 2000 Analytic Geometry and Calculus III: 5 semester hours

Prerequisite: MATH 1900. Topics include vectors, cylindrical and spherical coordinates, vector-valued functions, arc length and curvature, functions of several variables, partial and directional derivatives, gradients, extrema, Lagrange multipliers, multiple integrals, change of variables, surface area, vector fields, Stokes' Theorem.

MATH 2010 Introduction to Inquiry Approaches to STEM Education (STEP I): 1 semester hour

Same as CHEM 2010, PHYSICS 2010, BIOL 2010, and SEC ED 2010. Prerequisites: Concurrent enrollment BIOL 1821, BIOL 1831, CHEM 1111, CHEM 1121, PHYSICS 2111, PHYSICS 2112, MATH 1800, or MATH 1900 or have a declared STEM major. Students who want to explore teaching careers become familiar with lesson plan development by writing, teaching and observing lessons in a local school class. Students build and practice inquiry-based lesson design skills and become familiar with and practice classroom management in the school setting. As a result of the STEP I experiences students should be able to decide whether to continue to explore teaching as a career and ultimately finishing the remainder of the WE TEACH MO curriculum leading to teacher certification. The classroom observations and teaching represent a major field component and requires at least one two hour block of free time during the school day once a week.

MATH 2011 Designing Inquiry-Based STEM Experiences (STEP II): 1 semester hour

Same as CHEM 2011, PHYSICS 2011, BIOL 2011, and SEC ED 2011. Prerequisites: BIOL 2010, CHEM 2010, PHYSICS 2010, MATH 2010, or SEC ED 2010. Students explore teaching careers, become familiar with STEM school setting through observing and discussing the school environment and by developing and teaching inquiry-based lessons.

MATH 2020 Introduction to Differential Equations: 3 semester hours

Prerequisite: MATH 2000. Topics will be chosen from: linear differential equations, equations with constant coefficients, laplace transforms, power series solutions, systems of ordinary differential equations.

MATH 2300 Introduction to Discrete Structures: 3 semester hours

Prerequisites: MATH 1100 or MATH 1800, and CMP SCI 1250. This course treats fundamental mathematical concepts in discrete structures useful for computer science. Topics include logic, sets, equivalence relations and partitions, functions, elementary number theory, cardinality, basic combinatorial methods, trees and graphs.

MATH 2450 Elementary Linear Algebra: 3 semester hours

Prerequisite: MATH 1100 or MATH 1900. An introduction to linear algebra. Topics will include complex numbers, geometric vectors in two and three dimensions and their linear transformations, the algebra of matrices, determinants, solutions of systems of equations, eigenvalues and eigenvectors.

MATH 2510 Structure of Mathematical Systems II: 3 semester hours

Prerequisites: MATH 1150. Topics include an introduction to probability, statistics, and displays of data; a study of elementary geometry, including points, lines, planes, angles, properties of triangles, properties of quadrilaterals, other 2- and 3-dimensional shapes; similarity; measurement and conversions; Pythagorean Theorem; perimeter; area; surface area, and volume. This course does not apply towards the elective requirements for any of the majors, minors or related areas in mathematics and statistics.

MATH 3000 Discrete Structures: 3 semester hours

Prerequisites: MATH 1800 or MATH 1100, and CMP SCI 1250 or equivalent. This course introduces fundamental concepts and important data structures in Discrete Mathematics and serves as an important foundation for subsequent courses in Computer Science. It provides a formal system on which mathematical reasoning is based, and various problem-solving strategies with emphasis on the algorithmic approach (both iterative and recursive). Topics include logic, sets, functions and relations; methods of proof, including mathematical induction; elements of number theory; order of growth and basic analysis of algorithms efficiency; recurrence relations; basic counting methods; graphs and trees. This course does not apply towards the elective requirements for any of the majors, minors or related areas in mathematics and statistics.

MATH 3250 Foundations of Mathematics: 3 semester hours

Prerequisites: MATH 1900 and CMP SCI 1250. The course will focus on developing an understanding of proofs and rigorous mathematical reasoning. Topics will include logic, sets, relations, functions, number theory, and counting methods.

MATH 3320 Applied Statistics: 3 semester hours

Prerequisites: MATH 1320. The course will cover topics including multiple regression, analysis of variance, generalized linear models, and applications of these methods. Using R for statistical analysis will be part of the course.

MATH 3520 Structure of Mathematical Systems III: 3 semester hours

Prerequisites: MATH 2510. Topics from MATH 1150 and MATH 2510 are continued. Other topics include integers and the real number system, relations and functions, coordinate system and linear equations, congruence, geometric constructions, geometric proofs, isometries, tessellations, and trigonometry. This course does not apply towards the elective requirements for any of the majors, minors or related areas in mathematics and statistics.

MATH 4005 Exploratory Data Analysis with R: 3 semester hours

Prerequisites: (MATH 1100 or MATH 1800) and (ANTHRO 3220/SOC 3220 or BIOL 4122 or CRIMIN 2220 or ECON 3100 or MATH 1320 or POL SCI 3000 or PSYCH 2201). This course covers data analysis methods with R. It introduces the basic goals and techniques of the data science process, methods of characterizing and visualizing data and building predictive and inferential models. R will be introduced at the beginning of the class and then used throughout the rest of the class.

MATH 4010 Financial Mathematics I: 3 semester hours

Prerequisites: MATH 1900 or MATH 1100, and MATH 1320 or SCMA 3300 (or equivalents). This course introduces the theory of interest, annuities (certain), annuities with differing pay periods, amortization schedules, and sinking funds.

MATH 4020 Financial Mathematics II: 3 semester hours

Prerequisite: MATH 4010. This course introduces the premium-discount formula for bonds, bond amortization, term structure of interest rates, and pricing theory for options.

MATH 4030 Applied Mathematics I: 3 semester hours

Prerequisite: MATH 2020 and MATH 2450. Topics chosen from Fourier series, special functions, partial differential equations, and boundary value problems.

MATH 4070 Introduction to Nonlinear Optimization: 3 semester hours

Prerequisites: MATH 1320, MATH 2000, MATH 2450 and (MATH 3000 or MATH 3250). This course will introduce the theory, methods, and applications of nonlinear optimization. It will cover convex functions, convex analysis, linear and quadratic programs, semidefinite programming and other optimization problems. Topics may include duality theory, algorithms of descent method, Newton's method and interior-point methods, and applications to signal processing, statistics and other fields will be covered. Credit cannot be earned for both MATH 4070 and MATH 5070.

MATH 4080 Introduction to Scientific Computation: 3 semester hours

Prerequisites: MATH 2000 and MATH 2450. This course will introduce fundamental algorithms in numerical linear algebra, matrix factorizations including SVD and QR, direct and iterative methods for solving linear systems, least squares problems and eigenvalue problems. Other topics covered will be chosen from numerical integration and differentiation, iterative methods for ODEs and PDEs, Discrete Fourier transform and FFT, spline smoothing and kernel smoothing. Credit cannot be earned for both MATH 4080 and MATH 5080.

MATH 4090 Introduction to High-dimensional Data Analysis: 3 semester hours

Prerequisites: MATH 1320, MATH 2000 and MATH 2450. This course introduces several advanced classical and modern techniques for modeling and analysis of high-dimensional datasets with low-dimensional structures. The topics covered in this course include principal component analysis, factor analysis, clustering-based methods, and sparse and low-rank recovery theory and algorithms. Credit cannot be earned for both MATH 4090 and MATH 5090.

MATH 4100 Real Analysis I: 3 semester hours

Prerequisites: MATH 3250, or CMP SCI 3130, or consent of instructor. This course provides an introduction to real analysis in one variable. Topics include the real number system, limits, continuity, differentiability, and sequences and series of functions.

MATH 4160 Complex Analysis I: 3 semester hours

Prerequisites: MATH 2000 or consent of the instructor. This course introduces complex numbers and their geometrical representation, point sets, analytic functions of a complex variable, complex integration, Taylor and Laurent series, residue theorem, and conformal mapping.

MATH 4200 Mathematical Statistics I: 3 semester hours

Prerequisites: MATH 1320 and MATH 2000. Introduction to the theory of probability and statistics using concepts and methods of calculus.

MATH 4210 Mathematical Statistics II: 3 semester hours

Prerequisites: MATH 4200. Continuation of MATH 4200. Sampling distributions, estimation theory, properties of estimators, hypothesis testing, Neyman-Pearson Theorem, likelihood ratio tests, introduction of analysis of variance and linear models. Basics of some nonparametric procedures.

MATH 4225 Introduction to Statistical Computing: 3 semester hours

Prerequisites: MATH 1320, MATH 2000 and MATH 2450. This course will introduce fundamental algorithms in Monte Carlo methods: random variable generation, Monte Carlo integration, Monte Carlo optimization, Markov chain Monte Carlo, Metropolis-Hastings algorithm, Gibbs sampler, Langevin algorithms and Hamilton Monte Carlo, perfect, iterated and sequential importance sampling. Other topics covered may include particle systems, hidden Markov models, parallel and cloud computing. Credit cannot be earned for both MATH 4225 and MATH 5225.

MATH 4250 Introduction to Statistical Methods in Learning and Modeling: 3 semester hours

Prerequisites: MATH 1320, MATH 2000 and MATH 2450. This course will introduce basic statistical principles and methods for modeling, inference, prediction and classification. The topics will be chosen from linear regression, basis expansion methods, kernel smoothing methods, model regularization, model selection and assessment, and other nonparametric methods. Credit cannot be earned for both MATH 4250 and MATH 5250.

MATH 4260 Introduction to Stochastic Processes: 3 semester hours

Prerequisites: MATH 4200. Basic theory and applications of stochastic processes. Markov chains, recurrent and transient states, stationary distributions, ergodic theorem, renewal processes, discrete martingales and stationary processes.

MATH 4350 Theory of Numbers: 3 semester hours

Prerequisites: MATH 2450 and either MATH 3000 or MATH 3250; or consent of instructor. This course examines the properties of integers, multiplicative functions, congruences, primitive roots, and quadratic residues.

MATH 4390 Topics in Probability and Statistics: 3 semester hours

Prerequisites: Consent of instructor. A seminar on special topics in probability and statistics to be determined by the interests of the instructor. May be repeated for credit provided different topics are studied.

MATH 4400 Introduction to Abstract Algebra I: 3 semester hours

Prerequisites: MATH 2450 and either MATH 3250 or CMP SCI 3130; or consent of instructor. This course introduces groups, rings, and fields, with an emphasis on groups and rings.

MATH 4450 Linear Algebra: 3 semester hours

Prerequisites: MATH 2450 and either MATH 3250 or CMP SCI 3130; or consent of instructor. This course focuses on topics selected from vector spaces, bases, linear transformations, matrices, canonical forms, eigenvalues, hermitian and unitary matrices, inner product spaces, and quadratic forms.

MATH 4460 Introduction to Coding Theory: 3 semester hours

Prerequisites: MATH 2450 and either MATH 3000 or MATH 3250. This course is an introductory course in coding theory. Topics may include linear codes, generator and parity check matrices, dual codes, weight and distance, encoding and decoding, and the Sphere Packing Bound; various examples of codes like the Hamming codes, Golay codes, binary Reed-Muller codes, and the hexacode; Shannon's theorem for the binary symmetric channel, upper and lower bounds on the size of linear and nonlinear codes; constructions and properties of finite fields, basic theory of cyclic codes; concepts of idempotent generator, generator polynomial, zeros of a code, and defining sets, special families of BCH and Reed-Solomon cyclic codes as well as generalized Reed-Solomon codes. Credit cannot be granted for both MATH 4460 and MATH 5460.

MATH 4470 Introduction to Statistical Data Analysis for GIS: 3 semester hours

Prerequisites: MATH 1320, MATH 2450 or consent of instructor. This course covers statistical concepts and techniques that are standard for solving geospatial problems. Emphasis will be placed on descriptive statistics and inferential statistics, with a view toward working with geographic and geospatial data. Topics may include geographical data characteristics, visualization of GIS data, mappings and spatial patterns, descriptive statistics for geospatial data, inferential spatial statistics, autocorrelation, point pattern analysis, area pattern analysis, mapping regression models, spatial statistics applications (disease transmission, racial bias, etc.). Credit cannot be earned for both MATH 4470 and MATH 5470.

MATH 4480 Introduction to Remote Sensing Digital Image Analysis: 3 semester hours

Prerequisites: MATH 2000 and MATH 2450, or consent of instructor. This course covers commonly-used techniques for remote sensing digital images. Specifically, it covers remote sensing image pre-processing techniques including: radiometric normalization and geometric correction, manipulating satellite data with different formats, image classification and land use change detection. This course focuses on core mathematical principles, with only a secondary look at implementation. Credit cannot be earned for both MATH 4480 and MATH 5480.

MATH 4500 Special Readings: 1-10 semester hours

Prerequisites: 6 credit hours at the Math 4000 level and consent of the instructor. Advanced topics in Mathematics. May be repeated for credit if the topic differs.

MATH 4550 Combinatorics: 3 semester hours

Prerequisites: MATH 2450 and either MATH 3000 or MATH 3250; or consent of instructor. This course introduces advanced counting methods including the use of generating functions for the solution of recurrences and difference equations. Additional topics may include: graphs and trees, combinatorial designs, combinatorial games, error-correcting codes, and finite-state machines.

MATH 4555 Topics in Math for the Teacher: 3 semester hours

Prerequisites: Consent of instructor. This course will cover various topics in Algebra, Analysis, and Geometry to deepen a teacher's understanding of the pre-collegiate Mathematics curriculum. It can be taken more than once for credit. Students may not receive credit for both MATH 4555 and MATH 5550.

MATH 4580 Mathematical Logic: 3 semester hours

Prerequisites: MATH 2450 and one of MATH 3250, CMP SCI 3130, or PHIL 4460; or consent of instructor. This course focuses on a study of the logic of mathematics by the axiomatic method, with a development of the propositional calculus and restricted predicate calculus emphasizing its application to the foundations of mathematics.

MATH 4660 Foundations of Geometry: 3 semester hours

Prerequisites: MATH 2450 and either MATH 3250 or CMP SCI 3130; or consent of instructor. This course focuses on a development of portions of Euclidean geometry from a selected set of axioms, including a discussion of consistency, independence, categoricity, and completeness of the axioms.

MATH 4670 Introduction to Non-Euclidean Geometry: 3 semester hours

Prerequisites: MATH 2000, MATH 2450, and either MATH 3250 or CMP SCI 3130; or consent of instructor. This course focuses on a summary of the history of the non-Euclidean geometries and a study of hyperbolic plane geometry.

MATH 4750 Introduction to Mathematics of Artificial Neural Networks: 3 semester hours

Prerequisites: MATH 1320, MATH 2000, and MATH 2450. This course provides an introduction to the mathematical ideas and techniques underlying the modern theory of artificial neural networks. Guidance and training for implementing practical applications are also provided. Topics may include fundamentals of supervised learning, testing, and validation for parametric statistical models, feedforward neural networks, forward propagation, activation functions, loss functions, batch/stochastic/mini-batch gradient descent, the backpropagation algorithm, preventing overfitting, basics of convolutional neural networks (CNNs), other specialized architectures. Credit cannot be earned for both MATH 4750 and MATH 5750.

MATH 4890 Topics in Mathematics: 3 semester hours

Prerequisite: Consent of instructor.

MATH 4995 Internship in Actuarial Science: 1-3 semester hours

Same as ECON 4995. Prerequisites: Junior standing and consent of program director. Supervised off-campus training in a private or public sector position in which the student applies the knowledge and skills learned in their actuarial science coursework. The internship is monitored by a faculty member and the student must provide a written report at the end of the project. This course may be repeated for a maximum of 6 credit hours.

MATH 5070 Nonlinear Optimization: 3 semester hours

Prerequisites: Graduate standing. This course will introduce the theory, methods, and applications of nonlinear optimization. It will cover convex functions, convex analysis, linear and quadratic programs, semidefinite programming and other optimization problems. Topics chosen from duality theory, algorithms of descent method, Newton's method and interior-point methods, and applications to signal processing, statistics and other fields will be covered. Topics are identical to MATH 4070 but material is covered at a greater depth and additional projects/assignments are required. Credit cannot be earned for both MATH 4070 and MATH 5070.

MATH 5080 Scientific Computation: 3 semester hours

Prerequisites: Graduate standing. This course will introduce fundamental algorithms in numerical linear algebra, matrix factorizations including SVD and QR, direct and iterative methods for solving linear systems, least squares problems and eigenvalue problems. Other topics covered will be chosen from numerical integration and differentiation, iterative methods for ODE's and PDE's, Discrete Fourier transform and FFT, spline smoothing and kernel smoothing. Topics are identical to MATH 4080 but material is covered at a greater depth and additional projects/assignments are required. Credit cannot be earned for both MATH 4080 and MATH 5080.

MATH 5090 High-dimensional Data Analysis: 3 semester hours

Prerequisites: Graduate standing. This course introduces several advanced classical and modern techniques for modeling and analysis of high-dimensional datasets with low-dimensional structures. The methods covered in this course include principal component analysis, factor analysis, clustering-based methods, and sparse and low-rank recovery theory and algorithms. Topics are identical to MATH 4090 but material is covered at a greater depth and additional projects/assignments are required. Credit cannot be earned for both MATH 4090 and MATH 5090.

MATH 5100 Real Analysis II: 3 semester hours

Prerequisites: MATH 4100. Introduction to measure and integration. Topics include the Riemann-Stieltjes integral, Lebesgue measure, measurable functions, the Lebesgue integral, Radon-Nikodym and Fubini theorems and the basics of L_p -spaces.

MATH 5225 Statistical Computing: 3 semester hours

Prerequisites: Graduate standing. This course will introduce fundamental algorithms in Monte Carlo methods: random variable generation, Monte Carlo integration, Monte Carlo optimization, Markov chain Monte Carlo, Metropolis-Hastings algorithm, Gibbs sampler, Langevin algorithms and Hamilton Monte Carlo, perfect, iterated and sequential importance sampling. Other topics covered may include particle systems, hidden Markov models, parallel and cloud computing. Topics are identical to MATH 4085 but material is covered at a greater depth and additional projects/assignments are required. Credit cannot be earned for both MATH 4225 and MATH 5225.

MATH 5250 Statistical Methods in Learning and Modeling: 3 semester hours

Prerequisites: Graduate standing. This course will introduce basic statistical principles and methods for modeling, inference, prediction and classification. The topics will be chosen from linear regression, basis expansion methods, kernel smoothing methods, model regularization, other nonparametric methods, and model selection and assessment. Topics are identical to MATH 4250 but material is covered at a greater depth and additional projects/assignments are required. Credit cannot be earned for both MATH 4250 and MATH 5250.

MATH 5320 Topics in Statistics and its Applications: 3 semester hours

Prerequisites: MATH 4210 or consent of instructor. The course studies classical and recently developed statistical procedures selected from areas including multivariate analysis, linear and non-linear models, nonparametric methods, and statistical learning. Emphasis is on applications of the procedures.

MATH 5460 Coding Theory: 3 semester hours

Prerequisites: Graduate standing. This course is an introductory course in coding theory. Topics may include linear codes, generator and parity check matrices, dual codes, weight and distance, encoding and decoding, and the Sphere Packing Bound; various examples of codes like the Hamming codes, Golay codes, binary Reed-Muller codes, and the hexacode; Shannon's theorem for the binary symmetric channel, upper and lower bounds on the size of linear and nonlinear codes; constructions and properties of finite fields, basic theory of cyclic codes; concepts of idempotent generator, generator polynomial, zeros of a code, and defining sets, special families of BCH and Reed-Solomon cyclic codes as well as generalized Reed-Solomon codes. Topics are identical to MATH 4460 but material is covered at a greater depth and additional projects/assignments are required. Credit cannot be granted for both MATH 4460 and MATH 5460.

MATH 5470 Statistical Data Analysis for GIS: 3 semester hours

Prerequisites: Graduate standing, MATH 1320, MATH 2450 or consent of instructor. This course covers statistical concepts and techniques that are standard for solving geospatial problems. Emphasis will be placed on descriptive statistics and inferential statistics, with a view towards working with geographic and geospatial data. Topics may include: geographical data characteristics, visualization of GIS data, mappings and spatial patterns, descriptive statistics for geospatial data, inferential spatial statistics, autocorrelation, point pattern analysis, area pattern analysis, mapping regression models, spatial statistics applications (disease transmission, racial bias, etc.). Credit cannot be earned for both MATH 4470 and MATH 5470.

MATH 5480 Remote Sensing Digital Image Analysis: 3 semester hours

Prerequisites: MATH 2000 and MATH 2450, or consent of instructor. This course covers commonly-used techniques for remote sensing digital images. Specifically, it covers remote sensing image pre-processing techniques, including radiometric normalization and geometric correction, manipulating satellite data with different formats, image classification, and land use change detection. This course focuses on core mathematical principles, with only a secondary look at implementation. Credit cannot be earned for both MATH 4480 and MATH 5480.

MATH 5500 Directed Readings: 1-6 semester hours

Prerequisite: Consent of instructor. Independent readings at an advanced level.

MATH 5550 Topics in Advanced Math for the Teacher: 3 semester hours

Prerequisite: Consent of instructor. This course will look at various topics in Algebra, Analysis, and Geometry that will deepen a teacher's understanding of the Mathematics of the precollegiate curriculum. It can be taken more than once for credit.

MATH 5600 Topics in Computation: 3 semester hours

Prerequisite: Consent of instructor. The course will cover various advanced topics in computation, and can be taken more than once for credit. Examples of such topics are: computer graphics, computer architecture, theories of language, analysis of operating systems, numerical geometry and computer aided design, etc.

MATH 5750 Mathematics of Artificial Neural Networks: 3 semester hours

Prerequisites: MATH 1320, MATH 2000, MATH 2450, and graduate standing. This course provides an introduction to the mathematical ideas and techniques underlying the modern theory of artificial neural networks. Guidance and training for implementing practical applications are also provided. Topics may include fundamentals of supervised learning, testing, and validation for parametric statistical models, feedforward neural networks, forward propagation, activation functions, loss functions, batch/stochastic/mini-batch gradient descent, the backpropagation algorithm, preventing overfitting, basics of convolutional neural networks (CNNs), other specialized architectures. Topics are identical to MATH 4750, but the material is covered at a greater depth, and additional projects/assignments are required. Credit cannot be earned for both MATH 4750 and MATH 5750.

MATH 5770 Advanced Topics in Nonlinear Optimization: 3 semester hours

Prerequisites: MATH 4070 or MATH 5070; or consent of the instructor. Topics chosen from theory and algorithms of Lagrange multipliers, algorithms for solving variational inequalities, forward-backward splitting algorithms and proximal alternating minimization algorithm for non-convex optimization problems.

MATH 5820 Topics in Algebra: 3 semester hours

Prerequisite: Consent of instructor. Topics selected from the theory of groups, rings, fields, algebras and other algebraic systems. May be taken more than once for credit with consent of department.

MATH 5890 Advanced Topics in Mathematics: 3 semester hours

Prerequisites: Consent of the instructor. The course will cover various advanced topics in mathematics, statistics, or data science. May be taken more than once if the topic differs.

MATH 6900 Masters Thesis: 1-6 semester hours

Prerequisite: Consent of instructor. Thesis work under the supervision of a faculty member. The course is designed for those students intending to present a thesis as part of their M.A. program. Students who do not write a thesis cannot apply MATH 6900 to a degree.

MATH 7990 Ph.D. Dissertation Research: 1-9 semester hours

Prerequisites: Completion of comprehensive examinations. May be taken for no more than nine hours.

Physics Courses**PHYSICS 1011 Basic Physics I (MOTR PHYS 150L): 3 semester hours**

Prerequisites: MATH 1030 and MATH 1035 required, MATH 1100 or MATH 1800 strongly recommended, concurrent enrollment in PHYSICS 1011L recommended. This course is specifically designed for students in health and life sciences covering the topics in classical mechanics such as kinematics, Newton's laws, energy, momentum and oscillations. This course will not fulfill the PHYSICS 2111 requirement for physics, chemistry, and engineering majors.

PHYSICS 1011L Basic Physics I Laboratory: 1 semester hour

Prerequisite: PHYSICS 1011 (may be taken concurrently). This laboratory course accompanies PHYSICS 1011, which is specifically designed for students in health and life sciences covering topics in classical mechanics such as kinematics, Newton's laws, energy, momentum and oscillations.

PHYSICS 1012 Basic Physics II: 3 semester hours

Prerequisites: PHYSICS 1011, concurrent enrollment in PHYSICS 1012L recommended. This continuation of PHYSICS 1011 is specifically designed for students in health and life sciences covering electricity, magnetism, light, optics and waves. This course will not fulfill the PHYSICS 2112 requirement for physics, chemistry, and engineering majors.

PHYSICS 1012L Basic Physics II Laboratory: 1 semester hour

Prerequisites: PHYSICS 1012 (may be taken concurrently). This laboratory course accompanies PHYSICS 1012, which is specifically designed for students in health and life sciences, covering electricity, magnetism, light, optics and waves.

PHYSICS 1099 Windows on Physics: 1 semester hour

A seminar designed to introduce physics majors to research areas in physics and physics-related fields in the Department of Physics and Astronomy. In addition to fundamental areas of physics, the areas of astrophysics, biophysics, materials science, and nanotechnology will be included. Career opportunities for students with physics degrees will be discussed and the physics curriculum will be reviewed. The course meets weekly and is required of all physics majors and minors who are transfer students.

PHYSICS 2010 Introduction to Inquiry Approaches to STEM Education (STEP I): 1 semester hour

Same as CHEM 2010, BIOL 2010, MATH 2010, and SEC ED 2010. Prerequisites: Concurrent enrollment BIOL 1821, BIOL 1831, CHEM 1111, CHEM 1121, PHYSICS 2111, PHYSICS 2112, MATH 1800, or MATH 1900 or have a declared STEM major. Students who want to explore teaching careers become familiar with lesson plan development by writing, teaching and observing lessons in a local school class. Students build and practice inquiry-based lesson design skills and become familiar with and practice classroom management in the school setting. As a result of the STEP I experiences students should be able to decide whether to continue to explore teaching as a career and ultimately finishing the remainder of the WE TEACH MO curriculum leading to teacher certification. The classroom observations and teaching represent a major field component and requires at least one two hour block of free time during the school day once a week.

PHYSICS 2011 Designing Inquiry-Based STEM Experiences (STEP II): 1 semester hour

Same as CHEM 2011, BIOL 2011, MATH 2011, and SEC ED 2011. Prerequisites: BIOL 2010, CHEM 2010, PHYSICS 2010, MATH 2010, or SEC ED 2010. Students explore teaching careers, become familiar with STEM school setting through observing and discussing the school environment and by developing and teaching inquiry-based lessons.

PHYSICS 2111 Physics: Mechanics and Heat (MOTR PHYS 200L): 4 semester hours

Prerequisites: MATH 1900 (may be taken concurrently). This course introduces students to the phenomena, concepts, and laws of mechanics and heat for physics majors and students in other departments. Three classroom hours and one hour discussion per week.

PHYSICS 2111L Mechanics and Heat Laboratory: 1 semester hour

Prerequisites: PHYSICS 2111 (may be taken concurrently). This laboratory course accompanies PHYSICS 2111, which covers the phenomena, concepts, and laws of mechanics and heat.

PHYSICS 2112 Physics: Electricity, Magnetism, and Optics: 4 semester hours

Prerequisites: PHYSICS 2111 and MATH 2000 (MATH 2000 may be taken concurrently). This course provides a phenomenological introduction to the concepts and laws of electricity and magnetism, electromagnetic waves, optics and electrical circuits for physics majors and students in other departments. Three hours of lecture and one hour of discussion per week.

PHYSICS 2112L Electricity, Magnetism, and Optics Laboratory: 1 semester hour

Prerequisites: PHYSICS 2112 (may be taken concurrently). This laboratory course accompanies PHYSICS 2112, which covers the phenomena, concepts and laws of electricity and magnetism, electromagnetic waves, optics and electrical circuits.

PHYSICS 3200 Mathematical Methods of Theoretical Physics: 3 semester hours

Prerequisites: PHYSICS 2112, MATH 2000, and MATH 2020 (may be taken concurrently). Mathematical techniques specifically used in the study of mechanics, electricity, magnetism, and quantum physics are developed in the context of various physical problems. Course includes the topics of vector calculus, coordinate systems, the Laplace equation and its solutions, elementary Fourier analysis, & complex variables. Applications to electrostatics, mechanics, and fluid dynamics are emphasized. Three hours of lecture per week.

PHYSICS 3221 Mechanics: 3 semester hours

Prerequisites: PHYSICS 3200 and MATH 2020. Advanced course covering single and many particle dynamics, rigid-body dynamics, and oscillations. Variational principles and Hamiltonian formulations of mechanics are covered. Three hours of lecture per week.

PHYSICS 3223 Electricity and Magnetism: 3 semester hours

Prerequisites: PHYSICS 3200 and MATH 2020. Advanced course covering the rigorous development, from basic laws, of Maxwell's equations for electromagnetic fields along with applications of these equations. Topics covered are electrostatics and electrodynamics including currents, magnetic fields, motion of charged particles in fields and an introduction to electromagnetic waves. Three hours of lecture per week.

PHYSICS 3231 Introduction to Modern Physics I: 3 semester hours

Prerequisites: PHYSICS 2111, PHYSICS 2112, and MATH 2020 (MATH 2020 may be taken concurrently) and PHYSICS 3200 strongly recommended. Photons and the wave nature of particles, wave mechanics, Schrodinger equation, with applications to atomic physics; and radiation; the physics of solids; elementary particles; special relativity; health physics. Three hours of lecture per week.

PHYSICS 3281 Directed Readings in Physics: 1-5 semester hours

Prerequisite: Consent of instructor. An independent study of special topics in physics. A paper may be required on an approved topic. Topics must be substantially different. Hours arranged.

PHYSICS 3390 Research: 1-10 semester hours

Prerequisite: Consent of department. Independent physics research projects arranged between student and instructor. Hours arranged.

PHYSICS 4305 Bayesian Data Analysis for the Sciences: 3 semester hours

Prerequisites: Consent of instructor. This is a cross-disciplinary course in two parts. Part one covers Bayesian inference as applied to data analysis in general, with a special focus on the mathematics of model-selection in the physical and life sciences. Part two concentrates specifically on the Bayesian use of log-probability (i.e. information) measures to track order-disorder transitions in thermodynamics, and to track the evolution of sub-system correlations (via both digital and analog means) in a wide variety of complex systems. Expect weekly empirical observation exercises, and opportunities for asynchronous as well as synchronous collaboration.

PHYSICS 4306 Nanoscience Practicals: 1-3 semester hours

Studies of Nanoscience characterization, synthesis, modeling techniques designed for clients of these tools, as well as for technical users interested in a current overview. Course consists of a set of 1/3 semester modules. Check with the instructor on more specialized modules, (e.g. on materials microscopy), if interested. Each module will cover instrumentation, current applications, weaknesses, and will involve lab visits for hands-on experience, weekly web interaction and classroom hours.

PHYSICS 4310 Modern Electronics: 3 semester hours

Prerequisite: PHYSICS 2112. This course is an integrated recitation/ laboratory study of modern analog and digital electronics with emphasis on integrated circuits, which consist of active and passive electrical circuit elements integrated on a single semiconductor substrate. This course includes the study of the properties of the various specialized electronic devices that are constructed with integrated circuits along with a study of the various circuit elements. This course has four contact hours of lecture/ laboratory per week.

PHYSICS 4311 Advanced Physics Laboratory I: 3 semester hours

Prerequisites: PHYSICS 3200 and PHYSICS 3231 or consent of instructor. This course introduces students to the experimental techniques used in research. A student will choose and do several special problems during the semester. Six hours of laboratory per week.

PHYSICS 4323 Modern Optics: 3 semester hours

Prerequisite: PHYSICS 3223. A study of modern optics including diffraction theory, polarization, light propagation in solids, quantum optics, and coherence.

PHYSICS 4331 Intro to Quantum Mechanics: 3 semester hours

Prerequisites: PHYSICS 3200 and PHYSICS 3231. Photons and the wave nature of particles; wave mechanics, Schrodinger equation, operator and matrix formulations, and Dirac notation; applications to single particle systems, atomic physics, and spectroscopy.

PHYSICS 4341 Thermal and Statistical Physics: 3 semester hours

Prerequisites: MATH 2000 and PHYSICS 3231. Introduction to statistical mechanics, classical thermodynamics, and kinetic theory.

PHYSICS 4343 Selected Topics in Physics I: 3 semester hours

Prerequisites: PHYSICS 3221, PHYSICS 3223, PHYSICS 3231, PHYSICS 4341. Topics include special phenomena for research areas such as physics of waves, biophysics, nonlinear physics, geophysical fluid dynamics and the atmospheric sciences treated by methods of advanced mechanics, electromagnetism, statistical mechanics, thermodynamics and quantum mechanics. Three hours of lecture per week.

PHYSICS 4345 Introduction to Nonlinear Dynamics and Stochastic Processes: 3 semester hours

Prerequisites: PHYSICS 3221 and PHYSICS 4341 and consent of instructor. This course is an introduction to dynamical systems and stochastic processes and their applications within various fields. Topics may include: theory of oscillations; bifurcation theory and chaos in dissipative systems, dynamics of nonlinear systems perturbed by noise; noise-induced phase transitions; and linear and nonlinear time series analysis. Students may not receive credit for both PHYSICS 4345 and PHYSICS 5345.

PHYSICS 4347 Introduction to Biophysics: 3 semester hours

Prerequisites: PHYSICS 3231, BIOL 1821, and BIOL 1831; or permission of instructor. This course is an introduction to the application of physical principles to problems in biology. The course may cover topics such as molecular biophysics (e.g., ion transport, protein folding, molecular motors), collective dynamics and self-assembly of biological systems, nonlinear dynamics and electrophysiology in the heart and brain, and physics-based approaches to modeling gene networks and evolutionary dynamics. Students will complete a final project investigating a particular area of biophysics. Students may not receive credit for both PHYSICS 4347 and PHYSICS 5347.

PHYSICS 4350 Computational Physics: 3 semester hours

Prerequisites: PHYSICS 3221, PHYSICS 3223, PHYSICS 4331 and MATH 2450. This course explains how to solve physics-based problems using computational techniques. Mechanics, electrodynamics, and quantum physics problems are solved by (1) numerically solving ordinary and partial differential equations, (2) using Fourier analysis, and (3) solving eigenvalue problems.

PHYSICS 4353 Physics of Fluids: 3 semester hours

Prerequisites: PHYSICS 3221, PHYSICS 3223, and PHYSICS 4341, or consent of instructor. Dynamical theory of gases and liquids. Course covers the mathematical development of physical fluid dynamics with contemporary applications.

PHYSICS 4354 Atmospheric Physics: 3 semester hours

Prerequisites: PHYSICS 4341 and PHYSICS 3221. The mathematical application of physical laws to atmospheric dynamics and physical meteorology. Application of mechanics, thermodynamics, optics, and radiation to atmospheric phenomena including the ionosphere.

PHYSICS 4357 Fundamental Particles and Forces: 3 semester hours

Prerequisites: PHYSICS 3223, PHYSICS 3231 and PHYSICS 4331. This course is an introduction to the fundamental theory of matter and energy. Topics may include, high energy particle accelerators and detectors; phenomenology of strong, electromagnetic and weak interactions; symmetry principles; baryon and meson quark compositions; gauge theories, and the standard model of particle interactions; and grand unification.

PHYSICS 4358 Introduction to Global Geodynamics: 3 semester hours

Prerequisites: PHYSICS 3221 and PHYSICS 3223. This advanced course covers the development, from basic laws, of equations describing the many geodynamic processes underpinning geological modeling and geological data. Topics covered are paleomagnetism, plate tectonics, viscoelastic media, heat transfer, gravity, fluid mechanics, rheology, faulting, and geochronology.

PHYSICS 4370 Relativity and Cosmology: 3 semester hours

Prerequisites: PHYSICS 3221, PHYSICS 3223 and PHYSICS 3231. An introduction to Einstein's general theory of relativity. Topics will include special relativity in the formalism of Minkowski's four dimensional space-time, Principle of Equivalence, metric description of curved space, geodesic equation, Einstein Field Equation, black holes, and cosmology.

PHYSICS 4381 Directed Readings in Physics: 1-10 semester hours

Prerequisite: Consent of instructor. An independent study of special topics in physics for senior undergraduates or graduate students.

PHYSICS 5306 Advanced Nanoscience Practicals: 1-3 semester hours

Prerequisites: Graduate standing in physics or consent of instructor. Advanced studies of Nanoscience characterization, synthesis, and modeling techniques designed for clients of these tools, as well as for technical users interested in a current overview. The course consists of a set of 1/3 semester modules. Check with the instructor on more specialized modules, (e.g. on materials microscopy), if interested. Each module will cover instrumentation, current applications, and weaknesses and will involve lab visits for hands-on experience, weekly web interaction and classroom hours.

PHYSICS 5345 Nonlinear Dynamics and Stochastic Processes: 3 semester hours

Prerequisites: PHYSICS 3221 and PHYSICS 4341 and consent of instructor. Dynamical systems; theory of oscillations; introduction to bifurcation theory and chaos in dissipative systems with applications in physics and biology; introduction to stochastic processes with applications in physics, chemistry and biology; dynamics of nonlinear systems perturbed by noise; noise-induced phase transitions; linear and nonlinear time series analysis. Three classroom hours per week.

PHYSICS 5347 Intermediate Biophysics: 3 semester hours

Prerequisites: Graduate standing, PHYSICS 3231, BIOL 1821 and BIOL 1831 or permission of instructor. This course is applies physical principles to problems in biology. Topics may include molecular biophysics (e.g., ion transport, protein folding, molecular motors), collective dynamics and self-assembly of biological systems, nonlinear dynamics and electrophysiology in the heart and brain, and physics-based approaches to modeling gene networks and evolutionary dynamics. Students will complete a final project investigating a particular area of biophysics. Students will be expected to design projects containing a significant component of original research. Students may not receive credit for both PHYSICS 4347 and PHYSICS 5347.

PHYSICS 5350 Intermediate Computational Physics: 3 semester hours

Prerequisites: PHYSICS 3221, PHYSICS 3223, PHYSICS 4331 and MATH 2450; or graduate standing. This course explains how to solve physics-based, intermediate-level problems using computational techniques. Mechanics, electrodynamics, and quantum physics problems are solved by (1) numerically solving ordinary and partial differential equations, (2) using Fourier analysis, and (3) solving eigenvalue problems. Students may not receive credit for both PHYSICS 4350 and PHYSICS 5350.

PHYSICS 5353 Intermediate Physics of Fluids: 3 semester hours

Prerequisites: PHYSICS 3221, PHYSICS 3223, and PHYSICS 4341; or graduate standing. This course covers intermediate level dynamical theory of gases and liquids. This course examines mathematical fluid dynamics along with some contemporary applications. Students may not receive credit for both PHYSICS 4353 and PHYSICS 5353.

PHYSICS 5358 Intermediate Global Geodynamics: 3 semester hours

Prerequisites: Graduate standing, PHYSICS 3221 and PHYSICS 3223 or permission of the Instructor. This course intermediate course covers the development of equations describing the many geodynamic processes underpinning geological modeling and geological data. Topics covered may include paleomagnetism, plate tectonics, viscoelastic media, heat transfer, gravity, fluid mechanics, rheology, faulting, and geochronology. Students will complete a final project investigating a particular area of geodynamics. Students will be expected to develop a more advanced project. Students may not receive credit for both PHYSICS 4358 and PHYSICS 5358.

PHYSICS 5370 Intermediate Relativity and Cosmology: 3 semester hours

Prerequisites: PHYSICS 3221, PHYSICS 3223, and PHYSICS 3231; or graduate standing. Topics will include special relativity in the formalism of Minkowski's four dimensional space-time, Principle of Equivalence, geodesic equation, Einstein Field Equation, black holes, and cosmology. Differential geometry from metric description to Riemann curvature tensor will be studied.

PHYSICS 5402 Introduction to Mathematical Physics: 3 semester hours

Prerequisites: Graduate standing in physics or consent of instructor. A course covering mathematical techniques as applied in advanced theoretical physics including generalized vector spaces and their dual spaces, linear operators and functionals, generalized functions, spectral decomposition of operators, tensor analysis, and complex variables. Three hours of lecture per week.

PHYSICS 6300 Master's Thesis: 3 semester hours

Prerequisite: Consent of instructor. Thesis work under the supervision of a faculty member. The course is designed for those students intending to present a thesis as part of their M.S. program. Students who do not write a thesis cannot apply PHYSICS 6300 to a degree. This course transfers to the Cooperative Ph.D. program as three research credits.

PHYSICS 6400 Special Problems: 1-5 semester hours

Must have faculty mentor and approval of Department Chairperson. A study of special topics in physics for graduate students.

PHYSICS 6401 Special Topics: 1-4 semester hours

Prerequisite: Consent of instructor. This course is designed to give the department an opportunity to test a new course.

PHYSICS 6409 Theoretical Mechanics I: 3 semester hours

Prerequisite: PHYSICS 3221. Classical mechanics, methods of Newton, Lagrange, and Hamilton applied to motion of particles and rigid bodies, elasticity, hydrodynamics.

PHYSICS 6410 Seminar: 1-3 semester hours

Prerequisite: Approval of Department Chair. Discussion of current topics.

PHYSICS 6411 Electrodynamics I: 3 semester hours

Prerequisite: PHYSICS 3223. A rigorous development of the fundamentals of electromagnetic fields and waves. Electrostatics, magnetostatics, Maxwell's equations, Green's functions, boundary value problems, multipoles, conservation laws.

PHYSICS 6413 Statistical Mechanics: 3 semester hours

Prerequisite: PHYSICS 4331, PHYSICS 4341. A study of statistical ensembles; Maxwell-Boltzmann, Fermi-Dirac and Einstein-Bose distribution laws, application to some physical systems.

PHYSICS 6423 Electrodynamics II: 3 semester hours

Prerequisite: PHYSICS 6411. A continuation of PHYSICS 6411.

Applications of time-dependent Maxwell's equations to such topics as plasmas, wave guides, cavities, radiation: fields of simple systems and multiples. Relativity: covariant formulation of Maxwell's equations and conservation laws, fields of uniformly moving and accelerated charges.

PHYSICS 6461 Quantum Mechanics I: 3 semester hours

Prerequisite: PHYSICS 4331. A study of the Schrodinger wave equation, operators and matrices, perturbation theory, collision and scattering problems.

PHYSICS 6463 Quantum Mechanics II: 3 semester hours

Prerequisite: PHYSICS 6461. Continuation of PHYSICS 6461. To include such topics as Pauli Spin-Operator Theory, classification of atomic states, introduction to field quantization, and Dirac Electron Theory.

PHYSICS 6490 Research: 1-10 semester hours

Prerequisite: Must have a faculty mentor and approval of the department chair. Investigations of an advanced nature leading to the preparation of a thesis or dissertation.

PHYSICS 6495 Continuous Registration: 1-6 semester hours

Doctoral candidates who have completed all requirements for the degree except the dissertation, and are away from the campus must continue to enroll for at least one hour of credit each registration period until the degree is completed. Failure to do so may invalidate the candidacy.

Music

General Information

Degrees and Areas of Concentration

The Department of Music offers programs of study leading to the Bachelor of Music degrees in Jazz Studies; Music Education (and state teaching certification in grades K-12); Music Performance; Music Composition; Music Theory; the B.M. with Elective Studies in Business; and the B.A. degree in Music.

Music Minors

Minors in music and jazz studies are available.

Faculty

Music faculty members have received recognition for distinguished achievements in conducting, composition, performance, and teaching. The faculty is also recognized for high-profile research in musicology, music theory, and music education.

Applied instruction in piano, organ, voice, jazz/classical guitar and all band and orchestral instruments is provided by full-time and adjunct faculty, all of whom are actively performing and/or recording musicians in the St. Louis region and beyond. Faculty recitals are regularly scheduled and are free for students to attend.

Facilities

The Department has teaching, rehearsal, classroom, practice, and study spaces in the Music Building, the Arts Administration Building, and the nationally-renowned Touhill Performing Arts Center.

Ensembles

Membership in Music Department performing ensembles (choral, orchestral, concert band, pep band, jazz, chamber) is open to UMSL students in all majors and minors. Admission to most ensembles is by audition (contact the individual ensemble's director for more information about participation guidelines).

| | | |
|-------------|---|---|
| EN PER 1410 | The University Singers (MOTR PERF 102C) | 1 |
| EN PER 1500 | University Orchestra (MOTR PERF 102O) | 1 |
| EN PER 1530 | University Wind Ensemble | 1 |
| EN PER 1532 | University Pep Band | 1 |
| EN PER 1541 | Chamber Ensemble Brass | 1 |
| EN PER 1542 | Jazz Combo | 1 |
| EN PER 1543 | Chamber Ensemble Percussion | 1 |
| EN PER 1544 | Chamber Ensemble Strings | 1 |
| EN PER 1545 | Chamber Ensemble Voice | 1 |
| EN PER 1546 | Chamber Ensemble Woodwinds | 1 |
| EN PER 1550 | Jazz Orchestra | 1 |
| EN PER 1560 | | |

Career Outlook

A degree in music prepares students for careers in a wide range of specialties such as professional performance, teaching in public schools, holding positions in the music industry (e.g. recording, publishing, radio

programming, manufacturing), or working as a musical entrepreneur carving out your own niche in the field. Additionally, employers in many fields outside of music take notice of applicants with music degrees because they understand that self-discipline, collaboration, creativity, and adaptability to new and unfamiliar scenarios are central to the work of musicians, and these skills transfer to non-musical areas in beneficial ways.

UMSL music graduates are highly sought-after in the job market, particularly in K-12 school music programs in Missouri and Illinois. Many others develop busy careers as professional performers and composers. Those graduates who choose to seek further study in music have been readily accepted into many of the nation's top graduate programs. Others still are applying what they learned in their musical studies at UMSL in careers outside of music.

Additional information may be obtained by contacting the Department of Music 314-516-5981.

The University of Missouri - St. Louis is an All-Steinway School and is accredited by the National Association of Schools of Music.

Degrees

Music BA (p. 637)

Music BM

- Elective Studies in Business Emphasis (p. 639)
- Jazz Studies Emphasis (p. 641)
- Performance Emphasis (p. 651)
- Music Education Emphasis (p. 645)
- Music Theory (p. 649)
- Music Composition Emphasis (p. 643)

Minors

Jazz Studies Minor (p. 603)

Music Minor (p. 654)

Affiliated Degrees

Master of Education, Interdisciplinary Studies Emphasis (p. 536) with electives in Music

Courses

Courses offered by the department can be found at the links below:

Applied Music (AP MUS)

Ensemble Performance (EN PER)

Music Education (MUS ED)

Music History (M H L T)

Pedagogy (PDGOGY)

Practicum (PRACTM)

Theory and Composition (THRY COM)

AP MUS 3449 Percussion: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in percussion for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3450 Piano: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in piano for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3451 Saxophone: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in saxophone for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3452 Trombone: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in trombone for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3453 Trumpet: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in trumpet for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3454 Tuba: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in tuba for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3455 Violin: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in violin for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3456 Viola: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in viola for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3457 Violoncello: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in violoncello for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3458 String Bass: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in string bass for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3459 Voice: 1 semester hour

Prerequisites: Completion of advancement jury in major applied area. This course provides advanced individualized instruction in voice for music majors whose declared emphasis area is not music performance. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 6 credit hours.

AP MUS 3500 Junior Recital: 0 semester hours

Prerequisites: Consent of instructor; concurrent registration in a 4000-level AP MUS course. Preparation and presentation of a Junior Recital. The student's preparation will be evaluated by means of a pre-recital hearing at least 5 weeks before the recital.

AP MUS 3510 Senior Recital: 0 semester hours

Prerequisites: Consent of instructor; concurrent registration in a 3000-level AP MUS course (for non-performance majors) or a 4000-level AP MUS course (for Music Performance majors). Preparation and presentation of a Senior Recital. The student's preparation will be evaluated by means of a pre-recital hearing at least 5 weeks before the recital.

AP MUS 4440 Bassoon: 2 semester hours

Prerequisites: Completion of advancement jury in major applied area and consent of instructor. This course provides advanced individualized instruction in bassoon for music performance majors. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 8 credit hours.

AP MUS 4455 Violin: 2 semester hours

Prerequisites: Completion of advancement jury in major applied area and consent of instructor. This course provides advanced individualized instruction in violin for music performance majors. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 8 credit hours.

AP MUS 4456 Viola: 2 semester hours

Prerequisites: Completion of advancement jury in major applied area and consent of instructor. This course provides advanced individualized instruction in viola for music performance majors. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 8 credit hours.

AP MUS 4457 Violoncello: 2 semester hours

Prerequisites: Completion of advancement jury in major applied area and consent of instructor. This course provides advanced individualized instruction in violoncello for music performance majors. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 8 credit hours.

AP MUS 4458 String Bass: 2 semester hours

Prerequisites: Completion of advancement jury in major applied area and consent of instructor. This course provides advanced individualized instruction in string bass for music performance majors. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 8 credit hours.

AP MUS 4459 Voice: 2 semester hours

Prerequisites: Completion of advancement jury in major applied area and consent of instructor. This course provides advanced individualized instruction in voice for music performance majors. These private lessons are supplemented through a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. This course may be repeated for up to 8 credit hours.

AP MUS 5430 Special Applied Studies: 1 semester hour

Prerequisites: Graduate standing in music and consent of department. Individual instruction in the performance and literature of an applied area other than the student's primary performance study. No jury examination is required. May be repeated for credit.

AP MUS 5440 Graduate Applied Music: 1 semester hour

Prerequisites: Graduate standing in music and consent of department. Concurrent registration in EN PER 5490 is required for students enrolled in the Graduate Certificate in Music Performance. Instruction is offered in the following areas: bassoon, clarinet, classical guitar, euphonium, flute, French horn, harp oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, violin, viola, violoncello, string bass and voice. May be repeated for credit.

Ensemble Performance

Courses

EN PER 1400 University Chorus (MOTR PERF 102C): 1 semester hour

Prerequisite: Consent of instructor. Preparation and performance of choral literature.

EN PER 1410 The University Singers (MOTR PERF 102C): 1 semester hour

This course provides students with experience in the study and performance of music for choir.

EN PER 1500 University Orchestra (MOTR PERF 102O): 1 semester hour

This course provides students with experience in the study and performance of music for orchestra. There is no audition to join, but previous performance experience is expected.

EN PER 1520 University Symphonic Band (MOTR PERF 102B): 1 semester hour

Prerequisite: Consent of instructor. Study preparation and performance of music for the winds and percussion.

EN PER 1530 University Wind Ensemble: 1 semester hour

This course provides students with experience in the study and performance of music for wind ensemble and various chamber ensembles for woodwinds, brass, and percussion. There is no audition to join, but previous performance experience is expected.

EN PER 1532 University Pep Band: 1 semester hour

This course provides students with experience in the study and performance of music for pep band in diverse contemporary styles. Performances of the University Pep Band are primarily in conjunction with campus activities and athletic events.

EN PER 1541 Chamber Ensemble Brass: 1 semester hour

This course provides students with experience in the study and performance of music for small ensembles where brass instruments are the primary focus.

EN PER 1542 Jazz Combo: 1 semester hour

This course provides students with experience in the study and performance of music for small jazz ensemble.

EN PER 1543 Chamber Ensemble Percussion: 1 semester hour

This course provides students with experience in the study and performance of music for percussion ensemble.

EN PER 1544 Chamber Ensemble Strings: 1 semester hour

This course provides students with experience in the study and performance of music for small ensembles where string instruments are the primary focus.

EN PER 1545 Chamber Ensemble Voice: 1 semester hour

This course provides students with experience in the study and performance of music for small vocal ensembles.

EN PER 1546 Chamber Ensemble Woodwinds: 1 semester hour

This course provides students with experience in the study and performance of music for small ensembles where woodwind instruments are the primary focus.

EN PER 1547 Chamber Ensemble New Music: 1 semester hour

The New Music Ensemble is an undergraduate ensemble that promotes and presents a broad range of new and contemporary music. Repertoire will feature solo, chamber, and large ensemble works by living composers or those of the recent past. Part of the mission of this ensemble is to offer an outlet for composition majors to have their music performed.

EN PER 1548 Chamber Ensemble Piano: 1 semester hour

Prerequisites: Consent of instructor. This course provides instruction in the study, preparation, and performance of music for small ensembles where the piano is the primary musical focus.

EN PER 1550 Jazz Orchestra: 1 semester hour

This course provides students with experience in the study and performance of jazz music for big band.

EN PER 1551 Jazz Lab Band: 1 semester hour

Prerequisites: Consent of instructor. This course involves study, preparation, and performance of jazz music for big band.

EN PER 1580 Studio Ensemble: 1 semester hour

Prerequisites: Concurrent applied study AP MUS 14XX, 34XX, or 44XX. This course involves study, preparation, and performance of ensemble music composed for multiples of the same instrument. This course may be repeated for credit.

EN PER 2700 Seminar in Performance and Outreach: 1 semester hour

Prerequisites: Acceptance as a music major/minor and two semesters of applied music study or by consent on instructor. Instruction in developing performance repertoire and skills for community and educational outreach programming. Student presentations of these programs in community and educational venues required. Course may be repeated.

EN PER 4560 Advanced Opera Workshop: 1 semester hour

This advanced course provides students with instruction in movement, stage techniques, technical theater, repertoire, and techniques for advanced opera preparation and performance.

EN PER 5310 Graduate Chamber Ensemble: 1 semester hour

Prerequisites: Graduate standing in music and consent of department. Study and performance of traditional and nontraditional chamber literature.

EN PER 5490 Graduate Ensemble: 1 semester hour

Prerequisites: Graduate standing in music or consent of department. Study, preparation, and performance of ensemble literature from the choral, orchestral, or band/wind ensemble repertoire. May be repeated for a total of four hours of credit.

Music Education

Courses

MUS ED 2770 An Introduction to Music for the Elementary School Teacher: 3 semester hours

Through hands-on experiences and classroom lessons, students will develop an understanding and appreciation of the basics of music in order to create and present lesson plans that utilize music as a tool for teaching elementary subjects. Students will also learn basic music instrumentation, comprehension of musical elements and terminology, and the ability to play simple treble clef melodies on classroom instruments, e.g., soprano recorders and xylophones.

MUS ED 3570 Curriculum and Methods of Teaching Elementary and Secondary General Music: 3 semester hours

Prerequisites: THRY COM 2311 and THRY COM 2312 and completion of Level I Education courses for the music education major. This course provides a study of the elementary and secondary school music curriculum emphasizing the objectives, methods of teaching and staffing music classes, and analysis of instructional materials and resources. Must be completed in residence.

MUS ED 3680 Curriculum and Methods of Teaching Instrumental Music: 3 semester hours

Prerequisites: THRY COM 2311, THRY COM 2312, PRACTM 2510, and MUS ED 3570. A study of the teaching techniques, materials, curriculum, and organization of the beginning instrumental music education program. Topics include student recruitment, the elementary band/orchestra, small group instruction, jazz ensemble, and marching band. This course must be completed in residence. Concurrent enrollment in MUS ED 3570 is required.

MUS ED 3710 Curriculum and Methods of Teaching Choral Music: 3 semester hours

Prerequisites: THRY COM 2311, THRY COM 2312, MUS ED 3570, PRACTM 2180, and completion of Level I Education courses. A study of the following topics pertinent to an elementary and middle school choral music program: curriculum, methods of teaching techniques, organization, and administrative procedures for choral performance classes. This course must be completed in residence. Limited to music education majors.

MUS ED 5060 Graduate Workshop in Music Education: 1-5 semester hours

Prerequisites: Graduate standing and consent of instructor. Intensive workshop in Music Education. Variable topics. To gain skills and knowledge in specific areas not readily available in existing courses.

MUS ED 5510 Graduate Instrumental Methods: 3 semester hours

Prerequisites: Graduate standing in music. Development of objectives for instrumental programs and methods of achieving those objectives. Comprehensive musicianship through instrumental performance, analysis of instrumental literature, instrumental philosophies and methodologies, rehearsal organization, and recent research in instrumental music education will be discussed.

MUS ED 5570 Advanced Curriculum and Methods of Teaching Elementary and Secondary General Music: 3 semester hours

Prerequisites: Graduate standing and music coordinator approval. This course prepares students to teach general music to students at the elementary and secondary level. The course emphasizes the formation of a philosophy of music education and practices that consider the developmental needs of children as they are introduced to musical concepts and skills. Topics of the course may include lesson planning and observations, a review of traditional and current music education pedagogies, National and State music standards, music repertoire, assessment strategies, and differentiated teaching methods for music instruction.

MUS ED 5610 Graduate Choral Methods: 3 semester hours

Prerequisites: Graduate standing in music. Development of objectives for choral programs and methods of achieving those objectives. Comprehensive musicianship through choral performance, analysis of choral literature, the changing voice, choral philosophies and methodologies, rehearsal organization, and recent research in choral music education will be discussed.

MUS ED 5620 Guitar in the Classroom: 3 semester hours

Prerequisites: Graduate standing in music. A study of guitar instruction in grades 5-12 with a focus on curricular sequence that includes chords, strums and picking patterns essential for song accompaniment skill development. Current materials, suitable for upper elementary and secondary students will be explored.

MUS ED 5680 Advanced Curriculum and Methods of Teaching Instrumental Music: 3 semester hours

Prerequisites: Graduate standing and music coordinator approval. This course prepares students to teach instrumental music to students at the elementary and secondary level. The course emphasizes the formation of a philosophy of music education and practices that consider the developmental needs of students as they are introduced to musical concepts and skills through the playing of musical instruments in bands, orchestras, and other instrumental ensembles. Topics of the course may include lesson planning and the creation of behavioral objectives, teaching musical notation, rhythmic reading, sight reading, principles of musical acoustics, tone and intonation, bowing and articulation, and the study of rehearsal and performance procedures.

MUS ED 5712 Advanced Choral Music Methods: 3 semester hours

Prerequisites: Graduate standing and music coordinator approval. This course prepares students to teach choral music to students at the elementary and secondary level. This course emphasizes the formation of a philosophy of music education and practices that consider the developmental needs of students as they are introduced to musical concepts and skills through singing in vocal ensembles. Topics of the course may include lesson planning and the creation of behavioral objectives, building vocal tone, diction, rehearsal communication and techniques, diagnosing choral problems, working with changing voices, and developing style in choral singing.

MUS ED 5750 Computer Applications in Music Education: 3 semester hours

Prerequisites: Graduate standing in music. An examination of the potential of computers in the music education field. Experiences with available hardware and software suitable for applications that include inventory, budget, music library cataloging, digital music synthesis, digital music recording and editing, music-related graphics and basic animation with music soundtracks.

MUS ED 5810 Foundations of Music Education: 3 semester hours

Prerequisite: Graduate standing in music. A study of the historical, philosophical, and psychological foundations of music education, includes principles necessary for development, implementation, and evaluation of total school music program.

MUS ED 5830 Contemporary Music Education: 3 semester hours

Prerequisite: Graduate standing in music. A study of recent trends and issues in music education.

MUS ED 5910 Music Education Research: 3 semester hours

Prerequisite: Graduate standing in music. Applications of various approaches in defining and analyzing research problems in music education. Historical, experimental, descriptive, and philosophical research will be included.

MUS ED 5950 Special Problems in Music Education: 1-3 semester hours

Prerequisite: Graduate Standing in music. Selected Problems to meet the needs of the individual student.

MUS ED 5990 Master's Project in Music Education: 3 semester hours

Prerequisite: Graduate standing in music. A project utilizing historical, experimental, philosophical, descriptive, or analytical research techniques. The project will include a written report.

Music History

Courses

M H L T 1001 Introduction to Music (MOTR MUSC 100): 3 semester hours

An historically oriented study of art music, its styles and forms from the Baroque period to the present day. This course will not apply toward requirements for a music major.

M H L T 1003 History of Rock Music (MOTR MUSC 100RP): 3 semester hours

This course is a year-by-year review of the music, artists, composers, record producers, and others associated with rock 'n' roll from 1954 to the present with emphasis on the controversies surrounding this genre. The course will examine the artistry of rock music as well as its historical contexts and social implications.

M H L T 1004 B.A.M. - Black American Music: 3 semester hours

This course explores the depth and richness of African American music in the United States. It includes a broad spectrum of cultural and historical contexts to develop an understanding, past and present, of black music in America through many genres including blues, spirituals, jazz, soul, and hip-hop. This course satisfies the Cultural Diversity requirement.

M H L T 1005 Music and Film: 3 semester hours

This course will examine the interaction between music and films, TV, and video games. Students will discuss ways that music is used to reflect and enhance the mood, character, and action of the on-screen image, as well as their own emotional responses to the art form. Additionally, students will have the opportunity to contribute their personal favorites to the curriculum, which will span many genres and cultures from around the world.

M H L T 1080 Introduction to Irish Traditional Music: 3 semester hours

Will survey the rich tapestry of Irish traditional music, song and dance. Particular attention will be given to the cultural history of the traditional music maker in Irish society, as well as among the constituent communities of the Irish diaspora in Europe and North America. Will introduce students to the instruments, performance settings and regional styles of Irish traditional music. Using field recordings and archive materials collected in Ireland and North America, will focus on celebrated folk performers of the past and present, and evaluate the impact of contemporary media on their ancient, yet evolving, musical genre. No prior experience of Irish traditional music is necessary to pursue this course.

M H L T 1140 Popular Music in America: 3 semester hours

This course is designed as a survey of major genres of American popular music - Tin Pan Alley, musical theater, ragtime, blues, early and more popular phases of jazz, country, rock, pop, hip-hop, rap, etc. Included will be a broad spectrum of cultural and historical contexts, insight into the development of the music industry, study of significant artists, and understandings of the formal and stylistic components of the music.

M H L T 1150 Drumming Cultures of the World (MOTR MUSC 102): 3 semester hours

Drumming is one of the oldest forms of expression in the world and is prevalent on every continent. This course is designed as a survey of drumming throughout the world and the significance to the cultures therein. Included will be a broad spectrum of cultural and historical contexts, performance practices and hands on instruction. The major focus in this course will be the drumming practices of Africa, Asia, South America and the Caribbean. This course fulfills the cultural diversity requirement for the University.

M H L T 1160 Musical Journey through Latin America: 3 semester hours

Explore the diversity of this contagious music of the past and present, from the tango of Argentina, to salsa and meringue of the Caribbean, and from huayno of Amerindian cultures, to the marimba of Middle Latin America! This introduction to musical cultures of Latin America reveals the rich and wide range of musical forms, instruments, and styles that has influenced music on almost all parts of the globe today. This course fulfills the cultural diversity requirement for the University.

M H L T 1170 Musical Journey through the Far East: 3 semester hours

This class will explore the musical traditions and instruments of the countries of East Asia - China, Japan, and Korea. Much of the legendary founding of music and musical instruments originated on the Asian continent and transplanted along the Silk Road (trade routes from India, Persia and the Mediterranean) to the Far East. We will examine some of the world's most amazing sounds of the Orient. This course fulfills the cultural diversity requirement for the University.

M H L T 1180 Musical Journey Through Africa: 3 semester hours

This introduction to musical cultures of Africa provides a snapshot of African music south of the Sahara, or sub-Saharan Africa. We will explore the extraordinary rich and diverse musical traditions through the sounds and rhythms of its people. Highlights of the course include the introduction to a wide range of authentic musical instruments from Africa. This course fulfills the cultural diversity requirement for the University.

M H L T 1190 Musical Journey of the Native North American: 3 semester hours

This introduction to musical cultures of the Native American provides a snapshot of the aboriginal and modern day Native American in North America. We will explore the extraordinary rich and diverse musical traditions through the sounds and cultural practices of its people. Highlights of the course include the introduction to a wide range of authentic musical instruments of the Native American. This course fulfills the cultural diversity requirement for the University.

M H L T 1200 History of Jazz Music: 3 semester hours

This course is a chronological exploration of the history of jazz with an examination of its roots, important genres and styles, historic recordings, important musicians, and relation to society.

M H L T 2010 History of Western Music I (MOTR MUSC 103): 3 semester hours

Prerequisites: THRY COM 1311 and THRY COM 1312, or consent of instructor. This course is a survey of music history from antiquity through the Baroque period, with readings, listening, and lecture. The principal objectives are to acquaint students with important musical works from this period of Western music history, and to place these works in their larger social, cultural, economic, and intellectual contexts.

M H L T 2020 History of Western Music II (MOTR MUSC 104): 3 semester hours

Prerequisites: M H L T 2010, or consent of instructor. This course is a survey of music history from ca. 1750 to the present, with readings, listening, and lecture. The principal objectives are to acquaint students with important musical works from this period of Western music history, and to place these works in their larger social, cultural, economic, and intellectual contexts.

M H L T 2030 Special Topics in Musicology: 3 semester hours

Prerequisites: Sophomore standing. This course connects students with specialized topics in and related to music in and beyond the traditional western art canon. The primary goals of this class are to provide students opportunities to engage in close study of music from cultures, genres, and musicians that are typically excluded from music classes in the cultural west, and to explore commonalities between different musics along thematic lines. The specific topics and subject matter change from year to year at the discretion of the instructor.

M H L T 4000 Directed Studies: 1-5 semester hours

Prerequisites: Consent of instructor. Directed independent study of selected topics in music. May be repeated, but no more than 5 hours may be applied toward a degree.

Music: Pedagogy

Courses

PDGOGY 1220 String and Percussion Techniques: 2 semester hours

This course presents a study of fundamental string and percussion instrument pedagogical and performance skills. It is intended to prepare instrumental music education majors to teach string and percussion instruments to beginning and intermediate students, and to support more advanced students with a knowledge of pedagogical and performance practices, related materials, and equipment.

PDGOGY 1230 Brass and Woodwind Techniques: 2 semester hours

This course presents a study of fundamental brass and woodwind instrument pedagogical and performance skills. It is intended to prepare instrumental music education majors to teach brass and woodwind instruments to beginning and intermediate students, and to support more advanced students with a knowledge of pedagogical and performance practices, related materials, and equipment.

PDGOGY 1250 Brass Techniques: 2 semester hours

Prerequisites: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all brass instruments including trumpet, horn, trombone, euphonium, and tuba in the school setting.

PDGOGY 1260 Woodwind Techniques: 2 semester hours

Prerequisites: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all woodwind instruments including flute, clarinet, oboe, bassoon, and saxophone in the school setting.

PDGOGY 1270 String Techniques: 2 semester hours

Prerequisites: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all string instruments including violin, viola, cello, and bass in the school setting.

PDGOGY 1280 Percussion Instrumental Techniques: 2 semester hours

Prerequisites: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all percussion instruments including snare drum, tom-tom, bass drum, cymbals, drumset, timpani, mallet instruments and miscellaneous percussion instruments in the school setting.

PDGOGY 2220 Jazz Pedagogy: 3 semester hours

Students will participate in interactive sessions that will “boost the jazz teaching chops” whether students are seasoned teachers or novices in the field of jazz education. A wide range of jazz teaching methods will be studied, including those that have been successful in the instructor’s nationally recognized jazz camps. Lab groups will be formed for “hands on-minds on” teaching and learning. Students will experience jazz teaching techniques, examine jazz method series, listen to a variety of jazz styles, and examine and perform jazz literature from different styles.

PDGOGY 4000 Directed Study: Variable Topic: 1-5 semester hours

Prerequisites: Consent of instructor. Directed independent study of selected topics in music. May be repeated, but no more than 5 hours may be applied toward a degree.

PDGOGY 5001 Studio Pedagogy: 1 semester hour

Prerequisites: Consent of the instructor and graduate standing required. In this class, typically supervised by the student’s applied instructor, the student will focus on research of teaching techniques that apply specifically to the student’s instrument or voice.

Music: Practicum

Courses

PRACTM 1140 Piano Proficiency I: 1 semester hour

Prerequisite: Permission of department. Group instruction for music majors who do not meet beginning keyboard requirements.

PRACTM 1150 Piano Proficiency II: 1 semester hour

Prerequisite: PRACTM 1140 or consent of department. Group instruction for music majors who do not meet beginning keyboard requirements.

PRACTM 1200 Jazz Improvisation: 1 semester hour

Prerequisite: Consent of instructor. This course provides an introduction to jazz improvisation. Students will engage in study and application of the basic theoretical, technical, and performance aspects of jazz improvisation. It may be repeated once for a total of two credits.

PRACTM 1250 Singer's Diction: English, Italian and German: 1 semester hour

Prerequisites: AP MUS 1459. A study of English, Italian and German pronunciation using the International Phonetic Alphabet.

PRACTM 1260 Singer's Diction: Latin, French, and Spanish: 1 semester hour

Prerequisites: AP MUS 1459. A study of Latin, French, and Spanish pronunciation using the International Phonetic Alphabet.

PRACTM 1270 Digital Music Notation: 3 semester hours

This course is an in-depth study of a complex music notation program (Finale). The course will focus on various modes of notation entry, playback, basic engraving, MIDI and XML input, as well as several different output formats. An ability to read traditionally notated music in treble and bass clefs is necessary for this class.

PRACTM 1530 Collaborative Piano I: 1 semester hour

Prerequisites: Consent of instructor. This course focuses on basic practices of collaborative piano, for keyboard majors. Public performance of works studied is required.

PRACTM 1540 Collaborative Piano II: 1 semester hour

Prerequisites: PRACTM 1530 or consent of instructor. This course is a continuation of PRACTM 1530 with a focus on practices of collaborative piano, for keyboard majors. Public performance of works studied is required.

PRACTM 1550 Collaborative Piano III: 1 semester hour

Prerequisites: PRACTM 1540 or consent of instructor. This course is a continuation of PRACTM 1540 with a focus on practices of collaborative piano, for keyboard majors. Public performance of works studied is required.

PRACTM 1570 Piano Performance Class: 2 semester hours

Prerequisites: Two semesters of AP MUS 1450: Piano. This class allows for additional study of repertoire, giving students greater opportunities to perform and receive critiques from instructor, adjudicators, and peers. Course may be repeated for credit.

PRACTM 2160 Piano Proficiency III: 1 semester hour

Prerequisite: PRACTM 1150 or permission of department. Continuation of piano proficiency study.

PRACTM 2170 Jazz Keyboard Harmony I: 1 semester hour

Prerequisite: PRACTM 1150 or consent of department. This course provides group keyboard instruction in a jazz idiom. Students will develop proficiency in the performance of basic jazz harmonic progressions.

PRACTM 2171 Jazz Keyboard Harmony II: 1 semester hour

Prerequisite: PRACTM 2170. This course provides group keyboard instruction in advanced jazz harmony. Students will continue their development of performance techniques introduced in Jazz Keyboard Harmony I (PRACTM 2170).

PRACTM 2180 Piano Proficiency IV: 1 semester hour

Prerequisite: PRACTM 2160 or consent of department. Continuation of piano proficiency study.

PRACTM 2200 Advanced Jazz Improvisation: 1 semester hour

Prerequisite: PRACTM 1200. This course provides a study of advanced harmonic concepts and their application to jazz improvisation. Students will continue their study begun in "Jazz Improvisation" (PRACTM 1200). Course may be repeated for credit.

PRACTM 2510 Conducting I: 2 semester hours

Prerequisite: THRY COM 2301. Concurrent registration in PRACTM 2610 required for Bachelor of Music in Music Education program. Techniques and problems in conducting.

PRACTM 2610 Instrumental Literature Laboratory: 1 semester hour

Prerequisites: THRY COM 2301 and THRY COM 2302. Analysis and evaluation of selected instructional and concert materials for elementary, junior and senior high school groups.

PRACTM 2611 Choral Literature Laboratory: 1 semester hour

Prerequisites: THRY COM 2301 and THRY COM 2302. This course focuses on the analysis and evaluation of selected instructional and concert materials for elementary and secondary grades.

PRACTM 3280 Score Reading at the Keyboard: 1 semester hour

Prerequisites: PRACTM 2180, or consent of instructor. This course provides practical experience in the keyboard realization of figured bass and score reading with emphasis on C-clefs, transposition, and modulation.

PRACTM 3521 Conducting II - Instrumental: 2 semester hours

Prerequisite: PRACTM 2510. Advanced study of instrumental conducting and rehearsal techniques, score reading and interpretation.

PRACTM 3522 Conducting II - Choral: 2 semester hours

Prerequisite: PRACTM 2510. Advanced study of choral conducting and rehearsal techniques, score reading and interpretation. Concurrent enrollment in PRACTM 3620 required for Bachelor of Music in Music Education program.

PRACTM 3920 Senior Research: 2-4 semester hours

Prerequisite: Consent of department. Required of all senior music majors. Directed readings and research in an area mutually acceptable to the student and instructor.

PRACTM 4000 Directed Studies: Variable Topic: 1-5 semester hours

Prerequisites: Consent of department. Directed independent study of selected topics in music. May be repeated, if topic is substantially different, but no more than 5 hours may be applied toward a degree.

PRACTM 4100 Senior Project in Theory/Composition: 2-4 semester hours

Prerequisites: Consent of department. Required of all students in the BM in Theory/Composition program. This project could take any number of forms, dependent upon mutual agreement between student and instructor. For example, a student with a focus in music theory would write a thesis of substantial depth on a theoretical/analytical topic, and a student with a focus in composition would either write a large-scale work (for orchestra, wind ensemble, etc.) or prepare and lead a recital of several of his or her own compositions.

PRACTM 4920 Internship: 1-3 semester hours

Prerequisite: Senior standing in B.M. Business emphasis and permission of the instructor. Supervised experience in the area of the student's career objective, as music or instrument merchandising, arts management, mass communication, publishing, manufacturing or other, as available. May be repeated once for credit in different area.

PRACTM 5002 Interdisciplinary Studies in Music: 1 semester hour

Prerequisites: Consent of the instructor. In this course, the student will learn to give effective presentations in interdisciplinary educational settings, based on their study of potential connections between aspects of music and the subject in question. The non-musical subjects involved will be chosen by the student in consultation with the instructor. The course will culminate in an interdisciplinary presentation in a collegiate non-music class on the UMSL campus.

PRACTM 5210 Graduate Conducting: 3 semester hours

Prerequisites: Graduate standing in music. Conducting techniques, score reading, and interpretation of choral, orchestral, and band literature.

Theory and Composition

Courses

THRY COM 1190 Fundamentals of Music: 3 semester hours

This course provides basic music vocabulary: scales, intervals, and chords, and systematic instruction in the melodic, rhythmic, and harmonic aspects of music. This course will not apply toward requirements for a music major.

THRY COM 1300 Introduction to Music Theory: 1 semester hour

This course introduces the basic vocabulary of music notation and theory and rudimentary skills of ear training and sight singing. This course must be taken concurrently with THRY COM 1301, but may be waived on the basis of a successful score on the Theory Placement Exam.

THRY COM 1301 Theory of Music I: 3 semester hours

Prerequisite: Consent of department. This course introduces the basic materials of music as well as species counterpoint and diatonic harmony. Concurrent registration in THRY COM 1300 is required unless waived on the basis of a successful score on the Theory Placement Exam. Concurrent registration in THRY COM 1302 is required for music majors and minors.

THRY COM 1302 Aural Training I: 2 semester hours

Prerequisite: Consent of instructor. Systematic instruction in ear training and sight singing of all material covered in THRY COM 1301. Includes diatonic melodic and rhythmic dictation, chord quality recognition, sight singing of diatonic melodies, and the reading of units and divisions of units in simple and compound meters. Concurrent registration in THRY COM 1301 is required for music majors and minors.

THRY COM 1311 Theory of Music II: 3 semester hours

Prerequisites: THRY COM 1300, THRY COM 1301, and THRY COM 1302 or consent of department. This course continues the study of diatonic harmony begun in THRY COM 1301. Harmonic function, phrase structure, harmonic sequences, secondary dominants, and simple modulation. Concurrent registration in THRY COM 1312 is required for music majors and minors.

THRY COM 1312 Aural Training II: 2 semester hours

Prerequisites: THRY COM 1301 and THRY COM 1302 or consent of instructor. The systematic instruction in ear training and sight singing begun in THRY COM 1302 is continued. This course provides instruction in the performance and aural recognition of all musical devices introduced in THRY COM 1311. Concurrent registration in THRY COM 1311 is required for music majors and minors.

THRY COM 2301 Theory of Music III: 3 semester hours

Prerequisites: THRY COM 1311 and THRY COM 1312 or consent of department. This course begins the study of chromatic harmony and form in music of the eighteenth and nineteenth centuries. Concurrent registration in THRY COM 2302 is required for music majors and minors.

THRY COM 2302 Aural Training III: 2 semester hours

Prerequisites: THRY COM 1311 and THRY COM 1312 or consent of instructor. Systematic instruction in ear training and sight singing of THRY COM 1312 is continued. This course provides instruction in the performance and aural recognition of all musical devices introduced in THRY COM 2301. Concurrent registration in THRY COM 2301 is required for music majors and minors.

THRY COM 2311 Theory of Music IV: 3 semester hours

Prerequisites: THRY COM 2301 and THRY COM 2302 or consent of department. This course continues the study of chromatic harmony of late nineteenth-century music, as well as the analysis of larger musical forms. Additionally, this course focuses on developing the ability to communicate analytical observations effectively in both written and spoken formats. Concurrent enrollment in THRY COM 2312 is required for all music majors and minors.

THRY COM 2312 Aural Training IV: 2 semester hours

Prerequisite: THRY COM 2301 and THRY COM 2302 or consent of instructor. The systematic instruction in ear training and sight singing of THRY COM 2302 is continued. This course provides instruction in the performance and aural recognition of all musical devices introduced in THRY COM 2311. Concurrent enrollment in THRY COM 2311 is required for all music majors and minors.

THRY COM 2313 Jazz Theory: 3 semester hours

Prerequisites: THRY COM 2301 and THRY COM 2302. This course addresses the basics of jazz harmony. Students will be introduced to topics such as: jazz scales and modes; chords (7th through 13th) with all of their frequent jazz alterations; reharmonization; voice leading and dissonance treatment; melody, transcription, analysis, and the study of form.

THRY COM 2314 Jazz Aural Training: 1 semester hour

Prerequisites: THRY COM 2301 and THRY COM 2302. This course provides instruction in developing aural skills necessary for jazz musicians. Students will develop proficiency in both the translation of hearing into writing and the performance of reading into performing in the jazz idiom. Methods involved will include practice in singing, aural recognition, and transcription of recordings.

THRY COM 3110 Analysis of Music from 1900 to Present: 2 semester hours

Prerequisites: THRY COM 2311 and THRY COM 2312 or consent of department. This course primarily provides a study of compositional devices in atonal and serial music since 1900.

THRY COM 3120 Tonal Counterpoint: 2 semester hours

Prerequisites: THRY COM 2311 and THRY COM 2312; or consent of department. Study of tonal counterpoint with emphasis on the eighteenth century style. Composition in two and three parts.

THRY COM 3130 Advanced Analytical Techniques: 2 semester hours

Prerequisites: THRY COM 2311 and THRY COM 2312. Close analysis, seminar discussion, and focused theoretical/analytical study of selected compositions. Repertoire studied changes from year to year at discretion of instructor.

THRY COM 3140 Readings in Music Theory: 2 semester hours

Prerequisites: THRY COM 2311 and THRY COM 2312. An introduction to the primary areas of research in the field of music theory. This seminar-style course will include readings and discussion of a number of important writings in music theoretical areas including, but not limited to the following: tonal theory, post-tonal theory, mathematics and music, music cognition, and the history of music theory.

THRY COM 3310 Studio Composition: 1 semester hour

Prerequisites: THRY COM 2311 and THRY COM 2312, or consent of department. Individual lessons in music composition. Course may be repeated for credit.

THRY COM 3410 Orchestration: 3 semester hours

Prerequisites: THRY COM 2311 or consent of instructor. Study of the instruments of the brass, woodwind, percussion, and string families; scoring, transcription, and arranging for various instrumental ensembles.

THRY COM 3411 Jazz Arranging: 3 semester hours

Prerequisites: THRY COM 2313 and THRY COM 2314. This class provides instruction in scoring and arranging for jazz instruments in ensembles of various sizes. Study of arrangements in various styles will be used in application to the creation of original student arrangements.

THRY COM 3420 Choral Arranging: 2 semester hours

Prerequisites: THRY COM 2311 or consent of department. Study of vocal ranges, characteristics and capabilities at various ages and scoring for choral ensembles comprised of singers in these varying stages of vocal development.

THRY COM 4000 Directed Studies: Variable Topic: 1-5 semester hours

Prerequisite: Consent of instructor. Directed independent study of selected topics in music. May be repeated, but no more than 5 hours may be applied toward a degree.

THRY COM 5110 Scoring and Arranging: 3 semester hours

Prerequisite: Graduate standing in music. Experience in scoring and arranging music for a variety of ensembles.

Philosophy

General Information

Philosophy continues to keep alive the tradition begun by Socrates, Plato, and Aristotle of critically examining one's most cherished assumptions. Moreover, it deals with questions that are common to several areas of inquiry, such as art, ethics, the social sciences, the natural sciences, and the various professions. The study of philosophy also encourages logical precision, a heightened awareness of assumptions used in any discussion, and an attitude of both open-mindedness and responsible criticism toward new and unusual ideas. These skills are particularly useful for students planning careers in law, business, computer science, writing, or other fields requiring such disciplines of mind. For these reasons many students have found it useful to combine a major in another field with a major in philosophy. To accommodate such students, the department has a special program for double majors.

The philosophy faculty has an unusually wide range of research interests. Faculty members have written books and articles addressing not only the classical and traditional concerns of philosophy, but also contemporary controversies in the fields of law, psychology, sociology, political theory, biology, medical ethics, theology, logic, and philosophy of history as well. For their research in some of these areas, members have been awarded a number of national research grants, including fellowships from the National Science Foundation, the American Council of Learned Societies, the National Endowment for the Humanities and the John Templeton Foundation.

In keeping with this emphasis on diversity, the department is represented by scholars trained in widely different approaches to philosophy, such as the analytic tradition, Continental idealism and existentialism, Marxist dialectic, and Asian modes of thought.

Programs

Degrees

Philosophy BA (p. 681)

Philosophy MA (p. 682)

Philosophy MA Accelerated Master's Program (p. 682)

Minors

Law and Philosophy (p. 604)

Philosophy (p. 683)

Philosophy of Science and Technology (p. 683)

Certificate

Bioethics Graduate Certificate (p. 410)

Courses

PHIL 1021 Choice and Chance: 3 semester hours

Same as MATH 1021. Prerequisites: A satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course. This course provides an introduction to inductive logic and the theory of probability in an organized and systematic way, so as to give students tools for more effective decision-making. We will introduce the probability calculus, basic concepts of utility theory, decision theory and different approaches to understanding probability. This course is designed to be accessible to students of all levels. This course fulfills the University's general education mathematics proficiency requirement.

PHIL 1030 Present Moral Problems: 3 semester hours

This course will explore a range of ethical dilemmas with an eye towards living the best life. How should I live? What actions are right and wrong? How should I treat myself and others? In this class, we will consider these and other issues by investigating practical problems in American life including human rights, the environment, hunger and poverty, war and violence, racial and ethnic discrimination, gender roles and marriage, abortion, and euthanasia. This course fulfills the American History and Government general education requirement.

PHIL 1050 Existentialism and Phenomenology: 3 semester hours

The course will cover classic works by philosophers and writers in the existential and phenomenological traditions. Topics include free will, existential crisis, despair, anxiety, faith, the death of God, the origin of morals, authentic life, as well as the structure and content of conscious experience.

PHIL 1091 Great Philosophers: 3 semester hours

This online course introduces philosophy through a survey and examination of the ideas of fifteen of the most important figures in the history of the subject. From Socrates to Nietzsche, the questions, answers, and lives of the great philosophers are explored in a multimedia context. This course does not satisfy any of the requirements for philosophy major or minor.

PHIL 1110 Western Philosophy I: Antiquity to the Renaissance: 3 semester hours

Lectures and discussions tracing the development of western philosophy from its beginnings among the pre-Socratics through the Middle Ages and Renaissance. Philosophical ideas will be examined in the cultural and historical context: the Greek city-state, the rise of Christianity, etc.

PHIL 1111 Western Philosophy II: Descartes to the Present: 3 semester hours

Lectures and discussions on the development of western philosophy from Descartes (1596-1650) to the present. Philosophical ideas will be examined with an eye to their historical and cultural setting: the rise of modern science, the industrial revolution, the rise of capitalism, etc.

PHIL 1120 Asian Philosophy: 3 semester hours

Critical study of selected philosophical classics of India and China. This course fulfills the cultural diversity requirement.

PHIL 1125 Islamic Philosophy: 3 semester hours

An introduction to arabic philosophy in the islamic classical period (roughly from the mid-ninth through the twelfth centuries). We consider the philosophical and theological background, and then examine the thought of such notable Islamic philosophers as al-Kindi, Ibn Sina, al-Ghazali, and Ibn Rushd. Topics treated typically include proofs for the existence of God, whether the world is eternal or had a beginning, the nature of the soul and whether it is immortal, and the distinction between essence and existence. This course fulfills the cultural diversity requirement.

PHIL 1130 Approaches to Ethics (MOTR PHIL 102): 3 semester hours

A study and discussion of representative topics in moral philosophy such as moral skepticism, moral objectivity, theories of obligation and value, evaluation of social institutions and the relation between morality and science. Traditional and contemporary writers will be considered.

PHIL 1150 Introduction to Philosophy (MOTR PHIL 100): 3 semester hours

A study and discussion of representative topics in philosophy such as free will and determinism, concepts of mind and body, the basis of value judgments, knowledge and belief, and the possibility of constructing a world view.

PHIL 1151 Love 101: 3 semester hours

A critical review of what media personalities, philosophers, criminal justice experts, medical experts, neuroscientists, and psychologists have said about love and its place in our lives. Included will be such topics as the neuroscience of love, love across culture, love and commitment issues, marriage and the "seven-year itch," jealousy, domestic violence, and verbal abuse. Larger questions will include the role of love in the good life; the ethics of love; the psychological consequences of obsession, breakups and divorce; arranged marriages vs. freely chosen love; and the morality of laws that affect relationships between loving partners.

PHIL 1159 Blind Spots: 3 semester hours

This course provides a comprehensive introduction to cognitive biases, and to the strategies that can be used to address them. After an introductory unit devoted to the psychology of human reasoning, the course is structured around historical and contemporary case studies of particular biases, such as confirmation bias, negativity bias, and overconfidence.

PHIL 1160 Critical Thinking (MOTR PHIL 101): 3 semester hours

An introduction to the language and logical structure of arguments, the principles of sound reasoning, and application of these principles in a variety of contexts.

PHIL 1180 Science vs. God: 3 semester hours

This course examines whether religion and science are compatible, discusses the science-religion debate historically, and broaches philosophical issues surrounding belief, especially whether belief should be based in empirical evidence or in faith. Following these introductory course sessions, the class will discuss, in detail, topics in science and religion, including creation versus evolution; human nature (including abortion and stem cell research); the nature of sexuality and gender; the science of religion; morality; the environment from a religious perspective; meaningfulness in the universe; and finally, evidence for or against the afterlife, existence of a divinity, and divine providence.

PHIL 1185 Philosophy of Religion: 3 semester hours

A philosophical investigation of such problems as the nature of religious faith and experience, the relation of faith and reason, alternative concepts of deity and the problem of evil.

PHIL 2249 Accounting Ethics: 3 semester hours

Same as ACCTNG 2430. Prerequisites: ACCTNG 2400 and ACCTNG 2410 (may be taken concurrently). This course examines moral problems as they relate to the profession of accounting and the professional Codes of Conduct that govern the accounting profession. Students will apply the requirements of the Codes of Conduct to cases where ethical dilemmas or violations of professional standards may be present.

PHIL 2251 Sexual Ethics: 3 semester hours

A critical review of what philosophers, both classical and contemporary, have said about sexual experience and its place in our lives. Included will be such topics as sexual desire, sexual perversion, love and commitment, marriage and adultery, larger questions might include that role of sexual experience in the good life, issues of sexual privacy, and the morality of laws which regulate sexual activity.

PHIL 2252 Crime and Punishment: 3 semester hours

Same as CRIMIN 2252. This course will address fundamental conceptual, ethical, and moral issues that arise in the context of the legal system. Topics may include punishment, pre-trial detention, the death penalty, acquittal of persons who are legally guilty, plea bargaining, moral obligation to obey the law, and laws restricting civil liberties.

PHIL 2253 Philosophy and Feminism: 3 semester hours

Same as GS 2253. A critical examination of what various philosophers have said about issues of concern to women. Sample topics include oppression, racism, women's nature, femininity, marriage, motherhood, sexuality, pornography, the ethics of care.

PHIL 2254 Business Ethics: 3 semester hours

A critical survey from the perspective of moral theory of businesses and business practices. Topics vary but usually include some of the following: Whether the sole moral obligation of businesses is to make money; whether certain standard business practices, e.g., the creation of wants through advertising, are moral; whether businesses ought to be compelled, e.g., to protect the environment or participate in affirmative action programs.

PHIL 2255 Environmental Ethics: 3 semester hours

Examines such issues as the value of wilderness, our duties to animals and the natural world, pollution and development, environmental justice.

PHIL 2256 Bioethics: 3 semester hours

Same as GERON 2256. An examination of ethical issues in health care practice and clinical research and in public policies affecting health care. Topics include: abortion, euthanasia, health care, experimentation, informed consent and the right to health care.

PHIL 2257 Happiness and the Meaning of Life: 3 semester hours

This course is an accessible introduction to the historical and contemporary perspectives on happiness and the meaning of life in philosophy. It examines the nature of happiness by focusing on three major theories: happiness as pleasure, happiness as excellence and happiness as desire satisfaction. Other issues examined may include the relevance of virtue for happiness, the experience machine argument, the best way to pursue happiness as a personal or a policy goal, and other related topics.

PHIL 2258 Medicine, Values, and Society: 3 semester hours

Social, conceptual, and policy issues connected with medicine form the focus of the course. Topics may include: (1) role played by race & gender in design of research and distribution of care; (2) whether diseases are socially constructed categories reflecting the values of society; (3) development of social policies that offer universal access to health care; (4) the legitimacy of using psychotropic drugs to enhance life, rather than treat the disease. The course differs from Bioethics by emphasizing policy issues and their conceptual basis. Content of this course may vary.

PHIL 2259 Engineering Ethics: 3 semester hours

An examination of ethical issues in engineering using professional engineering codes as a starting point. The course will have a problem solving orientation, focusing on the analysis of particular cases. Actual high-profile cases such as the Challenger disaster will be considered, as well as hypothetical cases illustrating the more commonly encountered moral problems in engineering (such as accepting gifts from vendors). Topics include the engineer/manager relationship, engineers and the environment, honesty in engineering, and risk, safety, and liability.

PHIL 2277 Philosophy and Food: 3 semester hours

This course will examine issues surrounding the production, consumption, and enjoyment of food. Questions about food choices, food scarcity, self-control, and aberrant eating will be addressed. The focus will range from global issues such as population growth, the carrying capacity of the planet, famine, and GMO crops to more narrowly focused topics such as the workings of our sense of taste, our ability to evaluate and rank different food items, and the very idea of expertise in tasting.

PHIL 2280 Minds, Brains, and Machines: 3 semester hours

This course is an introduction to basic philosophical issues in cognitive science. General topics may include minds as computers; computers as minds, or the possibility of artificial intelligence that is truly intelligent; relationship between mental function and brain function; and some areas of current research, such as reasoning, vision, and emotion. This course fulfills the University's general education information literacy requirement.

PHIL 2283 Markets and Morals: 3 semester hours

Prerequisites: MATH 1030, or equivalent. This course will explore moral issues connected with economic markets: the reasons for and against promoting free markets and free trade; a consideration of goods and services that may be included in or above market transactions; how free markets impact happiness and individual freedom; and the moral considerations surrounding capitalism, libertarianism, socialism, and Marxism.

PHIL 3286 International Business Ethics: 3 semester hours

Same as INTL BUS 3286. The course will deal with moral issues that are raised by the increasing globalization of business. Apart from the general issue of whether this globalization is itself a good thing, we will discuss such issues as child labor, working conditions, safety standards, environmental policies, bribery and other "corrupt" practices, respect for intellectual property, etc. Frequent short papers will be assigned.

PHIL 3301 Ancient Philosophy: 3 semester hours

Freshman admitted by consent of department. The principle philosophical doctrines of the ancient world, with special emphasis on the philosophies of Plato and Aristotle. Although there is no formal prerequisite, it is recommended that students have taken at least one other philosophy course.

PHIL 3302 Medieval Philosophy: 3 semester hours

A critical study of the important philosophies of the period from August to the Renaissance. Although there is no formal prerequisite, it is recommended that students have taken at least one other philosophy course.

PHIL 3303 Early Modern Philosophy: 3 semester hours

Principal figures in the development of rationalism, empiricism and skepticism in early modern Europe, from Descartes through Hume. Although there is no formal prerequisite, it is recommended that students have taken at least one other philosophy course.

PHIL 3304 19th and 20th Century Philosophy: 3 semester hours

This course covers major nineteenth and twentieth century philosophers. It may include such major figures as Hegel, Nietzsche, Mill, Pierce, James, Carnap, Wittgenstein, Russell and Sartre.

PHIL 3320 Topics in Applied Ethics: 3 semester hours

This course has variable content related to topics in applied ethics. Topics covered may include feminism, sexual ethics, environmental ethics, business ethics and bioethics. Philosophy majors should enroll in this course rather than any 2000-level applied ethics course. This course may be repeated for credit as long as the topic differs.

PHIL 3327 Race and Racism: 3 semester hours

This course will investigate the concepts of race and racism through an examination of metaphysical, psychological, ethical, and political problems associated with race.

PHIL 3340 Knowledge and Reality: 3 semester hours

This course introduces students to basic issues in contemporary metaphysics and theories of knowledge. Topics may include universals, causality, skepticism and truth.

PHIL 3360 Formal Logic: 3 semester hours

An introductory study of logical truth and deductive inference, with emphasis on the development and mastery of a formal system.

PHIL 3378 Philosophy of Mind: 3 semester hours

Prerequisites: Three hours of philosophy or consent of instructor. An introduction to philosophical issues pertaining to the mind. Topics may include how the mind relates to the body, how the mind represents the world, how the mind works, consciousness, and free will.

PHIL 3380 Philosophy of Science: 3 semester hours

An examination of science: what makes science special? Topics may include (but are not limited to): empiricism and of induction; paradigms and revolutions; explanation, causation and laws; realism versus instrumentalism; critiques of science such as those of feminism or postmodernism; and reductionism - ultimately is it all just physics?.

PHIL 4401 Plato: 3 semester hours

Prerequisites: Six hours of philosophy, a course in Ancient Philosophy recommended, graduate standing, or consent of instructor. A study of selected Platonic dialogues.

PHIL 4402 Aristotle: 3 semester hours

Prerequisites: Six hours of philosophy, a course in Ancient Philosophy recommended, graduate standing, or consent of instructor. A selective study of Aristotle's major works.

PHIL 4407 Kant: 3 semester hours

Prerequisites: Six hours of philosophy, PHIL 3304 or equivalent recommended, graduate standing or consent of instructor. A systematic study of the Critique of Pure Reason.

PHIL 4410 Topics and Figures in the History of Philosophy: 3 semester hours

Prerequisites: Nine hours of philosophy, graduate standing, or consent of instructor. In-depth examination of a particular topic, significant figure or philosophical movement from the history of philosophy. The philosopher or movement to be studied will be announced prior to registration. This is a variable content course and may be taken again for credit with the consent of the instructor and department chair.

PHIL 4420 Topics in Non-Western Philosophy: 3 semester hours

Prerequisites: PHIL 1120, graduate standing of consent of instructor. An extensive exploration of issues in some particular non-Western tradition (Islamic, Indian, or Chinese). This is a variable content course and may be taken again for credit with the consent of the instructor and the department chair.

PHIL 4430 Social and Political Philosophy: 3 semester hours

Prerequisites: Six credit hours of philosophy required or consent of instructor. This course will cover several classic works of political theory, with a particular focus on the nature of justice, the proper extent of liberty, and social contract arguments for the legitimacy of state authority. Readings from Plato, Hobbes, Locke, Hume, Rousseau, Bentham, Mill, Marx and Rawls.

PHIL 4435 Classical Ethical Theory: 3 semester hours

Prerequisites: Six hours of philosophy, graduate standing, or consent of instructor. Significant contributions to moral philosophy from Plato and Aristotle to Bentham and Mill.

PHIL 4437 Metaethics: 3 semester hours

Prerequisites: Six credit hours of Philosophy. This course deals with questions regarding the foundations of ethics and the status of our ethical judgments about what's right and wrong, good and bad. The course will consider contemporary approaches to issues such as moral motivation, moral reasons, moral explanations, moral disagreement, moral knowledge, and moral supervenience, as well as various debates between realists and antirealists, and between cognitivists and expressivists.

PHIL 4438 Recent Ethical Theory: 3 semester hours

Prerequisites: Six hours of philosophy, graduate standing, or consent of instructor. A study of major contributions to twentieth-century ethics, including works by such writers as Moore, Dewey, Ross, Stevenson, Hare, and Rawls.

PHIL 4440 Theories of Knowledge: 3 semester hours

Prerequisites: Six hours of philosophy, graduate standing, or consent of instructor. An examination of concepts and problems involved in the characterization of knowledge. Specific topics will vary, but will usually include knowledge, belief, skepticism, evidence, certainty, perception, truth, and necessity.

PHIL 4445 Metaphysics: 3 semester hours

Prerequisites: Six hours of philosophy, graduate standing, or consent of instructor. An examination of selected metaphysical topics such as substance, universals, causality, necessity, space and time, free will, being, and identity.

PHIL 4450 Special Readings in Philosophy: 1-3 semester hours

Prerequisite: Consent of department. Independent study through readings, reports, and conferences. This is a content course and may be taken again up to a total of 6 credit hours with consent of instructor and department chair.

PHIL 4451 Special Topics in Philosophy: 3 semester hours

Prerequisites: Six hours of philosophy, graduate standing, or consent of instructor. A critical study of classical and/or contemporary contributions to a selected topic in philosophy. The topic to be considered will be announced prior to registration. This is a variable content course and can be taken again for credit with the consent of the instructor and the department chair.

PHIL 4458 Ethics and the Computer: 3 semester hours

Prerequisites: Six hours of coursework above the level of MATH 1030 in Math/Computer Science or at least six hours of philosophy or consent of instructor. An examination of ethical issues concerning the use of computers generally and software engineering in particular. Aims at developing awareness of these issues, and skills for ethical decision-making regarding them through careful, analytical methods. Typical issues include privacy, intellectual property, computer fraud, and others.

PHIL 4460 Topics in Logic: 3 semester hours

This course is the study of major developments in symbolic reasoning. Emphasis is given to theoretical problems with some attention devoted to philosophical issues arising from logic.

PHIL 4474 Topics in Aesthetics: 3 semester hours

Prerequisites: Junior standing or consent of instructor. This course is one of selected topics, such as vision and representation, musical aesthetics, and recent theorists. This is a variable content course that may be taken again for credit with the approval of the instructor and the department chair.

PHIL 4478 Topics in Philosophy of Mind and Philosophy of Language: 3 semester hours

Prerequisites: PHIL 3378 or six hours of other philosophy courses or consent of instructor. This course is an examination of selected topics at the interface of philosophical and psychological research. This is a variable content course and can be taken again for credit with the consent of the instructor and the department chair.

PHIL 4479 Philosophy of Cognitive Science: 3 semester hours

Prerequisites: PHIL 3378 or PHIL 4478 or nine hours of other philosophy courses or consent of instructor. An exploration of the philosophical foundations of cognitive science, a cooperative effort of philosophers, cognitive psychologists, brain scientists, computer scientists, and others to understand the relationship between the mind and the brain.

PHIL 4480 Topics in Philosophy of Science: 3 semester hours

Prerequisites: Consent of the instructor. An advanced introduction to the philosophy of science for advanced undergraduates in philosophy and graduate and professional students. Topics covered include scientific method, confirmation, explanation, the nature of theories, scientific progress, science criticism, ethics in science, and science and religion.

PHIL 4487 Philosophy of Law: 3 semester hours

Same as CRIMIN 4487. Prerequisites: CRIMIN 1100 or three hours of philosophy or graduate standing or consent of instructor. This course provides an intensive study of recent philosophical debate about such issues as the authority of law, legal equality and justice, legal responsibility, self-determination and privacy, and legal punishment.

PHIL 5400 Proseminar in Philosophy: 3 semester hours

Prerequisites: Graduate standing. Required of all entering Graduate Students in the Fall Semester of the first full year of residency. Topics vary. Other graduate students may take this course with the permission of the instructor and the director of Graduate Studies in Philosophy. Students will be expected to write papers, give presentations, and join in class discussion.

PHIL 5410 Seminar in Significant Figures in Philosophy: 3 semester hours

Prerequisites: Graduate standing. In depth study of the work of a single philosopher. The philosopher selected will be announced prior to registration. This is a variable content course and may be taken again for credit with the consent of the instructor and the department chair.

PHIL 5478 Seminar in Philosophy of Mind: 3 semester hours

Prerequisites: Graduate standing. Topics may include functionalism and physicalism; representation and the nature of propositional attitudes such as belief, desire, and the various emotions; folk psychology and knowledge of other minds; introspection and knowledge of one's own mind; conscious and unconscious mental states and processes. This is a variable content course and may be taken again for credit with consent of the instructor and the department chair.

PHIL 5495 Thesis Research: 1-3 semester hours

Prerequisites: Graduate standing or consent of instructor. May be repeated once for credit with the consent of the instructor and the department chair.

PHIL 5530 Seminar in Social and Political Philosophy: 3 semester hours

An intensive study of contemporary philosophical debate about such issues such as civil liberty, economic justice, political decision-making, and state authority. This is a variable content course and may be taken again for credit with the consent of the instructor and the department chair.

PHIL 5533 Philosophy of Law: 3 semester hours

Same as CRIMIN 5533. Prerequisite: Graduate standing or consent of instructor. Examination of origins of law and the basis for legal obligation. Specific consideration of the justification of punishment, morality and law, and legal reasoning.

PHIL 5538 Seminar in Ethical Theory: 3 semester hours

Prerequisites: Graduate standing or consent of the instructor. In this course we will seek to answer questions from normative ethics or metaethics, which may include: What do all morally wrong actions have in common? What does the word "wrong" mean? How, if at all, can we verify moral judgements? Are any moral judgements valid for all societies? Do we always have good reason to be moral?.

PHIL 5540 Seminar in Epistemology: 3 semester hours

Prerequisites: Graduate standing or consent of instructor. Close study of selected topics, texts, or individuals in epistemology. Topics may include (but are not limited to) theories of justification, naturalism in epistemology, and conceptions of knowledge. This is a variable content course and may be taken again for credit with the consent of the instructor and the department chair.

PHIL 5545 Seminar in Metaphysics: 3 semester hours

Prerequisite: Graduate standing. Intensive study of a selected topic or problem area in metaphysics, e.g. mind-body identity, nature of the self, or conception of time. This is a variable content course and may be taken again for credit with the consent of the instructor and the department chair.

PHIL 5551 Special Readings in Philosophy: 1-3 semester hours

Prerequisites: Graduate standing, written consent of instructor. Independent study through readings, reports, and conferences. This is a variable content course and may be taken again for credit with the consent of the instructor and the department chair.

PHIL 5560 Seminar in Logic: 3 semester hours

Prerequisites: Graduate standing. A focused study of topics in logic and/or its history. Representative topics include: Aristotelian logic, modal logic, the Godel incompleteness theorems, relevance logic, paraconsistent logic, free logic. This is a variable content course and may be taken again for credit with the consent of the instructor and the department chair.

PHIL 5561 Graduate Formal Logic: 3 semester hours

Prerequisite: Graduate standing; permission of the department. A rigorous introduction to formal logic that includes sentential calculus, predicate logic, and completeness proofs. May be taken for graduate credit only with permission of the graduate advisor and chair.

PHIL 5579 Seminar in Philosophy of Cognitive Science: 3 semester hours

Prerequisites: Graduate standing. General topics include the role of computation in cognitive science, the merits of symbolic computation and connectionism, the aims and methods of artificial intelligence, and the relationship between cognitive science and our everyday understanding of people. Specific topics may include perception, reasoning, consciousness, language, emotion, and will. This is a variable content course and may be taken again for credit with the consent of the instructor and the department chair.

PHIL 5580 Seminar in Philosophy of Science: 3 semester hours

Prerequisites: Graduate standing or consent of instructor. Focus is on recent issues and controversies. Topics may include: theories and observation, models of explanation, confirmation, realism and antirealism, empiricism & naturalism, "social construction" and feminist views of science. This is a variable content course and may be taken again with the consent of the instructor and the department chair.

Political Science

General Information

Undergraduate Degrees and Areas of Concentration

The political science department offers undergraduate work leading to the B.A. degree in political science, B.A. degree in international relations, B.S. degree in public policy and administration, and, in cooperation with the College of Education, the B.A. in political science with teacher certification and the B.S. in education with an emphasis in social studies. (See College of Education section in this Bulletin for details.) Minors in political science are available to students who are majoring in another discipline and who have a special interest in law, government, politics, nonprofit organizations, international relations, and public policy.

Principal areas of concentration include urban politics, American politics and behavior, international politics, comparative politics, public policy and administration, and public law. In many courses, emphasis is placed on the ways in which public policies are developed and administered. In addition to formal course work, internships are available in which the student can relate classroom learning to practical field experience.

Graduate Degrees

The political science department also offers graduate courses leading to the M.A. and Ph.D. in political science. The M.A. program in political science offers advanced education for those seeking careers in government, business, secondary education, community, or not-for-profit agencies. The principal foci of the 33-hour program are public administration and public policy analysis/evaluation in the local, state, national, and international areas. The flexibility of the general master's degree allows for individualized programs in urban politics, prelegal education, American national government, comparative politics, international relations, and political theory.

The Ph.D. in political science emphasizes the study of theoretic, analytic, and substantive approaches to public policy. Core courses include research methods, normative and empirical theory, and policy processes and institutions. Doctoral candidates, in consultation with the faculty, develop a policy concentration, which can be interdisciplinary. Internships, when appropriate, may be a component. All successful doctoral candidates must complete a dissertation, which makes a significant contribution to knowledge in the field.

Most graduate classes are scheduled so those employed outside the university can participate in the programs on a part-time basis.

Special Interdisciplinary Degree

The Department of Political Science also offers a master's degree in public policy administration (MPPA) in cooperation with the Department of Economics in the College of Arts and Sciences and the College of Business Administration.

Cooperative Programs

Political science students may also study abroad, or obtain a Certificate in Data Science, International Studies, Modern European Studies, African American and African Diaspora Studies, Gender Studies, or Labor Studies, in conjunction with their political science major. See Certificate Programs in this Bulletin.

Research in political science is encouraged for students at all levels. Assistance is available at UMSL's Community Innovation Action Center and UMSL Global. The department's membership in the Interuniversity Consortium for Political and Social Research provides access to a wide range of data on local-state-national, comparative, and international politics. In addition, extensive research opportunities are available within the metropolitan St. Louis area. Scholarships are available for qualified students; details can be obtained from the department office.

Faculty

Political science faculty are nationally known scholars in their respective fields, dedicated to high-quality teaching and education. Department faculty members have received distinctions such as the Curators' Research Award, Curators' Distinguished Teaching Professor Award, Presidential Award for Research and Creativity, Chancellor's Award for Research and Creativity, Chancellor's Award for Excellence in Teaching, Governor's Teaching Awards, Burlington Northern Faculty Achievement Award, Emerson Electric Excellence in Teaching Award and E. Desmond Lee Endowed Professor Award. They have received research grants from such prestigious agencies as the John F. Kennedy Library, the Ford Foundation, the MacArthur Foundation, the National Science Foundation, the German Marshall Fund, the United States Department of Education, the Fulbright Program, and the United States Institute for Peace. The faculty has published its research in more than 80 books and 400 articles in scholarly journals and is devoted to using its research findings to improve teaching.

In addition to helping students become more knowledgeable about politics and public policy, political science course work provides rich opportunities for students to develop a variety of practical skills--such as information-gathering and processing, analysis, research, decision making and oral and written communication--that are transferable to many career paths and job settings after graduation.

Undergraduate Degree Programs

Political Science BA (p. 695)
International Relations BA (p. 600)
Public Policy Administration BSPPA (p. 710)

- Public Administration Emphasis (p. 713)
- Public Policy Emphasis (p. 714)

Graduate Degree Programs

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Public Policy Administration MPPA (p. 716)

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- Local Government Management Emphasis (p. 719)
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Political Science PhD (p. 700)

2+3 Programs

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Minors

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 American Politics Minor (p. 396)
 Gender and Politics Minor (p. 576)
 International and Comparative Politics Minor (p. 599)
 International Relations Minor (p. 601)
 Nonprofit Administration Minor
 Public and Nonprofit Administration Minor (p. 710)
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Graduate Certificates

Nonprofit Organization Management and Leadership Graduate Certificate (p. 655)
 Local Government Management Graduate Certificate (p. 607)
 Policy and Program Evaluation Graduate Certificate (p. 695)

Political Science Courses

POL SCI 1100 Introduction to American Politics (MOTR POSC 101): 3 semester hours

This course is an introduction to basic concepts of government and politics with special reference to the United States, but also includes comparative material from other systems. This course fulfills the University's general education American history and government requirement.

POL SCI 1200 Foundations of Law: An Introduction to Legal Studies: 3 semester hours

Same as CRIMIN 1200. As a broad liberal-arts approach to the study of law, this course is designed to familiarize students with legal ideas, legal reasoning, and legal processes. It also provides comparative and historical perspectives on law that will help explain legal diversity and legal change. Finally, it offers opportunities to explore some of the persistent issues in law and legal theory: for example, issues about the sources of law, the responsibilities of the legal profession, or the relative merits of the adversary system.

POL SCI 1500 Introduction to Comparative Politics (MOTR POSC 202): 3 semester hours

This course introduces students to western and non-western systems. It examines similarities and differences in the basic political ideologies, structures, economies, social institutions and governmental processes of developed and developing countries. It also provides frameworks for understanding the cultures of the world that are the basis for formal economic and political institutions. In addition, the course examines the role of non-state institutions, including trans-national ones, in shaping national policies. It uses case studies from Africa, Asia, Latin America, as well as Europe, to enhance student understanding of comparative politics. This course fulfills the cultural diversity requirement.

POL SCI 1800 Introduction to International Politics (MOTR POSC 201): 3 semester hours

An introduction to the field of international relations, covering such topics as nationalism, power, foreign policymaking, diplomacy, war, terrorism, arms control and disarmament, economic interdependence, the regulation of conflict, and other aspects of politics among nations.

POL SCI 1820 Global Issues: 3 semester hours

A freshman and sophomore level course designed to introduce students to a range of global concerns, including population, hunger, trade, energy, and the environment. The worldwide implications of these and other problems will be considered, as well as their effects on local communities such as St. Louis.

POL SCI 2102 Introduction to Gender Studies: 3 semester hours

Same as SOC WK 2102, SOC 2102, GS 2102, HIST 2102. This core class is required for all Gender Studies Certificate earners. This class introduces students to cultural, political and historical issues that shape gender. Through a variety of disciplinary perspectives in the humanities, social sciences, and natural sciences, the course familiarizes students with diverse female and male experiences and gendered power relationships.

POL SCI 2260 Law, Politics and Society: 3 semester hours

Prerequisites: POL SCI 1100 or POL SCI 1200 or consent of instructor. This course examines the ways in which law in America connects with politics and society. The course will cover the litigation process, access to the courts, how and why individuals and groups bring litigation to pursue political and policy goals, and how lawyers, judges and other political actors use law to solve policy problems. Attention will be placed on current legal policy issues facing American society. This course fulfills the University's general education American history and government requirement.

POL SCI 2280 Judicial Politics: 3 semester hours

Prerequisites: POL SCI 1100 or POL SCI 1200 or consent of instructor. This course is an examination of the American state and federal legal systems. Topics examined in this course include an analysis of the structure, organization and foundation of courts. Emphasis will be placed on the role of juries, judges, attorneys, litigants, and interest groups in the judicial system. The objective of the course is to evaluate courts as political institutions and analyze the policy-making role of judges. This course fulfills the University's general education American history and government requirement.

POL SCI 2290 Gender and the Law: 3 semester hours

Same as GS 2290. Prerequisites: POL SCI 1100, or POL SCI 1200, or consent of instructor. This course examines the ways in which law has created, reinforced or transformed gender roles over time. It surveys the legal status of American women from the adoption of the U.S. Constitution to the present through court cases, statutes and other legal materials. The course will also focus on relevant legal issues in areas such as marriage and the family, reproductive freedom, voting rights, employment, education, the criminal justice system, women in the legal profession and the intersection of gender, race and class in the legal system. This course fulfills the University's general education American history and government requirement.

POL SCI 2300 State Politics: 3 semester hours

Prerequisites: POL SCI 1100 or consent of instructor. This course is an examination of contemporary state politics in the U.S. It covers topics such as, social, economic and political determinants of policies; federal-state-local relations, elections, interest groups and participation; executive legislative and judicial institutions and processes, policies and their impact. This course fulfills the American History and Government general education requirement.

POL SCI 2320 African Americans and the Political System: 3 semester hours

Prerequisites: POL SCI 1100 or consent of instructor. This course is an examination of the status of African Americans in the context of the American political system. It will focus on a number of issues, which may include attitudes of various publics toward racial concerns; nature of problems in specific policy areas (e.g., unemployment, school desegregation, housing, poverty); representation of African Americans in governmental institutions and the private sector; and the role of African American leadership and civil rights groups in the political process. The course fulfills the state requirement. This course fulfills the American History and Government general education requirement.

POL SCI 2330 The American Presidency: 3 semester hours

This course studies the constitutional, political, legislative, and administrative roles played by the American chief executive in the development of public policy.

POL SCI 2331 Congressional Politics: 3 semester hours

This course examines the Congress of the United States, its history and evolution, its contemporary politics, and its role in the national policy-making process. Topics may include candidate recruitment, campaigns and elections, representation, committees, legislative leadership, roles and norms, voting alignments, lobbyists and interest groups, oversight of administration, and House-Senate comparisons. The course may also introduce students to the role of Congress in foreign policy, economic policy, and social-welfare policy.

POL SCI 2350 Introduction to Urban Politics: 3 semester hours

This course examines the structure and process of politics in the urban community, with emphasis on their relationships to community power structures.

POL SCI 2370 The Politics of Identity and Social Justice: 3 semester hours

Examines the meaning of social justice at the intersections of identities linked to race, ethnicity, class, gender, sexuality, age, ability, religion, and citizenship in the United States. We will dissect how the social construction of "difference" within systems of power has resulted in social policies that marginalize some groups more than others. We will also discuss how oppression linked to delineations of difference can be challenged and socially reconstructed, and ultimately used as a source of political empowerment.

POL SCI 2380 The Politics of Gender in the United States: 3 semester hours

Same as GS 2380. This course examines the role of gender in political institutions, practices and policy in the United States, past for political equality, the relationship between gender and political participation, vote choice, and public opinion, and how legislative, executive, and judicial offices are gendered at the national, state, and local levels.

POL SCI 2400 Public Administration: 3 semester hours

Prerequisite: POL SCI 1100 or consent of instructor. Survey of Public Administration, with reference to organization, financial administration, personnel management, judicial control of the administrative process.

POL SCI 2420 Introduction to Public Policy: 3 semester hours

Prerequisite: POL SCI 1100 or consent of instructor. Study of differing approaches to understanding the public policy process. Course surveys the application of social science to public issues and problems.

POL SCI 2430 Public and Nonprofit Organizational Behavior: 3 semester hours

This course examines behavior in public and nonprofit organizations, including theory about how organizations work and how groups and individuals behave within organizations. Theories will be applied in an attempt to explain and predict behavior in an organizational context. Topics include motivation, leadership, goal complexity and ambiguity, organizational structure, culture, and communication in public and nonprofit organizations, as well as the relationship between public and private organizations.

POL SCI 2450 Labor, Work, Society, and Politics: 3 semester hours

This course explores the evolution of work in the United States, and how labor unions shaped and influenced society, politics, and the workplace. It examines the role of workers, (past present and future) unions' organizational structure, the role of collective bargaining, labor and the media, and labors' political and social campaigns.

POL SCI 2500 Comparing Different Worlds: 3 semester hours

This course focuses on the role of political institutions, economic structures and social groups in explaining differences in forms of government and levels of socio-economic development. It explores in detail one or more of these themes in cases drawn from developing and developed nations.

POL SCI 2510 The Politics of European Union: 3 semester hours

The European Union has become the driving force in European economic and social development. This course assesses the changing nature of national identity and national sovereignty in Europe. It compares and contrasts key public policies, (single market, welfare, migration, gender mainstreaming, "democratic deficits"), along with core EU actors and institutions, and includes participation in the annual Midwest Model EU.

POL SCI 2530 Political Systems of South America: 3 semester hours

Prerequisites: POL SCI 1500 or consent of instructor. An introduction to the study of the political systems of South America. Examination of the cultural context that has shaped the political, economic, and social development of states in the region. This course satisfies the Cultural Diversity requirement.

POL SCI 2540 Political Systems of Mexico, Central America and the Caribbean: 3 semester hours

Prerequisites: POL SCI 1500 or consent of instructor. An introduction to the study of the political systems of Mexico, Central America, and the Caribbean. Examination of the cultural context that has shaped the political, economic, and social development of these countries. This course satisfies the Cultural Diversity requirement.

POL SCI 2580 African Politics: 3 semester hours

This course introduces the nature of societies, governments, and international relations in Africa. It deals with forms of governance on the continent, regional groupings of states, and persistent conflicts within and among states. Problems of economic underdevelopment, food supplies, health and population trends, and cultural change are analyzed, along with the role of outside major power intervention. This course fulfills the Cultural Diversity requirement.

POL SCI 2585 Aiding Africa: 3 semester hours

Same as HIST 2068. This course examines the history of economic development on the African continent. Students will learn about the local and the international encounters that development has fostered; they will explore how Africans have experienced and reformulated development in different contexts and time periods; and they will study the changing international policies on development, which have shaped the lives of Africans. This course satisfies the Cultural Diversity requirement.

POL SCI 2590 Globalization: Prospects and Problems: 3 semester hours

Globalization is a multidimensional construct, which calls for its study from a multidisciplinary perspective: i.e., economics, political science, history, and anthropology. The course will explore the forces undergirding economic globalization, as well as the factors that are giving rise to a global democratic dispensation. It will also examine previous forms of globalization including archaic globalization, proto-globalization, and modern globalization as well as so-called deviant globalization - the trade in illicit goods and services, which are also highly lucrative: e.g., human trafficking, prostitution, endangered species, narcotics, organ transplants, small arms, etc. Finally, the course will explore cultural globalization and the rise of a global 'pop culture.' The course will include a comparative analysis of the impacts of globalization in all of its manifestations on social groups (e.g., men and women, ethnic and racial minorities, young and old, classes), countries, and regions.

POL SCI 2600 The Geography of Governance: 3 semester hours

This course investigates the impacts of geography on the formation and performance of political, economic, and social institutions at the domestic and international level. Questions addressed include how geography impacts economic development, democratization, state capacity, and public goods provision. Students will become familiar with spatial terminology and learn the basics of spatial analysis and maps in ArcGIS, demonstrating skill development through written and oral presentations.

POL SCI 2800 International Relations Theories: 3 semester hours

This course provides a foundational understanding of how International Relations (IR) theories shape policymaking at the national, regional and global levels. Using real-world events, this course applies realist, liberal and constructivist theories to examine 21st-century global challenges, such as terrorism, ethnonationalism, cybersecurity, migration, refugees, health, development and the environment.

POL SCI 2820 United States Foreign Policy: 3 semester hours

Prerequisites: POL SCI 1100 or POL SCI 1800. This course examines the factors influencing the formation and the execution of American foreign policy, with a focus on specific contemporary foreign policy issues.

POL SCI 2900 Studies in Political Science: 1-6 semester hours

Selected topics in political science.

POL SCI 3000 Political Analysis: 3 semester hours

This course provides an introduction to political analysis, emphasizing both the logic of inquiry and practical methods. Students will learn about the construction and evaluation of theories that relate to real-world politics. Students will also have an opportunity for hands-on experience with qualitative and quantitative methods including graphics, descriptive statistics, cross-tabular and correlational analysis, hypothesis testing, and computer applications.

POL SCI 3041 Topics in American Constitutional History: 3 semester hours

Same as HIST 3041. Prerequisites: Junior standing or consent of instructor. This course examines the origins and development of the principal institutions and ideas of the American constitutional systems. More specifically, topics may include, the role of the Constitution and the Supreme Court in the growth of the nation, important Supreme Court decisions, great American jurists and their impact upon the law, and historical background to current constitutional issues.

POL SCI 3200 Constitutional Law: 3 semester hours

Prerequisites: POL SCI 1100 or POL SCI 1200 or consent of the instructor. This course examines major U.S. Supreme Court cases on the constitutional structure of American government. Topics covered may include judicial review, separation of powers, federal-state relations commerce clause, and economic liberties. The course explores how the Supreme Court has interpreted these constitutional conflicts in light of changing times and emerging issues.

POL SCI 3210 Civil Liberties: 3 semester hours

Prerequisites: POL SCI 1100 or POL SCI 1200 or consent of instructor. This course examines major U.S. Supreme Court cases in the areas of civil liberties and civil rights. Topics covered may include the incorporation of the Bill of Rights into the Fourteenth Amendment, freedom of religion, freedom of speech, freedom of the press, freedom of association, the right to protest, discrimination in the contexts of race, gender and sexual orientation, and the right to privacy. The course explores how the Supreme Court has interpreted these fundamental rights in light of changing times and emerging issues.

POL SCI 3220 Labor and Employment Law: 3 semester hours

This course examines the primary labor and employment laws that govern employment relationships in the United States. Topics may include laws that govern private-sector employment relationships, including the National Labor Relations Act, the Fair Labor Standards Act, the Family, and Medical Leave Act, and parallel issues found in state and other federal laws.

POL SCI 3260 The Supreme Court: 3 semester hours

Prerequisites: POL SCI 1100, or POL SCI 1200 or consent of the instructor. An examination of the role, function and assertion of power by the U.S. Supreme Court in our constitutional democracy. Topics include an historical overview of the Supreme court, the process of selecting Supreme Court Justices, life in the Court, Supreme Court decision making, Supreme Court policymaking, implementation and impact of Court decisions and the role of the Supreme Court as a national policymaker.

POL SCI 3330 Public Opinion and Political Participation: 3 semester hours

Prerequisite: POL SCI 1100 or consent of instructor. This course links Americans' political attitudes to their political participation (defined broadly) and explores how governmental institutions, the media, and social group affiliations affect political behavior. It also connects trends in public opinion and participation to the state of American democracy.

POL SCI 3350 Political Parties and Elections: 3 semester hours

This course examines the development, organization, functions, activities of major and minor political parties, pressure groups, and election administration, especially in the United States.

POL SCI 3390 Studies in American Politics: 3 semester hours

Prerequisite: POL SCI 1100 or consent of instructor. Selected topics in American politics. May be repeated.

POL SCI 3420 Public and Nonprofit Personnel Management: 3 semester hours

Prerequisites: POL SCI 1100 or POL SCI 2400 or consent of instructor. This course examines personnel practices in the public and nonprofit sectors, including recruitment, job development, labor relations, and administration of equal employment/ affirmative action programs.

POL SCI 3430 Labor and Community Leadership: 3 semester hours

This course examines leadership development principles through the lens of labor and social action leadership. Topics may include a variety of leadership theories as well as the intersection of race, gender, and multiculturalism with leadership and the resultant challenges and opportunities within social organizations and labor unions.

POL SCI 3440 Public and Nonprofit Budgeting: 3 semester hours

Prerequisites: POL SCI 1100 or POL SCI 2400 or consent of instructor. This course studies budgeting, namely, "who gets what" and who pays for it. It examines the administration and politics of federal, state, and local government budgets. Students will gain experience in interpreting budget documents and making budget choices, using electronic and other resources.

POL SCI 3450 Urban Administration: 3 semester hours

Prerequisites: POL SCI 1100 or consent of instructor. Study of administrative machinery and practices of metropolitan government, how metropolitan areas organize themselves to provide services, how urban policies are made and implemented, how budgeting and personnel recruitment processes operate, and how these relate to urban policies.

POL SCI 3460 The Politics of Poverty and Welfare: 3 semester hours

Prerequisite: POL SCI 1100 or consent of instructor. An examination of the structure of income inequality in the U.S. and public policies designed to redistribute wealth and to treat poverty. The history of welfare programs, the growth of the welfare state, and attempts to cut social spending are closely examined.

POL SCI 3470 Negotiation, Collective Bargaining, and Dispute Resolution: 3 semester hours

This course explores the process of collective bargaining (contract negotiations). Topics include the origins of the laws that govern the process, terminology, and basic strategies. In this course, students will take a close look at the legal constraints on the process, the economic factors influencing the power dynamics, the strategies and techniques of bargaining, and the dispute resolution processes.

POL SCI 3480 Environmental Policy: 3 semester hours

This course examines the process of environmental policy-making and key environmental issues. Topics may include national and international policies toward land, air, and water pollution; energy use; solid and toxic waste disposal; climate change; population; biodiversity; conservation; and sustainability.

POL SCI 3700 Nonprofit Organizations and Social Equity: 3 semester hours

Prerequisites: POL SCI 1100. This course examines the increasing involvement of nonprofit organizations in addressing social equity issues. The course focuses on how nonprofit organizations are managed, as well as challenges and opportunities facing these organizations when tackling equity issues. Additionally, it examines several types of nonprofit activism, including advocacy, lobbying, and political participation, in several policy areas.

POL SCI 3710 Nonprofits, Civil Society and Volunteerism: 3 semester hours

Prerequisites: POL SCI 1100. This course introduces basic concepts and theories about the role of voluntary action by nonprofit organizations in democratic society. Students will gain practical skill development in the recruitment and training of volunteers.

POL SCI 3810 The Politics of the Middle East: International and National Dynamics: 3 semester hours

Prerequisites: POL SCI 1500, POL SCI 1800, or consent of instructor. This seminar engages students in the complex discussions and analyses of the ways in which the national and regional dynamics of the geostrategic region of the Middle East impact international relations in the twenty-first century.

POL SCI 3830 International Political Economy: 3 semester hours

Prerequisite: POL SCI 1100 or POL SCI 1500, or consent of instructor. This course provides an introduction to international political economy. In particular, it will focus on the politics of international trade, finance, and investment. It will analyze the relationships between developed and developing countries and it will assess the relative usefulness of alternative frameworks for studying international political economy.

POL SCI 3850 International Organizations and Global Problem-Solving: 3 semester hours

Prerequisites: POL SCI 1500 or POL SCI 1800. This course is an introduction to the study of international organizations. It will focus on global intergovernmental organizations, such as the United Nations, as well as non-governmental organizations, such as multinational corporations. Course topics may focus on the creation, existence, and evolution of international organizations, their relationships with nation-states, and their roles in economic development, resource management, and control of violence across national boundaries.

POL SCI 3860 Political Violence: 3 semester hours

Prerequisites: POL SCI 1500, POL SCI 1800, or consent of instructor. This course examines the way actors in the international system use, promote, or allow violence to achieve political goals. Students will learn about interstate war, terrorism, armed rebellion, state repression, riots, and election related violence.

POL SCI 3890 Workers and Globalization: 3 semester hours

This course investigates the effects of globalization on the working class at the local and individual level through the lens of economic and political neo-liberalism. Historical and personal narratives as well as political and economic critiques are offered.

POL SCI 3900 Special Readings: 1-10 semester hours

Prerequisite: Consent of instructor. Independent study through readings, reports, and conferences. May be repeated.

POL SCI 3901 Capitalism in American History: 3 semester hours

Same as HIST 3901. This course offers students the opportunity to approach America's political economy with tools different from those offered by more quantitative economic constructs. Students will analyze market processes through a three dimensional approach that focuses not just on market competition but also on relationships of command; the exercise of power in firms, among nations, and between social groups; and on processes of historical change from the late colonial era through the twentieth century.

POL SCI 3940 Public Affairs Internship: 1-6 semester hours

Prerequisites: Consent of instructor. This course is an independent study involving work with an appropriate public or private agency. A maximum of six credit hours may be earned.

POL SCI 4040 Survey Research Practicum in Political Science: 3 semester hours

This course involves the execution of a sample survey, including establishing study objectives, sampling, questionnaire construction, interviewing, coding, data analysis, and presentation of results.

POL SCI 4090 American Government for the Secondary Classroom: 3 semester hours

Same as: SEC ED 4090. Prerequisites: Admission to the Teacher Education Program. TCH ED 3310 or the consent of the instructor. Adapts the themes and subject matter of American Government to the secondary classroom and trains teachers in techniques particularly designed to maximize the use of primary sources, foster critical inquiry, and encourage knowledge of subject matter. Particular emphasis will be placed on defining the broad and connecting methods of inquiry for use in an interactive classroom. Can be counted towards the Political Science major requirement, but not the American Politics subgroup. Counts towards Social Studies certification. Not available for graduate credit.

POL SCI 4345 War Crimes, Genocide, and Justice in the 20th and 21st Centuries: 3 semester hours

Same as SOC 4345, CRIMIN 4345, and MVS 4345. Prerequisite: ENGL 3100. This course provides advanced undergraduate and Master's level students a comprehensive overview of the subject of war crimes, crimes against humanity, genocide and legal responses to these crimes in the modern era. The goal of this course is to engage students in sustained, critical thought about these issues and to foster a deeper understanding of both the causes and consequences—legal, social and human—of these egregious crimes.

POL SCI 4810 Human Rights: 3 semester hours

Prerequisites: POL SCI 1500, POL SCI 1800, or consent of instructor. This course provides students with a greater understanding of the concept of human rights, including their importance in international politics and the various means by which these rights might be either violated or protected. Further, it may focus on many of the methods used to study and evaluate respect for human rights cross-nationally. This course satisfies the Cultural Diversity requirement.

POL SCI 4850 International Law: 3 semester hours

Prerequisites: POL SCI 1100 or POL SCI 1500 or POL SCI 1800. This course studies the international legal system. Topics may include the content and operation of the laws of war and peace, how laws are created and enforced with regard to the oceans and other parts of the globe, and the relationship between international law and international politics.

POL SCI 4900 Topics in Political Science: 3 semester hours

Prerequisites: POL SCI 1100 or consent of instructor. Selected topics in Political Science.

POL SCI 4901 Designing Surveys to Study Human Behavior and Attitudes: 1-3 semester hours

Prerequisites: POL SCI 3000 or POL SCI 6401 or P P ADM 6010 or consent of instructor. The course allows students to apply research methods to designing a survey to study people's attitudes and behaviors with a focus on developing online surveys. The course may count toward an elective in the Policy Research and Analysis, Local Government Management, Non-Profit Management and Leadership, or Individualized Emphasis Areas for a Master of Public Policy Administration.

POL SCI 4950 Senior Seminar in Political Science: 3 semester hours

Prerequisites: POL SCI 3000 and senior standing. This course provides the integrative capstone experience required of all political science majors in their last year of coursework. It emphasizes student-faculty interaction in a seminar format designed to engage upper-level students in a critical examination of a broad theme in political science, leading to the production of a major research paper. This course is not available for graduate student credit.

POL SCI 6300 Leadership and Management in NonProfit Organizations: 3 semester hours

Same as P P ADM 6300 and SOC WK 6300. Prerequisites: Graduate standing required. Addresses the role and scope of the independent sector in the United States, as well as the leadership and management of nonprofit organizations within that sector. Topics include the economic and political scope of the independent sector, the role of volunteerism in a democratic society, and the role and scope of philanthropy. Topics in voluntary organization management and leadership include the dynamics, functions and membership structure of NPOs, especially staff-board and other volunteer relations; governance and management of NPOs; resource mobilization; and program development management and evaluation.

POL SCI 6401 Introduction to Policy Research: 3 semester hours

Procedures for testing explanations, including research design, principles of measurement, probability sampling, methods of data collection, and techniques for analyzing data.

POL SCI 6402 Intermediate Techniques in Policy Research: 3 semester hours

Prerequisite: Graduate standing and POL SCI 6401. Elementary distribution theory, statistical inference, and introduction to multiple regression. Emphasis on practical applications.

POL SCI 6403 Advanced Techniques in Policy Research: 3 semester hours

Prerequisite: Graduate standing and POL SCI 6402. Selected topics in policy research emphasizing forecasting, modeling and estimation.

POL SCI 6404 Multi-Method Research Design: 3 semester hours

Prerequisites: Graduate standing. This course develops policy research skills that combine qualitative and quantitative social science tools and applies an appropriate mix of these tools to specific policy problems. Topics may include alternative approaches to causal analysis, levels of analysis, triangulation from a variety of qualitative and quantitative research techniques, building contextual effects into multiple research projects, techniques for assessing alternative program theories and clarifying implicit assumptions, and meta-analysis of secondary data sources.

POL SCI 6405 Directed Readings in Research Methods: 1-10 semester hours

Independent study through readings, reports, research projects, and conferences.

POL SCI 6410 Introduction to Policy Analysis: 3 semester hours

Same as P P ADM 6000. Systematic development of a critical/analytic base for dealing with public policy.

POL SCI 6415 Directed Readings and Research in Public Policy: 1-10 semester hours

Same as P P ADM 6150. Prerequisite: Consent of instructor. Independent study through readings, reports, research projects, and conferences. May be repeated for credit, provided the subject matter is different.

POL SCI 6418 Social and Economic Development Policy: 3 semester hours

Same as SOC WK 6250. Prerequisites: SOC WK 5200 or equivalent, or consent of instructor. This course examines the economic and political urban processes that planners, policy makers, service organizations and advocates seek to influence. In this course students will develop skills in policy analysis and development. The course provides an introduction to three models of modern political economy, then seeks to deepen these broad analytic approaches by examining more recent policy developments in cities like St. Louis. This course also focuses on recent strategies to address issues such as employment, wages, housing, education, taxes and social services.

POL SCI 6420 Proseminar in Public Law: 3 semester hours

Study of judicial systems and processes (judges, courts, litigants, and juries) and evaluation of legal policies (Compliance, impact and deterrence).

POL SCI 6425 Directed Readings and Research in Public Law: 1-10 semester hours

Independent study through readings, reports, research projects, and conferences.

POL SCI 6430 Proseminar in American Politics: 3 semester hours

Study of individual and group political behavior including socialization, participation, consensus formation, representation, legislative and judicial behavior.

POL SCI 6435 Directed Readings and Research in American Politics: 1-10 semester hours

Independent study through readings, reports, research projects, and conferences.

POL SCI 6440 Public Administration: Theory & Practice: 3 semester hours

Same as P P ADM 6400. The course examines major approaches to analyzing public policies and their administration with emphasis on the effects of administrative organization and procedures on policy decisions and their impact. Specific topics may include administrative accountability, inter-governmental relations, public private interaction, implementation processes, bureaucratic expertise, the legal environment of public administration, and public service and merit issue.

POL SCI 6442 The Policy Process: 3 semester hours

Prerequisite: Graduate standing. This course will examine how public policies are made in the United States. It will cover different theories of the policy process, including how political actors get the government to focus on certain problems, form coalitions to enact policies, and generate support for their implementation. Finally, the course will examine how well various policy models apply to different policy domains.

POL SCI 6443 Health Care Policy: 3 semester hours

Same as P P ADM 6430, GERON 6443, and SOC WK 6443. Prerequisites: Graduate Standing or consent of instructor. Survey course examining current issues in health policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

POL SCI 6445 Directed Readings and Research in Public Administration: 1-10 semester hours

Independent study through readings, reports, research projects, and conferences.

POL SCI 6448 Political Economy and Public Policy: 3 semester hours

Prerequisite: Graduate standing. This course examines political economy in its contemporary manifestations as public choice and as the study of the ways in which institutional power shapes economic policies and performance. The course explores the origins and major concepts of political economy, the institutions of economic policymaking and economic policies in the U. S. It emphasizes the consequences of budget constraints inflation, unemployment and sectoral decline on the design and administration of public programs at all levels of government.

POL SCI 6449 Human Resources in the Public Sector: 3 semester hours

Same as SOC WK 6449 and P P ADM 6490. This course presents an overview of personnel and labor relations in the public sector. It places particular emphasis on issues which are unique to the public sector, such as the merit system, the questions of representative bureaucracy, and the constraints of personnel in the nonprofit sector. Course topics may include personnel reforms in the federal sector, equal employment and affirmative action policies, testing, selection, hiring, comparable worth, job evaluation and labor relations, including grievance arbitration and collective bargaining.

POL SCI 6452 Public Policy of Conservation and Sustainable Development: 3 semester hours

Same as BIOL 6250. Prerequisites: Graduate standing in Political Science or Biology. This course introduced concepts and techniques for formulating, implementing, and analyzing public policy with an emphasis on environmental concerns, conservation, and sustainable development. The course will be team-taught by faculty representing the departments of political science and biology. Course materials will include case studies that demonstrate the special problems of environmental policymaking in developing and developed economies.

POL SCI 6455 Directed Readings and Research in Comparative Politics: 1-10 semester hours

Independent study through readings, reports, research projects, and conferences.

POL SCI 6465 Directed Readings and Research in Political Theory: 1-10 semester hours

Independent study through readings, reports, research projects, and conferences.

POL SCI 6470 Proseminar in Urban Politics: 3 semester hours

Same as: P P ADM 6470. Examination of the relationship between the social, economic and political systems of urban areas. Urban political structure, patterns of influence, political participation and communication and political change. Special attention to problems of access to and control of urban political systems.

POL SCI 6475 Directed Readings and Research in Urban Politics: 1-10 semester hours

Independent study through readings, reports and conferences.

POL SCI 6480 Proseminar in International Relations: 3 semester hours

Examination of various approaches to the study of international politics and foreign policy, focusing on studies of conflict, decision-making, international political economy, and related topics. Included are realist, idealist, and Marxist perspectives.

POL SCI 6481 Seminar in International Relations: 3 semester hours

Research problems and design in international politics. May be repeated for credit when the subject matter is different.

POL SCI 6485 Directed Readings and Research in International Relations: 1-10 semester hours

Independent study through readings, reports, research projects, and conferences.

POL SCI 6488 Studies in International Relations: 1-6 semester hours

Prerequisites: Graduate standing or permission of instructor. Selected topics in international studies. May be repeated for credit provided the topic of the course is different each time.

POL SCI 6490 Strategic and Program Planning for Nonprofit Organizations: 3 semester hours

Same as P P ADM 6550 and SOC WK 6491. Prerequisites: Graduate standing. This course covers strategic and program planning and its ability to enable an organization to concentrate on efforts and set priorities guided by a mission, vision, and an understanding of its environment. The course focus is on preparing a strategic plan and a program plan for a nonprofit organization and analyzing an organization's ability to deliver goods and/or services to its constituents in today's economic, social, and political climate.

POL SCI 6494 Thesis Research: 1-10 semester hours

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POL SCI 6495 Internship: 1-6 semester hours

Independent study involving work with an appropriate public or private agency.

POL SCI 6499 Directed Dissertation Proposal Research: 3 semester hours

Prerequisites: Consent of instructor. Supervised study through readings and research leading to the preparation of a dissertation proposal plan. Open to doctoral students who have completed at least 42 hours of course work. The proposal plan will indicate the following: statement of research question, importance of the problem, literature review and research design.

POL SCI 7499 Dissertation Research: 1-10 semester hours

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Public Policy Administration Courses

P P ADM 6000 Introduction to Policy Analysis: 3 semester hours

Same as POL SCI 6410. Systematic development of a critical/analytic base for dealing with public policy.

P P ADM 6010 Introduction to Policy Research: 3 semester hours

Same as POL SCI 6401. Procedures for testing explanations, including research design, principles of measurement, probability sampling, methods of data collection, and techniques for analyzing data.

P P ADM 6150 Directed Readings and Research in Public Policy: 1-10 semester hours

Same as POL SCI 6415. Prerequisite: Consent of instructor. Independent study through readings, reports, research projects, and conferences. May be repeated for credit, provided the subject matter is different.

P P ADM 6180 Governmental Budgeting and Financial Control: 3 semester hours

Prerequisites: Graduate standing. This course is a study of municipal and federal financial control and budgeting procedures with emphasis on public policy. It covers the impact of financial control on top management decisions and the effect of budget strategies on the allocations of public funds.

P P ADM 6300 Leadership and Management in Nonprofit Organizations: 3 semester hours

Same as POL SCI 6300 and SOC WK 6300. Prerequisites: Graduate standing required. Addresses the role and scope of the independent sector in the United States, as well as the leadership and management of nonprofit organizations within that sector. Topics include the economic and political scope of the independent sector, the role of volunteerism in a democratic society, and the role and scope of philanthropy. Topics in voluntary organization management and leadership include the dynamics, functions and membership structure of NPOs, especially staff-board and other volunteer relations; governance and management of NPOs; resource mobilization; and program development management and evaluation.

P P ADM 6310 American Philanthropy and Nonprofit Resources Development: 3 semester hours

Same as SOC WK 6310. Prerequisites: Graduate standing required. This course addresses the history, philosophy, roles and scope of philanthropy in the United States, including its role in the nonprofit, voluntary sector. It further examines the contemporary forces which impact philanthropy and charitable giving, both by institutions and individuals. The course examines the effective planning and management of development programs (e.g., annual giving), fundraising vehicles (e.g., mail solicitations) and the fund raising process, from planning through donor relations.

P P ADM 6311 Staff Management Issues in Nonprofit Organizations: 1 semester hour

Same as SOC WK 6311. Prerequisites: Graduate standing required. This course addresses issues involved in managing staff in nonprofit organizations. The course will cover the following topics: fundamentals of staff supervision; balancing supervisory processes with counseling and coaching; selecting, hiring, evaluating, and terminating staff; legal issues that affect these processes.

P P ADM 6312 Legal Issues in Managing Nonprofit Organizations: 1 semester hour

Same as SOC WK 6312. Prerequisites: Graduate standing required. This course addresses legal issues involved in managing and governing nonprofit organizations. The course will cover the following topics: The Board as steward of the organization; Director and officer liability; tax laws concerning charitable giving; legal issues in managing staff and volunteers (e.g., hiring, evaluating, and terminating employees); Missouri nonprofit law.

P P ADM 6313 Financial Issues in Managing Nonprofit Organizations: 1 semester hour

Same as SOC WK 6313. Prerequisite: Graduate standing required. This course addresses financial issues involved in governing and managing nonprofit organizations. The course will cover the following topics: Cash flow analysis; budgeting; fund accounting; cost accounting (determining costs for programs and services); understanding and using standard financial statements, including balance sheets, cash flow statements, statements of activity, and operating and capital budgets.

P P ADM 6340 Seminar in City Administration: 3 semester hours

This course provides an overview of the working environment of a city administrator and is jointly sponsored by the local city managers association. Professional city personnel make presentations to the students on six major topics: political structure, organizational structure, service delivery, finance, personnel policies and practices, and leadership. The course provides direct observation of city council meetings, visits to various city facilities, exposure to different philosophies and styles of city management, and provides students a chance to assemble facts, evaluate options, and present policy recommendations for real problems that local administrators face.

P P ADM 6350 Issues in Urban Management: 3 semester hours

Designed to evaluate management issues that confront managers in local government from a political perspective. The format will include an intense review and discussion of original case studies from actual local government situations. The specific focus of this course will vary. Course may be repeated.

P P ADM 6400 Public Administration: Theory & Practice: 3 semester hours

Same as POL SCI 6440. The course examines major approaches to analyzing public policies and their administration with emphasis on the effects of administrative organization and procedures on policy decisions and their impact. Specific topics may include administrative accountability, inter-governmental relations, public private interaction, implementation processes, bureaucratic expertise, the legal environment of public administration, and public service and merit issue.

P P ADM 6430 Health Care Policy: 3 semester hours

Same as GERON 6443, POL SCI 6443, and SOC WK 6443. Prerequisites: Graduate standing or consent of instructor. Survey course examining current issues in health policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

P P ADM 6470 Proseminar in Urban Politics: 3 semester hours

Same as: POL SCI 6470. Examination of the relationship between the social, economic and political systems of urban areas. Urban political structure, patterns of influence, political participation and communication and political change. Special attention to problems of access to and control of urban political systems.

P P ADM 6490 Human Resources in the Public Sector: 3 semester hours

Same as POL SCI 6449 and SOC WK 6449. This course presents an overview of personnel and labor relations in the public sector. It places particular emphasis on issues which are unique to the public sector, such as the merit system, the questions of representative bureaucracy, and the constraints of personnel in the nonprofit sector. Course topics may include personnel reforms in the federal sector, equal employment and affirmative action policies, testing, selection, hiring, comparable worth, job evaluation and labor relations, including grievance arbitration and collective bargaining.

P P ADM 6500 Selected Topics in Public Policy Administration: 3 semester hours

Prerequisites: Graduate standing. This course is a seminar of selected issues and methods relating to public policy administration. It may be repeated for credit, provided the subject matter is different.

P P ADM 6501 Selected Topics in Nonprofit Management and Leadership: 3 semester hours

Prerequisites: Graduate standing. Permission of instructor may be required. A seminar of selected issues and methods relating to nonprofit management and leadership. May be repeated for credit, provided the subject matter is different.

P P ADM 6550 Strategic and Program Planning for Nonprofit Organizations: 3 semester hours

Same as POL SCI 6490 and SOC WK 6491. Prerequisites: Graduate standing. This course covers strategic and program planning and its ability to enable an organization to concentrate on efforts and set priorities guided by a mission, vision, and an understanding of its environment. The course focus is on preparing a strategic plan and a program plan for a nonprofit organization and analyzing an organization's ability to deliver goods and/or services to its constituents in today's economic, social, and political climate.

P P ADM 6600 Managing and Leading in Organizations: 3 semester hours

Same as MGMT 5600. Prerequisites: Graduate standing or consent of instructor. The theoretical and research contribution of the behavioral sciences to management and administration are examined and applied to selected organizational situations. Areas to be considered from the standpoint of both individual and organizational performance are communication, motivation, conflict, decision-making, goal setting, leadership, organizational design, climate, development and control. Utilizing a systems perspective, the course attempts to develop in each student an ability to analyze and solve organizational problems.

P P ADM 6750 Applied Research Design: 3 semester hours

Prerequisites: Graduate standing. The course offers a comparative study of research strategies with regard to data sources, data collection, and modes of analysis that are appropriate for program evaluation research. Attention is given to observational, survey, and quasi-experimental methodologies.

P P ADM 6751 Applied Evaluation Project: 3 semester hours

Prerequisites: P P ADM 6000 or P P ADM 6010 or P P ADM 6750. This course is an independent study involving an evaluation project with an appropriate public or private or nonprofit agency.

P P ADM 6800 Management Information Systems: 3 semester hours

Same as INFSYS 5800. Prerequisites: Graduate standing. This course provides an overview of issues related to the management of information systems within organizations. Course topics may include the role of the Chief Information Officer, business value from emergent information technologies (IT), enterprise systems, the impact of IT on organizational competitiveness, managing IT-enabled projects, extracting business intelligence from big data, sourcing IT, cybersecurity, ethics, intellectual property rights, and societal impacts of IT.

P P ADM 6850 E-Governance in the Public Sector: 1 semester hour

Prerequisite: Graduate standing. This course addresses information technology in the public sector from a managerial perspective. Students will examine basic hardware, software, data, and information management issues from a managerial perspective. These topics may include web portal design, geographic information systems, database management, e-government, strategic design, and the use of information technology to address public policy questions.

P P ADM 6900 Cases in Public Policy Administration: 3 semester hours

Prerequisites: Graduate standing. This capstone course intensively analyzes public policy administration cases drawn from a variety of issues and settings.

P P ADM 6950 Internship: 3 semester hours

Independent study involving work with an appropriate public or private or nonprofit agency.

Pre-professional Programs

Students at the University of Missouri-St. Louis may develop pre-professional study plans in either law or the health professions. With early and careful advising, students may develop an appropriate plan to prepare for their intended professional study.

Students should meet with pre-professional advisors in their interest area early in their academic careers to ensure development of sound, comprehensive study plans that aim to fulfill the admission requirements of the professional program to which they wish to apply. It is the student's responsibility to coordinate their plan of study with their intended graduate/pre-professional programs.

The following information on pre-professional study at UMSL is provided to give students minimal guidelines and assistance in planning a program.

For advising and information, contact the Marcus Allen Advising Center in the College of Arts and Sciences, 303 Lucas Hall, 314-516-5501

Pre-Law

Pre-law students at UMSL come from a variety of majors, including Art History, Criminal Justice, Economics, English, History, Philosophy, Political Science, and many more. Many of these majors offer pre-law tracks or minors, and you can identify yourself as a pre-law student at any time during your career at UMSL. The Pre-Law Committee of the American Bar Association (ABA) advises that a wide range of undergraduate majors can serve as a path to law school:

The ABA does not recommend any undergraduate majors or group of courses to prepare for a legal education. Students are admitted to law school from almost every academic discipline. You may choose to major in subjects that are considered to be traditional preparation for law school, such as history, English, philosophy, political science, economics or business, or you may focus your undergraduate studies in areas as diverse as art, music, science and mathematics, computer science, engineering, nursing or education. Whatever major you select, you are encouraged to pursue an area of study that interests and challenges you, while taking advantage of opportunities to develop your research and writing skills. Taking a broad range of difficult courses from demanding instructors is excellent preparation for legal education. (Source: the American Bar Association (http://www.americanbar.org/groups/legal_education/resources/pre_law.html))

After graduating from UMSL, students have gone on to attend law school locally at Saint Louis University, Washington University in St Louis, as well as at the University of Missouri-Columbia and University of Missouri-Kansas City. Graduates attend prestigious law schools outside the St Louis area as well.

There are hundreds of UMSL graduates who have gone to law school and now work as lawyers, judges, or in other careers in the legal profession. Many of them remain in the St Louis area, and the pre-law program at UMSL regularly brings them to campus to interact and share advice with students. By declaring yourself to be pre-law, you will receive updates about upcoming events and opportunities to meet and connect with alumni in the legal profession.

The pre-law advisor can assist you in selecting courses that will best meet your interests while also allowing you to develop the skills that are

important for a successful law school application. For more information, please refer to the UMSL pre-law advising website.

Pre-Health Sciences

The University of Missouri - St. Louis provides advising for students planning to continue their studies to become healthcare professionals. While there are no pre-health majors, most of the prerequisite classes necessary for entry into health professions schools are offered in both the Fall and Spring Semesters with some being offered in the Summer as well. This allows students to complete any major offered by UMSL while pursuing their desired pre-health goals. For more information on pre-health, please go to: <https://www.umsl.edu/divisions/artscience/advising/prehealth/index.html>

Pre-requisite coursework varies depending on the professional program you choose. In addition to the courses listed below, students should actively seek out extracurricular opportunities. Such activities can include volunteering, shadowing, research, and organizational leadership. Students are encouraged to join some of the many on-campus organizations including one of the pre-health societies. Information about student organizations can be found at the Office of Student Involvement

Suggested Courses

Common pre-requisite courses include:

Biology

| | | |
|-----------|--|---|
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 1821 | Introductory Biology: Organisms and the Environment (MOTR BIOL 150LEC) | 5 |
| BIOL 2012 | Genetics | 3 |
| BIOL 2482 | Microbiology | 3 |
| BIOL 3622 | Cell Biology | 3 |
| BIOL 1131 | Human Physiology and Anatomy I | 4 |
| BIOL 1141 | Human Physiology and Anatomy II | 4 |

Chemistry

| | | |
|-----------|---|---|
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| CHEM 4712 | Biochemistry | 3 |

Mathematics

Select courses at least through calculus, as appropriate for the major degree.²

| | | |
|---------------------------|--|-----|
| MATH 1100 or MATH 1800 | Basic Calculus Analytic Geometry and Calculus I | 3-5 |
| MATH 1320 | Introduction to Probability and Statistics | 3 |

Physics

As appropriate for the degree chosen:² 8-10

| | |
|--|---|
| PHYSICS 1011, PHYSICS 1011L, PHYSICS 1012 and PHYSICS 1012L | 8 |
| or | |
| PHYSICS 2111 & PHYSICS 2112 | 8 |
| Physics: Mechanics and Heat (MOTR PHYS 200L) and Physics: Electricity, Magnetism, and Optics | |

Successful completion of these recommended courses helps students prepare for required standardized exams. Students should take the required national standardized examination early in their junior year as is appropriate for the exam: The Medical College Admission Test (MCAT) for Pre-Med students; the Dental Aptitude Test (DAT) for Pre-Dental students; the Optometry Admission Test (OAT) for Pre-Optometry students; and the Pharmacy College Admission Test (PCAT), (if required) for Pre-Pharmacy students; and the Graduate Record Exam (GRE) is generally sufficient for other professional healthcare school. (Students should consult with their intended professional school for appropriate test information.)

Each year the number of applicants to health profession schools far exceeds the number of available places. Students should meet with Career Services and the various campus advising resources available to students to explore alternative plans should they not be accepted.

Pre-Optometry

4+4 Program

The University of Missouri-St. Louis offers a four-year graduate program of study leading to the Doctor of Optometry degree; this professional degree is administered by the College of Optometry. It is one of only 20 schools or colleges of optometry in the United States and the only one in the state of Missouri. This program, as a result, makes UMSL an ideal institution for Pre-Optometry education. Various programs are available for Pre-Optometry students as noted below.

Students may pursue a traditional 4 + 4 program, which is a bachelor's degree followed by the four-year graduate optometry program. In this case, students may pursue any bachelor's degree, as long as the pre-optometry requirements are met.

3+4 Program

Alternatively, the College of Arts & Sciences sponsors a 3+4 program in which the undergraduate degree is granted when the student satisfactorily completes the first semester of the professional program and has met all of the conditions for the specific undergraduate degree for which the student has applied. The program is intended for students who enter as Freshman.

Students interested in this program must apply to the College of Optometry and maintain a G.P.A. of 3.2. Some summer classes may be expected, and the student should be prepared to take the OAT by the end of their sophomore year.

For more information on admission requirements for the College of Optometry, please refer to the Optometry section of this Bulletin.

Sample 3+4 Biology BS UMSL College of Optometry Plan of Study

*this plan assumes that a student has tested into MATH 1100.

| Freshman | | | | | |
|--|-------|---|-------|-----------|-------|
| Fall | Hours | Spring | Hours | | |
| INTDSC 1003 | | 1 BIOL 1831 | 5 | | |
| ENGL 1100 | | 3 CHEM 1121 | 5 | | |
| MATH 1100 | | 3 COMM 1040 | 3 | | |
| CHEM 1111 | | 5 EXPLORE - Humanities and Fine Arts | 3 | | |
| CORE - US History and Government | | 3 --- | | | |
| Activities: Get involved in student organizations, Start researching professionals to shadow. Volunteer/ community service | | Activities: Get to know faculty so that you can start inquiring about research opportunities. Volunteer/Community Service | | | |
| 15 | | 16 | | | |
| Sophomore | | | | | |
| Fall | Hours | Spring | Hours | | |
| BIOL 1821 | | 5 PHYSICS 1012 | 3 | | |
| CHEM 2612 | | 3 PHYSICS 1012L | 1 | | |
| PHYSICS 1011 | | 3 BIOL 2012 | 3 | | |
| PHYSICS 1011L | | 1 CHEM 2622 | 3 | | |
| BIOL 2482 | | 3 BIOL Elective | | | |
| BIOL 2483 | | 2 EXPLORE - Social Sciences (PSYCH 1003 recommended) | 3 | | |
| Activities: Patient experience exposure, shadowing, community service / volunteer | | Take OAT over the Summer | | | |
| 17 | | 13 | | | |
| Junior | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| BIOL 3302 | | 3 BIOL 4889 | 2 | BIOL 3622 | 3 |
| BIOL Elective | | 3 PHIL 2254 | 3 | PHIL 2256 | 3 |
| BIOL Lab | | 2 EXPLORE - Humanities and Fine Arts | 3 | | |
| CHEM 2633 | | 2 EXPLORE - Social Sciences | 3 | | |
| MATH 1320 | | 3 EXPLORE - Social Sciences (Cultural Diversity) | 3 | | |
| ENGL 3160 | | 3 | | | |
| 16 | | 14 | | | 6 |
| Senior | | | | | |
| Fall | Hours | | | | |
| Course that count toward the BS in Biology | | | | | |
| OPTOM 8010 | | 5 | | | |
| OPTOM 8040 | | 4 | | | |
| OPTOM 8050 | | 2 | | | |
| OPTOM 8060 | | 2 | | | |
| OPTOM 8110 | | 4 | | | |
| 17 | | | | | |

Psychological Sciences

General Information

Psychology Academic Advising Office

Undergraduate psychology majors and other students interested in majoring or minoring in Psychological Sciences should meet with an Academic Advisor in the Psychology Academic Advising Office to receive specific information on degree requirements and course offerings, career options, and graduate school. All students are encouraged to see a Psychology Academic Advisor regularly throughout their collegiate careers. It is especially important for all students who are within one calendar year of graduation to meet with a Psychology Academic Advisor. Students can make an appointment by e-mailing: psy_advising@umsl.edu or calling 314-516-7651.

Career Outlook

An undergraduate degree in Psychological Sciences provides the Liberal Arts or math and science background necessary for entry level positions in many fields such as mental health, business, communication, human services, and research. It also provides the foundation for graduate training in psychology, counseling, school counseling, and social work. To function specifically as a counselor or therapist, a graduate degree is required. For more career information please schedule an appointment with an Academic Advisor in the Psychology Academic Advising Office (psy_advising@umsl.edu). For additional information, visit the American Psychological Association website at www.apa.org.

Facilities

The department has several human experimental laboratories furnished with a wide range of psychophysiological equipment. The department also operates four clinics (Community Psychological Services (CPS), the Center for Trauma Recovery (CTR), the Center for Behavioral Health (CBH), and Children's Advocacy Services of Greater St. Louis (CASGSL)) that provide training opportunities for students in Psychology, as well as psychological treatment and assessment services for citizens of the region.

Program Overview

The Department of Psychological Sciences offers a Bachelor of Arts (B.A.) and a Bachelor of Science (B.S.) degree in Psychological Sciences, as well as a B.A. degree in Applied Psychology in Child Advocacy Studies and an online collaborative B.A. in Psychology. The department also offers a minor in Psychological Sciences and a minor in Child Advocacy Studies. In addition, there are several certificates that can be earned through the department including undergraduate certificates in Trauma Studies, Neuroscience and Child Advocacy Studies. The department also offers a terminal Master of Arts in Psychology, with a specialization in Behavioral Neuroscience and two options within its Ph.D. Program: Clinical Psychology or Behavioral Neuroscience.

Graduate School Preparation

Students interested in applying to graduate school in Psychology are strongly encouraged to become involved in a research project with a psychology faculty member by securing enrollment in PSYCH 3390 Directed Studies or as a volunteer. Students can contact any psychology faculty member that they are interested in working with to ask if they have any undergraduate research assistant positions available, and if so, how to apply. These positions are available on a limited and

competitive basis. Contact the Psychology Academic Advising Office for more information on such positions (psy_advising@umsl.edu).

Degrees

Applied Psychology of Child Advocacy Studies BA (p. 401)

Psychological Sciences BA (p. 702)

Psychological Sciences BS (p. 704)

Psychology BA, Collaborative Psychology Degree Program (p. 706)

Psychology MA, Behavioral Neuroscience Emphasis (p. 707)

Psychology PhD, Behavioral Neuroscience Emphasis (p. 708)

Psychology PhD, Clinical Community Psychology Emphasis (p. 708)

Psychology PhD, Industrial and Organizational Psychology Emphasis (p. 709)

Minors

Child Advocacy Studies Minor (p. 472)

Psychology Minor (p. 707)

Certificates

Child Advocacy Studies Undergraduate Certificate (p. 472)

Neuroscience Undergraduate Certificate (p. 654)

Workplace and Organizational Science Undergraduate Certificate (p. 765)

Licensure and Certification

As of July 1, 2024 it has been determined that the following programs meet educational requirements for Licenses Clinical Psychologist in Illinois and Missouri.

- Psychology PhD, Clinical Community Psychology

We have not determined if the above programs meet the educational requirements for licensure in the remaining U.S. Territories. For the most up to date information about Licensure and Certification requirements, please visit <https://teaching.missouri.edu/student/state-authorization/umsl/licensure>.

Under federal regulations, we may not enroll into licensure or certification program students located in a state or territory in which our program does not meet the educational requirements to be eligible for licensure or which the University has not made a determination. However, if you plan to seek licensure and employment in any of the following states or territories listed below, you may enroll in the program after signing an attestation indicating your plans to become licensed and employed in a state that meets requirements.

If you plan to seek licensure in one of the states listed above, please contact the Psychological Sciences Department at 314-516-5391 for more information.

Psychology Courses

PSYCH 1000 Choosing a Career in Psychology: 1 semester hour

Prerequisite: Psychology Major or consent of instructor. This course is an orientation to the field of psychology for majors and for students who are considering declaring the major. This course is to be completed by native and transfer Psychology majors during their first semester of study at UMSL. Students will be engaged in activities that will help them to develop and identify their professional goals, learn about the various specialties and careers available within the field of psychology, understand the education and skills necessary for various careers, learn the requirements for a psychology major, become familiar with minors that are available at UMSL, think about a possible choice of minor or certificate, and become acquainted with the interest areas of UMSL faculty in Psychology and related fields. All Psychology majors must complete this course during the first semester at UMSL with a grade of C- or higher.

PSYCH 1003 General Psychology (MOTR PSYC 100): 3 semester hours

A survey of the basic concepts, theories, and pivotal findings over the past 100 years in the science of Psychology, with special emphasis on contemporary concepts and findings that focus on the relation of the brain to normal and pathological behaviors. All Psychology majors must complete this course with a grade of C- or higher.

PSYCH 2040 Attraction: An Evolutionary Approach: 3 semester hours

Prerequisites: PSYCH 1003. This course examines the topics of interpersonal and sexual attraction in a scientific context through the milieu of popular media outlets as well as published empirical literature from the fields of Psychology, Anthropology, Ecology, Economics, and Gender Studies. Specific topics include attraction cues, jealousy, monogamy, infidelity, the economics of sex, and the long-term and short-term mating strategies of men and women. We will also investigate the technological and media manipulation of sexual cues, as well as conflicts between the sexes, religion and sex, the peopling of the earth, the fundamentals of evolved psychological mechanisms, identifying adaptive problems and potential solutions, gender roles, parental investment, issues of kinship, and inter- and intra-sexual competition.

PSYCH 2200 Drugs and Behavior: 3 semester hours

Prerequisite: PSYCH 1003. The course is an introduction to psychopharmacology and the relationship among drugs, and how these impact the brain and behavior. The emphasis is on physiological mechanisms underlying the behavioral responses to psychotherapeutic substances, illicit psychoactive drugs, commonly used substances (alcohol, nicotine, caffeine), and drug-like substances produced naturally in the body.

PSYCH 2201 Psychological Statistics: 4 semester hours

Prerequisites: PSYCH 1003 and satisfaction of the Mathematical Proficiency general education requirement. This course, along with its laboratory, serves as an introduction to statistical concepts and methods used in Psychological measurement and the analysis and interpretation of social sciences data. Topics may include descriptive statistics, frequency distributions centrality, variability, and correlational measures; as well as an introduction to statistical inference, sampling fundamentals, significance testing and effect size, t-test, and analysis of variance. All Psychology majors must complete this course with a grade of C- or higher before registering for PSYCH 2219. This course fulfills the Information Literacy general education requirement.

PSYCH 2205 Human Sexuality: Psychological Perspectives: 3 semester hours

Prerequisites: PSYCH 1003. This course is a comprehensive overview of human sexuality from the standpoint of the behavioral science of Psychology. This course includes a study of sexual anatomy and physiology, intersex classifications, sex and gender differences, sexual orientation, interpersonal and interpersonal aspects of human sexuality, classification and treatment of sexual dysfunction and sexual disorders, sexual victimization, and the methods employed for the scientific examination of human sexual behavior.

PSYCH 2211 Introduction to Biological Psychology: 3 semester hours

Prerequisites: PSYCH 1003 and 3 hours of BIOL chosen from either BIOL 1012, or BIOL 1102, or BIOL 1831. Students with career goals that include graduate study in Psychology are urged to complete the BIOL 1831 prerequisite for this course. This course introduces psychology students to behavioral neuroscience and neuropsychology. Course topics include basic neuroanatomy and neurophysiology, neurodevelopment, sensory and motor systems, and the integration of subcortical and cortical networks. All are covered with an emphasis on behavioral outcomes of normal and pathological functioning of the brain. All psychology majors must complete this course with a grade of C- or higher.

PSYCH 2219 Research Methods in Psychological Science: 3 semester hours

Prerequisites: PSYCH 2201. This course is a comprehensive overview of research methods in the psychological sciences. Topics may include technical scientific writing in current APA format, critical evaluation of research literature, the application of statistical methods, and mastery of the ethical principles guiding psychological sciences research. Course and laboratory work involve designing and evaluating research questions, formulating research hypotheses, designing and conducting original research studies, and presenting research results. All psychology majors must complete this course with a grade of C- or higher. This course fulfills the Information Literacy general education requirement.

PSYCH 2230 Psychology of Gender: 3 semester hours

Same as GS 2230. Prerequisite: PSYCH 1003. Evaluation of psychological theories and research regarding physiological, cognitive, and personality gender differences and similarities, gender related problems in adjustment, and gender specific clinical interventions.

PSYCH 2245 Psychological Disorders: 3 semester hours

Prerequisite: PSYCH 1003. This course examines the historical views and current perspectives on the possible antecedents, symptoms, and treatments of major psychological disorders, including anxiety, dissociative, mood, somatoform, eating, schizophrenia and substance-related disorders. Major diagnostic categories and criteria, individual and social factors of maladaptive behavior, methods of clinical assessment, research strategies, and types of therapy will also be covered. All psychology majors must complete this course with a grade of C- or higher.

PSYCH 2250 Social Psychological Science: 3 semester hours

Prerequisite: PSYCH 1003. This course examines the scientific study of the way people think, feel, and behave in social situations. The content focuses on understanding how people influence, and are influenced by, real or imagined others. Specific topics may include the self, social judgments, attitudes and persuasion, helping behavior, prejudice, aggression, attraction, conformity and obedience, and group processes.

PSYCH 2268 Lifespan Developmental Psychology (MOTR PSYC 200): 3 semester hours

Prerequisites: PSYCH 1003. This survey course examines development over the lifespan with an emphasis on the developmental tasks and challenges of each age period.

PSYCH 2270 Developmental Psychology: Infancy, Childhood and Adolescence: 3 semester hours

Prerequisites: PSYCH 1003. This course systematically examines theories and research concerning the physical, social, emotional, and cognitive development of children from conception through adolescence. It will provide students with a basic knowledge of infant, child, and adolescent development; its subject matter; its approaches to gathering and evaluating evidence about the causes of behavior; and the ways in which our knowledge is applied to enhance the development and the quality of life of children. It is intended for Psychology majors and students with career interests in research, education, and/or the treatment of children. All Psychology majors taking this course instead of PSYCH 2250, must complete it with a grade of C- or higher.

PSYCH 2299 Directed Readings in Psychology: 3 semester hours

Prerequisites: PSYCH 1003 or SOC 1010, or consent of instructor. This course will provide an intellectual forum for discussing classic and contemporary theories and research in psychology on a selected topic. Students can retake the course as long as the topic is different.

PSYCH 2392 Topics in Psychology: 1-5 semester hours

Prerequisites: PSYCH 1003 and consent of instructor. This course is a seminar of selected issues and methods in psychology.

PSYCH 2400 Sports Psychology: 3 semester hours

Prerequisites: PSYCH 1003. This course examines psychological, biological, and social aspects of sport and human performance. Course topics may include performance enhancement, mental skills training, motivation, group dynamics, as well as physiological responses to stress and anxiety in sport.

PSYCH 2500 Human Motivation: 3 semester hours

Prerequisite: PSYCH 1003. This course approaches human motivation through a biopsychosocial perspective, including theories of motivation, individual motivation, and how motivation differs. Application will include real-life workplace and educational psychology contexts.

PSYCH 2520 Introduction to Addiction Science: 3 semester hours

Prerequisites: PSYCH 1003 and enrolled in the Psychology BA, Collaborative Psychology Degree Program. This course provides an overview of the scientific study of addiction, focusing on a range of theoretical models and their implications for prevention, intervention and treatment.

PSYCH 3232 Psychology of Trauma: 3 semester hours

Same as GS 3232. Prerequisites: PSYCH 1003. This course examines responses to potentially traumatic events (e.g., child abuse and neglect, physical and sexual assault, intimate partner violence, community and gun violence, war, natural disasters). Trauma exposure, posttraumatic growth, the development of trauma-related difficulties including PTSD, assessment and intervention are examined with attention to gender, cultural and lifespan issues.

PSYCH 3280 Psychology of Death and Dying: 3 semester hours

Same as GERON 3280. Prerequisite: PSYCH 1003 or consent of the instructor. An exploration of end-of-life issues integrating the scholarly, social, and individual dimensions of death and dying. This course provides a solid grounding in theory and research, as well as practical application to students' lives.

PSYCH 3290 Traumatic Stress in Childhood and Adolescence: 3 semester hours

Same as CAST 3290. Prerequisites: PSYCH 2270 (majors), PSYCH 2268, or approval from the instructor. Exploration of the impact of stressors experienced during infancy, childhood, and adolescence. Integrates how theoretical frameworks, cultural considerations and policy implications apply to child development research and practice.

PSYCH 3295 Selected Projects in Field Placement: 3 semester hours

Prerequisites: 15 credit hours of psychology and consent of instructor. This course provides for selected options in field work placement experiences on campus or in various local agencies with training and supervision by faculty. It may be repeated once for credit.

PSYCH 3299 Special Readings in Psychology: 1-3 semester hours

Prerequisites: PSYCH 1003 and consent of instructor. This course entails independent readings and a writing project selected in consultation with a supervisory faculty member. Instructor approval must be obtained before enrolling. This course may be taken only once.

PSYCH 3318 Industrial and Organizational Psychology: 3 semester hours

Same as MGMT 3623. Prerequisites: PSYCH 2201 or MATH 1105 (or equivalent). This course introduces students to psychological research and theories pertaining to human behavior in the work setting. Topics covered may include: selection, performance appraisal, training, leadership, motivation, job satisfaction, and organizational design.

PSYCH 3340 Clinical Issues of Childhood: 3 semester hours

Prerequisites: PSYCH 2245 or PSYCH 2270. This course will address the clinical disorders and difficulties of children, as well as the causes and the treatment of these disorders. Topics addressed may include autism, childhood schizophrenia, conduct disorders, learning disabilities, ADHD, mood disorders, health-related disorders, anxiety disorders, and child maltreatment. Treatments designed for specific use with children, including behavioral, drug and community mental health approaches will be addressed. This course is recommended for those going on to graduate work in psychology.

PSYCH 3346 Introduction to Clinical Psychology: 3 semester hours

Prerequisite: PSYCH 1003, PSYCH 2245; and three additional hours of Psychology. This course provides a conceptual framework for research, description and understanding of clinical phenomena. Assessment, interviewing, the clinical use of tests and psychological approaches to treatment are also addressed.

PSYCH 3390 Directed Research in Psychology: 1-6 semester hours

Prerequisites: PSYCH 1003 and consent of instructor. This course is a research apprenticeship with a faculty member (who must approve enrollment) that involves assisting a faculty member in the development and execution of empirical research, or receiving mentorship from a faculty member in developing an independent research project. The course (and research) should culminate in a presentation to the faculty member's research group or a research conference. Enrollment is generally limited to psychology majors and minors, and especially students who are exploring plans to pursue a PhD in Psychology or Neuroscience. Psychology majors and minors taking PSYCH 3390 to fulfill the Neuroscience Certificate should be working with one of the approved faculty mentors for that certificate program. This course may be repeated for a maximum of 10 hours, but only 3 hours count toward 3000-4000 requirement for the psychology degree.

PSYCH 3392 Special Topics in Psychology: 1-5 semester hours

Prerequisites: PSYCH 1003 and consent of instructor. This course is a seminar of selected issues and methods in psychology.

PSYCH 3405 Forensic Psychology: 3 semester hours

Same as CRIMIN 3405. Prerequisites: PSYCH 1003 or CRIMIN 1100.

This course is the application of scientific psychological knowledge to matters that come before a judge or jury using actual case studies. It will focus on criminal cases such as homicide and sex offender commitment and on personal injury cases. Topics may include psychological tests used and recommended by forensic psychologists, sex offender risk assessment, consultation with attorneys, and keys to being a forensic expert on the witness stand.

PSYCH 3500 Health Psychology: 3 semester hours

Prerequisite: PSYCH 1003 and three additional hours of Psychology.

Health Psychology involves the discipline and principles of psychology and behavior in understanding how the mind, body, and behavior interact in health and disease. Class topics include theoretical foundations of health and illness, health promotion and primary prevention of illness, health enhancing and health damaging behaviors, psychosomatic illness, stress and coping, pain management, and a variety of specific behavior-related medical illnesses (e.g., heart disease, eating disorders, cancer, AIDS).

PSYCH 3820 Cross-Cultural Psychology: 3 semester hours

Prerequisites: PSYCH 1003 and 9 hours of Psychology. The purpose of this course is to present students with a broad theoretical and applied overview of cross-cultural psychology. To this end, the course presents an orientation to the definitions, concepts, theories, and methodologies of crosscultural psychology. Included is an examination of cultural and ecological factors and their influences on perceptual and cognitive processes, personality, language, and other psychological variables.

PSYCH 3840 Individual Differences: 3 semester hours

Prerequisites: PSYCH 1003 and enrolled in the Psychology BA, Collaborative Psychology Degree Program. This course surveys individual and group differences. It covers many of the various factors that lead to variations in behavior.

PSYCH 3850 Multicultural Psychology and Mental Health: 3 semester hours

Prerequisites: PSYCH 1003. This course is an introduction to the psychological science of culture through theory-driven and applied learning. Topics may include a broad range of psychological issues associated with diversity and multiculturalism including, structural inequity, developmental processes, family and peer relationships, intergroup relations, mental health and well-being, health disparities, and intervention. This course satisfies the Cultural Diversity requirement.

PSYCH 3995 Undergraduate Teaching Internship in Psychology: 1 semester hour

Prerequisites: PSYCH 1003 and 6 additional credits in Psychological Sciences (9 credits minimum), and instructor consent. This course prepares students to work as learning assistants, tutors, or peer mentors for courses within the Department of Psychological Sciences. Students will develop general pedagogical skills. Specific teaching assistant duties will be determined by the instructor of record for the associated course. This course may be repeated for up to 3 total credit hours.

PSYCH 4250 Stereotyping, Prejudice, and Discrimination: 3 semester hours

Prerequisites: PSYCH 2219 and PSYCH 2250, or consent of instructor.

This course will provide an intellectual forum for discussing classic and contemporary theories and methodologies focused on understanding stereotyping, prejudice, and discrimination. Using a social psychological framework, students will assess psychology's current understanding of why people use and apply stereotypes in their everyday thinking and behavior. Students will also explore such topics as social categorization, stereotype activation, contemporary forms of prejudice, the social context of prejudice, the consequences of prejudice and discrimination, the stigmatized target's perspective, coping with prejudice, and techniques for reducing prejudice and discrimination.

PSYCH 4275 Drug Use and Addiction: People, Policy, and Practice: 3 semester hours

Prerequisites: PSYCH 2245 or consent of instructor. This course will examine the differences between drug use and addiction and how substance-use disorders manifest across different people, communities, and contexts. Topics may also include a high-level review of evidence-based treatments for substance-use disorders and the limitations of various interventions. Students will learn about the systems, institutions, and policies surrounding substance use harm reduction, treatment, and recovery services, as well as possibilities for impactful career paths to improve lives among people who use drugs.

PSYCH 4300 Introduction to Psychopharmacology: Drugs and Mental Illness: 3 semester hours

Prerequisites: PSYCH 1003, PSYCH 2211 or PSYCH 2200; PSYCH 2245. The course is designed to provide an introduction to drugs used to treat anxiety disorders, major depression, schizophrenia, and other psychopathologies. The emphasis will be on understanding neural mechanisms related to psychological disorders and to the effectiveness of current drug treatments.

PSYCH 4340 Introduction to Human Neuroanatomy: 3 semester hours

Prerequisites: Grade of B- or above in PSYCH 2211, and nine hours of psychology or biology or consent of instructor. This course is an intensive introduction to brain anatomy. It will explore the structure and function of the human nervous system with the goal of preparing students for advanced study in neuroscience-related fields. Topics will include a review of core concepts from cellular neuroscience, neuroimaging and neuroanatomical techniques, sensory and motor systems, and the anatomical basis of cognitive functions. Based on an understanding of typical brain structure and function, the anatomical and physiological basis of various neurological disorders is explored.

PSYCH 4349 Human Learning and Memory: 3 semester hours

Prerequisites: PSYCH 2211 and six additional hours of psychology; or consent of instructor. This course focuses on the basic forms of learning and memory such as habituation, sensitization, conditioning, and skill/procedural memory, as well as more complex forms of learning and memory such as semantic memory, episodic/autobiographical memory, short-term and working memory, and social learning. Students will learn about the neurobiological basis of learning and memory on both cellular and system levels. In addition, students will study how factors such as emotion and age affect learning and memory as well as the relevance of learning and memory for clinical and legal environments.

PSYCH 4350 Emotions and the Brain: 3 semester hours

Prerequisites: PSYCH 2211 and six additional hours of psychology; or consent of instructor. Emotions play an important role in everyday life. But what exactly is an emotion? And what happens in your body when you experience an emotion? More specifically, what happens in your brain? Doesn't the limbic system have something to do with emotions? What are the differences and similarities between emotions (such as anger) and motivations (such as hunger)? What happens in your body and brain when you fall in love? And how do emotions influence cognition, such as attention and memory? Conversely, does cognition influence our emotions as well? These are some of the questions that we will answer in this course. Given that many mental disorders involve emotional disturbances, this course is not only relevant for students who are interested in the fundamental knowledge of emotions, but also for students who are interested in clinical psychology.

PSYCH 4356 Cognitive Processes: 3 semester hours

Prerequisite: Nine hours of psychology or consent of instructor. This course is an overview of the major topics in cognitive psychology, including perception, visual imagery, attention, memory, knowledge representation and retrieval, language, problem solving, reasoning, judgment, decision making, and intelligence.

PSYCH 4365 Psychological Testing and Assessment: 3 semester hours

Prerequisites: Grade of C- or above in PSYCH 2201, or consent of instructor. This course covers the uses, construction, and evaluation of psychological tests and assessments. Students will learn about tests designed to measure personality, intelligence, and other individual differences, including issues related to test use in specific settings. Examination of professionally-developed tests and hands-on learning exercises will be key aspects of the course.

PSYCH 4372 Introduction to Social Neuroscience: 3 semester hours

Prerequisites: PSYCH 2250 and PSYCH 2211, or consent of instructor. This course introduces current theory and research in social neuroscience with a focus on mechanisms underlying mind and behavior interactions using a multi-level integrative analysis. It examines how organismic processes are shaped, modulated, and modified by social factors and vice versa. This course may be taken for graduate credit with permission of the instructor.

PSYCH 4374 Introduction to Clinical Neuropsychology: 3 semester hours

Prerequisites: PSYCH 2211 and PSYCH 2245, or consent of instructor. This course is an introduction to current theory and practice of clinical neuropsychology with a focus on neuropsychological findings concerning relationships between the brain and behavior. Particular attention is devoted to function, neuroanatomy, neurological syndromes, patterns of brain impairment associated with various medical diseases, and methods of neuropsychological assessment and intervention.

PSYCH 4376 Mental Health and Aging: 3 semester hours

Same as GERON 4376. Prerequisites: PSYCH 2245 and ENGL 3100, or consent of instructor. This writing intensive course provides a survey of theory and research on mental health issues for older populations, focusing on psychological and social aspects of mental health and functioning. The course details approaches to understanding healthy aging, along with the prevalence, etiology, assessment and treatment of psychological disorders in older adults. The course also provides an overview of health care and community-based delivery systems for behavioral health and allows students to explore information about careers in aging.

PSYCH 4392 Selected Topics in Psychology: 1-5 semester hours

Prerequisites: Twelve hours of psychology and consent of instructor. This course is a seminar on selected topics and methods in psychology.

PSYCH 4398 Child Maltreatment: A Multidisciplinary Approach: 3 semester hours

Same as SOC WK 4398 and CAST 4398. Prerequisites: CAST 3798 (Majors/Certificates) or CAST 3290/PSYCH 3290 (Non-Majors/ Non-Certificates). This course, with its interdisciplinary emphasis, focuses on the systemic response to the primary domains of child maltreatment by multidisciplinary teams and child advocacy centers. Risk factors, cultural considerations, and mandated reporting of child abuse and neglect are emphasized. Students will begin to develop professional skills pertaining to child maltreatment, using a variety of experiential learning modalities.

PSYCH 4441 Psychology of Youths' Close Relationships: 3 semester hours

Prerequisites: PSYCH 1003 and enrolled in the Psychology BA, Collaborative Psychology Degree Program. This course will provide an examination of the close, interpersonal relationships humans typically encounter and create over the first two and a half decades of life and the ways in which they influence youth development and well-being. It will examine the ways in which relationships with parents, siblings, friends, and romantic partners develop and change from infancy through young adulthood, including theoretical perspectives, research methods, relationship forms and processes, and contextual influences on relationships.

PSYCH 4999 Integrated Psychology: 2 semester hours

Prerequisites: Consent of instructor. This capstone course serves as a review of the primary sub-fields of psychology. An advanced general psychology textbook will guide the class through important contemporary topics in behavioral neuroscience, learning and memory, cognition, psychopathologies and their treatments, and developmental and social psychology. The Major Field Aptitude Test in Psychology will serve as the final exam for the course. This course is restricted to Psychology majors and must be taken during majors' final semester of study. Students are expected to have already completed their application to graduate. All Psychology majors must complete this course with a grade of C- or higher.

PSYCH 5340 Human Neuroanatomy: 3 semester hours

Prerequisites: Admission to graduate program in psychology or consent of instructor. This course provides an overview of brain anatomy for graduate students in psychology and related disciplines. It explores the structure and function of the human nervous system both in health and disease. The course will cover core concepts from cellular neuroscience, neuroimaging and neuroanatomical techniques, sensory and motor systems, and the anatomical basis of cognitive functions.

PSYCH 5400 Seminar: Special Topics in Behavioral Neuroscience: 1 semester hour

Prerequisites: Admission to the graduate program in behavioral neuroscience or consent of the instructor. A seminar of selected contemporary topics in behavioral neuroscience. The class will meet weekly to discuss a journal article in the field with special focus on the methodologies used in neuroscience research. May be repeated for a total of 3 credit hours, provided the subject matter is different.

PSYCH 5407 Psychopharmacology: 3 semester hours

Prerequisite: 12 units of graduate-level. An examination of the effects of drugs on the brain and on behavior. Primary emphasis is on those drugs used in the treatment of affective disorders, schizophrenia and anxiety.

PSYCH 5465 Seminar: Behavioral Neuroscience: 3 semester hours

Prerequisites: Graduate standing or permission of instructor. Behavioral neuroscience is the study of the relation of the brain to behavior. The field has emerged as the new face of psychology; there are few subfields in psychology that have not been influenced by findings from animal labs, and from human studies employing physiological recordings, neuroimaging and psychotherapeutic drugs. This course will serve as an introduction for graduate students in psychology of brain morphology and function with an emphasis on normal and pathological behaviors.

PSYCH 5468 Seminar: Cognitive and Affective Processes: 3 semester hours

Prerequisites: Admission to the Graduate Program in Psychology or consent of instructor. This course is an introduction to classic and contemporary theories, methodologies, and theoretical perspectives used in the field of cognitive and affective psychology. Both basic research and applications of cognitive and affective psychology including the effect of culture are discussed. Special attention is paid to the interaction between cognition and emotion, including cognitive processing of emotional information and various forms of emotion regulation.

PSYCH 6415 Seminar in Health Psychology & Behavioral Medicine: 3 semester hours

Prerequisites: Consent of instructor. This course analyzes research, theory, and clinical applications in the interrelationships of behavior, psychological states, physical health and disease. Discussion includes theoretical foundations of health and illness, biopsychosocial factors affecting health and illness, diagnostic issues, prevention, interdisciplinary treatment applications, health and public policy, and research issues. Critical evaluation of theory and empirical support for clinical applications will be discussed.

PSYCH 6448 Multicultural Issues in Clinical Psychology: 3 semester hours

Prerequisites: Admission to the doctoral program in Clinical Psychology or consent of instructor. A survey of theoretical perspectives utilized in the treatment of various cultural groups. Their relationship to and implications for the treatment of members of various cultural groups will be explored. Strategies and ethical concerns in diagnosis, test interpretation, and treatment are considered.

PSYCH 6466 Seminar: Developmental Psychology: 1-3 semester hours

Prerequisites: Admission to the doctoral program in Clinical Psychology or consent of instructor. A critical examination of contemporary problems in developmental psychology.

PSYCH 7403 Psychopathology: 3 semester hours

Prerequisite: Admission to Clinical Psychology program or permission of instructor. A critical examination of the clinical-experimental literature in psychopathology. Etiologies of cognitive/affective functions and dysfunctions are explored, and implications for therapeutic interventions are considered.

PSYCH 7404 Introduction to Clinical Assessment I: 4 semester hours

Prerequisites: Admission to Clinical Psychology program. Fundamentals of clinical assessment with emphasis on interviewing and the measurement of cognitive functioning. This course includes a laboratory.

PSYCH 7406 Introduction to Clinical Assessment II: 4 semester hours

Prerequisites: PSYCH 7404. This course addresses theory and techniques of personality assessment including clinical interviewing, objective and projective assessment, and integrative report writing.

PSYCH 7412 Social Psychology: 3 semester hours

Prerequisites: Admittance to psychology doctoral program or consent of instructor. A review of key areas in contemporary theory and research in social psychology.

PSYCH 7421 Quantitative Methods I: 4 semester hours

Prerequisites: Admission to the Graduate Program in Psychology or consent of instructor. A comprehensive study of univariate statistical concepts and analyses used in psychological research. Topics include descriptive statistics, normal distributions, z , t , F , chi-square statistics, and distributions. Correlation, simple and multiple regression, factorial and repeated measures analysis of variance, significance testing and effect size are also examined.

PSYCH 7422 Quantitative Methods II: 4 semester hours

Prerequisites: PSYCH 7421 and consent of instructor. (With laboratory) A comprehensive study of the use of multivariate statistics in data analysis. Topics include the general linear model, multiple regression, factor analysis, and multivariate analysis of variance.

PSYCH 7423 Quantitative Methods III: 3 semester hours

Prerequisites: PSYCH 7422 and PSYCH 7429 and consent of instructor. A selective study of the use of multivariate statistics in data analysis. Topics include structural equation modeling, multilevel modeling, and analysis of longitudinal data.

PSYCH 7430 Introduction to Clinical Skills: 1 semester hour

Prerequisites: Admission to doctoral program in Clinical Psychology. An introduction to processes and procedures involved in psychotherapy.

PSYCH 7431 Clinical Supervision: 1-3 semester hours

Prerequisite: Admission to Clinical Psychology Program. Supervised experience in clinical practice. May be repeated six times for credit.

PSYCH 7432 Ethics and Professional Issues: 3 semester hours

Prerequisites: Admission to Clinical Psychology program. A study of issues in professional development, clinical supervision, risk management, and ethical standards as they relate to teaching, research, and professional practice.

PSYCH 7433 Clerkship in Clinical Psychology: 1 semester hour

Prerequisites: Admission to the doctoral program in Clinical Psychology. Supervised training in an affiliated agency or organization following completion of two years of course work. (May be repeated 3 times).

PSYCH 7434 Foundations of Clinical Interventions: 3 semester hours

Prerequisites: Admission to Clinical Psychology program. This course focuses on conceptual and methodological issues that are central to the development, evaluation and application of interventions in clinical psychology. Topics include efficacy and effectiveness research, introduction to theories of behavior change, and applications with specific populations.

PSYCH 7439 Summer Supervision: 1 semester hour

Prerequisites: PSYCH 7431. Supervised experience in clinical practice at all graduate year levels during the summer months. Can be repeated for credit.

PSYCH 7442 Seminar: Cognitive and Behavioral Interventions: 3 semester hours

Prerequisites: PSYCH 7434. This course focuses on the theory and practice of cognitive-behavioral interventions in the field of clinical psychology.

PSYCH 7447 Trauma and Recovery: 3 semester hours

Prerequisites: Graduate Trauma Studies Certificate. A comprehensive seminar on the psychological effects associated with exposure to potentially traumatic events. The course will include information on the history of trauma studies; definitions of stressful and traumatic events; common responses to these events; theoretical models for conceptualizing traumatic responses; information on specific types of traumatic events; and issues in treatment.

PSYCH 7450 Clinical Internship I: 1-9 semester hours

Prerequisite: Consent of advisor. Formal, one year, full-time internship providing student with in-depth supervised training within a site approved by the American Psychological Association. This course is repeated in the fall and spring semesters of the internship year.

PSYCH 7451 Clinical Internship II: 1-9 semester hours

Prerequisite: PSYCH 7450 and consent of advisor. Formal, one-year, full-time internship providing student with in-depth supervised training within a site approved by the American Psychological Association. (Taken in the final summer of the internship).

PSYCH 7459 Practicum in Industrial/Organizational Psychology: 1-4 semester hours

Supervised experience in personnel or human resource management.

PSYCH 7461 Summer Research in I/O Psychology: 1 semester hour

Prerequisites: Admission to I/O program. Supervised experience on research topics in I/O psychology at all graduate year levels during the summer months. Can be repeated for credit.

PSYCH 7472 Special Topics in Psychology: 1-3 semester hours

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PSYCH 7474 Research Methods in Psychology: 3 semester hours

Prerequisites: Admission to the doctoral program in Clinical Psychology or consent of instructor. This course focuses on the issues, methods, and designs involved in clinical psychology research.

PSYCH 7476 Seminar in Developmental Psychopathology: 3 semester hours

Prerequisites: Admission to the doctoral program in Clinical Psychology or consent of instructor. This course focuses on the major theories, issues, and research related to the development of psychological disorders of childhood and adolescence. Etiologies, descriptions, and classifications of representative child and adolescent disorders will be covered.

PSYCH 7478 Directed Research in Industrial/Organizational Psychology: 1-4 semester hours

Independent study of an issue in industrial/organizational psychology through the application of research techniques.

PSYCH 7479 Directed Readings in Industrial/Organizational Psychology: 1-4 semester hours

Independent literature review of a topic in industrial/organizational psychology.

PSYCH 7483 Directed Research: 1-10 semester hours

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PSYCH 7484 Directed Readings: 1-10 semester hours

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PSYCH 7485 Seminar in Clinical Science: 1-3 semester hours

Prerequisites: Graduate standing in Clinical Psychology. This course discusses professional identity as a clinical scientist and development of programmatic research. Readings include theories and methodologies within clinical psychology, with group supervision of proposals for program research milestones. May be repeated once for credit.

PSYCH 7487 Thesis Research Project: 1-6 semester hours

Prerequisites: Admission to the doctoral program in clinical psychology. Supervised original research project of a clinically-related topic.

PSYCH 7488 Specialty Examination Research: 1-6 semester hours

Prerequisites: Admission to the doctoral program in Clinical Psychology. Supervised original review and analysis of a clinically related topic.

PSYCH 7491 MA Thesis Research: 1-10 semester hours

Prerequisite: Graduate standing and consent of instructor.

PSYCH 7492 Ph D Thesis Research: 1-10 semester hours

Prerequisite: Graduate standing and consent of instructor.

Child Advocacy Studies Courses

CAST 1000 Introduction to Child Advocacy Studies: 3 semester hours

This survey course explores how child-serving systems have evolved, the functions they serve, and the roles they play in the lives of children and families. Key legislation, concepts, theories, and historical and contemporary approaches will be examined to highlight the types of advocacy relevant to children and the career paths associated with them. Students will examine skills needed for success as a child advocate, including collaboration and secondary traumatic stress prevention.

CAST 2100 Communication in Child Advocacy: 3 semester hours

This course introduces the concept of child advocacy communication. Students will use critical thinking to develop interpersonal and multidisciplinary communication skills necessary for success in the field. Students will demonstrate skills through verbal persuasion, team decision making, professional documentation, and oral discourse; with a specific focus on public speaking.

CAST 2275 The Ethics, Values, and Policy of Child Advocacy: 3 semester hours

Prerequisites: CAST 1000. This course reviews the codes of ethics related to the field of Child Advocacy and allows students to explore the process of ethical decision making via case studies. Students will review the development of U.S. policies impacting the field, consider current policy and legislative needs, and learn methods of influencing legislative processes to enact policy. Students will engage in efforts to advocate on behalf of children with policy makers.

CAST 3290 Traumatic Stress in Childhood and Adolescence: 3 semester hours

Same as PSYCH 3290. Prerequisites: PSYCH 2270 (majors), PSYCH 2268, or approval from the instructor. Exploration of the impact of stressors experienced during infancy, childhood, and adolescence. Integrates how theoretical frameworks, cultural considerations and policy implications apply to child development research and practice.

CAST 3295 Service Learning Projects in Child Advocacy: 2 semester hours

Prerequisites: CAST 1000 and consent of instructor. This course is designed to acclimate students to child advocacy in an agency or community-based setting. Students volunteer in supervised social service agencies or with faculty on a supervised service project, to complete a minimum of 50 hours of service as defined by the site-based professional supervisor and/or the faculty member. Students also complete a series of didactic sessions with a goal of affirming their interest and personal fit with child advocacy-related work.

CAST 3650 Culture and Child Advocacy: 3 semester hours

This course will examine how history, cultural experiences, spirituality, and values impact the identity formation of children and youth. Special consideration will be given to the impact of historical trauma on youth and its implications for contemporary child-serving sectors. Primary sources will include indigenous and other underrepresented group writings.

CAST 3798 Foundations of Practice in Child Advocacy: 3 semester hours

Prerequisites: CAST 3290/PSYCH 3290 (may be taken concurrently). This course focuses on building and applying key child advocacy skills through simulation and practice. Students will learn a range of skills in family engagement, basic interviewing, mandated reporting, minimal facts interviewing, and conducting safety and risk assessment. Mastery of skills will be demonstrated through practice exercises and problem-based learning simulations.

CAST 4398 Child Maltreatment: A Multidisciplinary Approach: 3 semester hours

Same as PSYCH 4398 and SOC WK 4398. Prerequisites: CAST 3798 (Majors/Certificates) or CAST 3290/PSYCH 3290 (Non-Majors/ Non-Certificates). This course, with its interdisciplinary emphasis, focuses on the systemic response to the primary domains of child maltreatment by multidisciplinary teams and child advocacy centers. Risk factors, cultural considerations, and mandated reporting of child abuse and neglect are emphasized. Students will begin to develop professional skills pertaining to child maltreatment, using a variety of experiential learning modalities.

CAST 4498 Forensic Investigation of Child Abuse: 3 semester hours

Prerequisites: CAST 4398 or PSYCH 4398 or SOC WK 4398. This course is designed for students across multiple disciplines where knowledge of child abuse investigation and advocacy is necessary. It focuses on the investigative and prosecutorial responses of multidisciplinary team professionals involved with child abuse cases to expand the student's knowledge and skills about the most effective response to child abuse investigations. The course also includes critical thinking and competency-based skills training, such as conducting a cursory interview, participating in peer review, making case presentations, and producing investigative documentation.

CAST 4598 Child Abuse Assessment and Intervention: 3 semester hours

Prerequisites: CAST 4398 or PSYCH 4398 or SOC WK 4398. This course provides students from a variety of disciplines with knowledge and skills to intervene effectively and empathically with families who may experience child abuse and neglect. It uses experiential learning to develop critical thinking and skills in trauma-focused screening, assessment, and crisis intervention for vulnerable children and their families who are involved with child serving systems, such as law enforcement, child protective services, prosecution, and physical and mental health.

CAST 4698 Internship in Child Advocacy Studies: 3 semester hours

Prerequisites: CAST 4398 or PSYCH 4398 or SOC WK 4398, CAST 4498 (may be taken concurrently), CAST 4598 (may be taken concurrently), and approval of the CAST director. This course involves an internship in child or youth-serving setting and requires approval from the CAST director prior to enrolling. It must be taken concurrently with the CAST field education seminar (CAST 4700).

CAST 4700 Field Education Seminar in Child Advocacy Studies: 1 semester hour

Prerequisites: Consent of CAST director and concurrent enrollment in an approved CAST field education course. In this course, students will synthesize their learning from the Child Advocacy Studies (CAST) certificate courses with their field experiences.

ROTC

Web Site: <https://rotc.wustl.edu/>

Main Number: 314-935-5521

Background

The Military Science Program in the Department of Military and Veterans Studies is the academic home to Army Reserve Officers Training Corps (Army ROTC). UMSL is a partner institution in the Gateway Army ROTC Battalion – which is hosted at Washington University in St. Louis. Completion of the Army ROTC program of instruction qualifies the student for a commission in the United States Army, Army National Guard, or United States Army Reserve. The curriculum does not provide technical training in a job specialty, nor does it emphasize vocational training; rather, it complements and provides a base for normal progression in the commissioned officers' educational program.

Leadership and management objectives are included in academic periods of instruction. Practical leadership experience is gained in a field training environment by attendance at a thirty-two-day summer camp, normally between the junior and senior years. Nursing students attend a nursing internship at Army hospitals following the normal summer camp. A leadership laboratory also provides experience in a range of leadership positions during the school year. The program offers both a four-year and a two-year program, each with its own special advantages. Students are invited to contact the Military Science Program to obtain additional information.

The program requires four years of military science courses, which consist of a two-year basic course and a two-year advanced course. Students can begin the four-year program as a freshman or as a sophomore.

There is also a two-year ROTC program for those students with only two years of college remaining. The two-year course is designed for junior college and other non-ROTC college transfer students, but may be utilized by students who did not enroll in the basic course outlined below. Graduate students may also qualify for enrollment in the two-year course. Additional information regarding eligibility requirements for the two-year program may be obtained by contacting the Department of Military Science.

Basic Course

The basic course is normally taken as an elective subject by students in their freshman and sophomore years. The purpose of this instruction is to qualify students for entry into the advanced course by familiarizing them with the organization of the Army, military skills, basic leadership and time management, and military tradition. Students do not incur any military obligation as a result of enrolling in the basic course.

Advanced Course

Instruction in the advanced course includes leadership and management, the exercise of command, military teaching methods, tactics, logistics, administration, history, and military justice. Leadership experience and command experience are provided by assigning advanced course students as cadet leaders. Participation in regularly scheduled physical training is a required part of the leadership training. Classroom instruction consists of two one and a quarter hour (seventy-five minutes) periods and a one and a half hour (ninety minutes) leadership laboratory period each week. Only students who have demonstrated a definite potential for becoming competent officers will be selected for the advanced course.

Students entering this course must be selected in accordance with the prerequisites listed below.

- Pass a military physical examination
- Pass a background screening
- Pass the three-event physical fitness test
- Pass healthy body-fat standards

Monetary Allowances

Cadets selected for admission into the advanced course qualify for a nontaxable monetary allowance of \$400–\$500 per month for up to twenty months. Cadets may also qualify for the simultaneous membership program with the United States Army Reserve or National Guard, which can provide over \$16,000 during the last two years of school. Both the United States Army Reserve and the National Guard offer additional monetary incentives for cadets who join their organizations.

Army ROTC College Scholarship Program

Financial assistance is available in the form of two-, three-, or four-year ROTC academic scholarships for selected students. Under the Army ROTC Scholarship Program, the students/cadets receive reimbursement for their tuition and fees. Additionally, Army scholarship recipients receive a flat-rate allowance of \$1200 per year for textbooks and other expenses and a stipend for up to 10 months per year. There are also numerous national and organizational scholarships that students may compete for as members of Army ROTC.

Textbooks and Uniforms

All textbooks, uniforms, items of insignia, and equipment incident to membership in the Army ROTC Program are furnished by the Gateway Battalion.

Leadership Laboratory

Leadership laboratory (MIL SCI 1500) is open to students who are members of the Reserve Officer Training Corps or who are eligible to pursue a commission as determined by the professor of military science. Leadership laboratory is the formalized phase of leadership training conducted by the cadets. It is scheduled for one and one half hours (ninety minutes) each week for both the basic and advanced officer courses (non-contracted and contracted). All uniforms and equipment required for cadet activities are furnished.

FAQs

What is Army ROTC?

ROTC is the Reserve Officers Training Corps. It is the largest officer commissioning program for the U.S. Army. It is structured as a college class in which one learns valuable leadership skills.

Do ROTC courses count for credit?

Yes! All MIL SCI courses at UMSL count as elective credit (towards your 120 requirement) and your grades are included in GPA calculations.

How do I join ROTC if I am already in college?

Once you are enrolled as a full time student, you can register for MIL SCI 1101 in the Fall or MIL SCI 1102 in the Spring.

Am I joining the Army by signing up for ROTC?

No, you are not joining the Army. Only if you are commissioned as a Second Lieutenant will you join the Army. If you are not receiving scholarship or stipend support, there is no military obligation whatsoever during the first two years of ROTC.

Can I just take the ROTC class for the leadership education or for my minor?

YES. You can take any 1000 or 2000 level class without prerequisite or obligation. You can choose (or not choose) to participate in the extracurricular events like physical training, field training and other military skills. Before signing up for a 2000 level class, you should have a discussion with the UMSL ROTC advisor.

How about Scholarships? Do you have any available?

The Army offers full tuition 2, 3, and 4 year scholarships for the best students (you must be medically, physically, academically qualified and pass a background check). These scholarships are merit and potential based. The number and type of scholarships available is different every year, but once awarded a scholarship is a financial commitment from the Army to you through your graduation.

Web Site: <https://www.slu.edu/science-and-engineering/academics/parks-aviation-science/air-force-rotc/index.php>

Main Number: 314-977-8227

Background

The Aerospace Studies program in the Department of Military and Veterans Studies is the academic home to Air Force Reserve Officers Training Corps (Air Force ROTC). UMSL is partner institution in Detachment 207, Air Force ROTC – which is hosted at St. Louis University. This program provides pre-commissioning education for qualified students who desire to serve on active duty as commissioned officers in the United States Air Force.

The aerospace studies curriculum is divided into two phases: (1) the general military course; and (2) the professional officer course. The department offers a standard and condensed four-year commissioning programs. The four-year program provides coursework during the freshman through senior years. The condensed program compresses the general military course to one academic year beginning in the fall. To obtain specific information, please contact the Aerospace Studies Program directly.

General Military Course

This program of instruction is open to any student and consists of the first- and second-year courses for students in the four-year Air Force Reserve Officer Training Corps (AFROTC) program. These courses deal with the Air Force structure and the development of air power. They strengthen interest in becoming a professional Air Force officer, develop knowledge of world military forces, and enable the student to understand how the United States Air Force supports national objectives and policies.

Professional Officer Course

Aerospace studies courses offered during the third and fourth years must be completed by all students who seek a commission through AFROTC. Coursework continuity is designed to prepare college students to serve

as active duty Air Force officers upon graduation and commissioning. The curriculum stresses national security in contemporary American society, leadership, management, and professionalism. Special emphasis is placed on developing the cadet's communication skills. Students entering this course must be selected in accordance with the prerequisites listed below. Students not currently enrolled in the AFROTC program must have permission of the department chairperson prior to enrolling in these courses.

- Pass a military physical examination
- Pass the four-event physical fitness test
- Pass height/weight standards
- Have a 2.5 cumulative GPA or higher for undergraduates or a 3.0 cumulative GPA or higher for graduate students.

Note: Call the Aerospace Studies Program at 314-977-8227 for specific requirements.

Leadership Laboratory

Leadership laboratory (AERO 1500) is the formalized phase of leadership training conducted by the cadets. It is scheduled for up to two hours each week. All uniforms and equipment required for cadet activities are furnished. It is required for members of the Air Force Reserve Officer Training Corps, or students who are eligible to pursue a commission as determined by the chairman of the Department of Aerospace Studies.

Monetary Allowances

Once the admission criteria have been met, the student may compete for the opportunity to contract for four years of active duty as a commissioned officer upon graduation. Upon selection and acceptance, the student receives a monthly, tax-exempt stipend ranging from \$300.00–\$500.00. Tuition assistance is possible but not guaranteed. It is awarded on a competitive basis.

Field Training

Cadets are required to attend a four-week field training course at Maxwell Air Force Base in Montgomery, AL before they may formally enroll in the professional officer course. Field training provides a better understanding of the United States Air Force mission, increases the cadets' proficiency in junior officer training areas, and stresses the importance of physical conditioning. Students attending these courses receive pay for the encampment plus travel allowances.

FAQ

How do I join AFROTC if I am already in college?

Once you are enrolled as a full time student, you can register for AERO 1001 in the fall or AERO 1002 in the spring. If you are a sophomore or only have 3 years left of your degree, you may still join but will need to contact the Unit Admissions Officers first.

Do AFROTC courses count for credit?

Yes! All AERO courses at UMSL count as elective credit (towards your 120 requirement) and your grades are included in GPA calculations.

What is the difference between AFROTC and enlisting in the Air Force?

AFROTC is one of three commissioning sources for the USAF. Upon completion of a bachelor's degree and AFROTC you will be commissioned as an officer, followed by specific training in a career field. Officers are trained to be the leaders and supervisors of enlisted personnel. Rank, pay, and career opportunities for officers are commensurate with their elevated level of responsibility. Enlisting in the Air Force is done through a local recruiter followed by basic training and prospective technical training. This avenue does not require a college degree.

Will the Air Force pay for my school?

AFROTC offers many scholarship opportunities. Prospective AFROTC cadets can apply for a high school scholarship before entering into college. Once in college, AFROTC cadets can apply for an in-college scholarship. This process is handled by the host detachment.

Air Science Courses

AERO 1001 Heritage and Values of the US Air Force I: 2 semester hours

This course introduces students to contemporary military issues and overall Air Force structure. Contracting with AFROTC is not required for this course.

AERO 1002 Heritage and Values of the US Air Force II: 2 semester hours

This course introduces students to military concepts such as strategic offensive and defense forces, general purpose forces, aerospace support forces, and the Air Force relationship with U.S. Army forces. Contracting with AFROTC is not required for this course.

AERO 1500 Leadership Laboratory: 0 semester hours

Prerequisites: Students must be enrolled in an AERO course. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. Course work includes a study of Air Force customs and courtesies, drill and ceremonies, career opportunities in the Air Force, and the life and work of an Air Force junior officer. Students develop their leadership potential in a practical, supervised laboratory, which typically includes field trips to Air Force installations throughout the United States. This course is generally taught at St. Louis University. It is required for all AF ROTC students.

AERO 2001 Team Leadership Fundamentals I: 2 semester hours

This course lays the foundation for teams and leadership. The topics include skills that will allow cadets to improve their leadership on a personal level and within a team. The course will prepare cadets for their field training experience where they will be able to put the concepts learned into practice. The purpose is to instill a leadership mindset and to motivate sophomore students to transition from AFROTC cadet to AFROTC officer candidate.

AERO 2002 Team Leadership Fundamentals II: 2 semester hours

Prerequisites: AERO 2001 or consent of instructor. This course lays the foundation for Air Force leadership and prepares AFROTC students for their field training experience where they will be able to put the concepts learned into practice. Contracting with AFROTC is not required for this course.

AERO 3001 Leading People and Effective Communications I: 3 semester hours

Prerequisites: AERO 2002 or consent of the instructor. This course focuses on training students to be effective managers in Air Force context. Professional concepts that will be emphasized include the use of managerial processes involving decision-making and the use of analytic aids to support planning, organizing, and controlling systems in a changing environment.

AERO 3002 Leading People and Effective Communications II: 3 semester hours

Prerequisites: AERO 3001 or consent of instructor. This course continues the management training from AERO 3001. Using actual Air Force cases, students focus on the management of forces in change and managerial strategy within the context of the military organization.

AERO 4001 Air Force in National Security Affairs I: 3 semester hours

Prerequisites: AERO 3002 or consent of instructor. This course explores the role of the armed forces as an integral element of American society, including civil-military relations, defense policy, and Air Force responsibilities in national defense. It is part of the final educational experience for AF ROTC Cadets before commissioning.

AERO 4002 Air Force in National Security Affairs II: 3 semester hours

Prerequisites: AERO 4001 or consent of instructor. This course explores the importance of maintaining adequate national security forces and teaches students how to effectively design and implement Air Force-focused national security policies. It is part of the final educational experience for AF ROTC Cadets before commissioning.

Military Science Courses

MIL SCI 1101 Introduction to Leadership I: 3 semester hours

Examine the challenges and competencies that are critical for effective leadership. You will learn how the personal development of life skills such as cultural understanding, goal setting, time management, mental/physical resiliency, and stress management relate to leadership, officership, and the Army profession. Enrollment in MIL SCI 1101 does not require a commitment to join the US Army, (FALL ONLY).

MIL SCI 1102 Introduction to Leadership II: 3 semester hours

Investigate leadership fundamentals such as problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. You will explore dimensions of leadership attributes and core leader competencies in the context of practical, hands-on, and interactive exercises. Learn fundamental military concepts and explore the Army's leadership philosophy. Enrollment in MIL SCI 1102 does not require a commitment to join the US Army. (SPRING ONLY).

MIL SCI 1500 Leadership Laboratory: 0 semester hours

Prerequisites: Must be currently enrolled in a MIL SCI course. Leadership Laboratory provides basic and advanced leadership experience in military courtesy, drill and ceremonies and practical application of classroom-taught subjects. Functions and responsibilities of leadership positions are developed through student-led staff planning actions and command positions. This course normally meets at Washington University. Note: All military science scholarship and advanced course students must register for MIL SCI 1500.

MIL SCI 2201 Innovative Team Leadership: 3 semester hours

Explore the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and leadership theories. The focus continues to build on developing knowledge of leadership attributes and core leader competencies through the understanding of Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Enrollment in MIL SCI 2201 does not require a commitment to join the US Army. (FALL ONLY).

MIL SCI 2202 Foundations of Tactical Leadership: 3 semester hours

Develop greater self-awareness as you assess your own leadership styles and practice communication and team building skills. Examine the challenges of leading teams in the complex operational environment. Study dimensions of terrain analysis, patrolling, and operation orders. Explores the dynamics of adaptive leadership in the context of military operations. Enrollment in MIL SCI 2202 does not require a commitment to join the US Army. (SPRING ONLY).

MIL SCI 3301 Adaptive Team Leadership: 3 semester hours

Prerequisites: MIL SCI 2202 or consent of instructor. In this course, students will study, practice, and apply the fundamentals of Army leadership, officership, Army values and ethics, and small unit tactics. Upon successful completion of this course, students will be capable of planning, coordinating, navigating, motivating and leading a team or squad in the execution of a tactical mission during a classroom practical exercise (PE), a leadership lab, or during a situational training exercise (STX) in a field environment. (FALL ONLY).

MIL SCI 3302 Applied Team Leadership: 3 semester hours

Prerequisites: MIL SCI 3301. Through this course, students continue to learn and apply the fundamentals of Army leadership, officership, Army values and ethics as they hone leadership abilities in a variety of tactical environments and the classroom. The course focuses on leadership attributes and the development of value and core leader competencies. Successful completion of this course will help prepare students for success at the ROTC Leader Development and Assessment Course (LDAC) which they may attend the summer following this course. It is only offered in the Spring.

MIL SCI 4401 Adaptive Leadership: 3 semester hours

Prerequisites: MIL SCI 3302 or consent of the instructor. This course focuses on practical application of adaptive leadership. Throughout the semester, students will attend weekly training meetings and fill the roles of Army staff officers. They will plan, execute and assess ROTC training and recruiting events. Study will also focus on the Army values, leader ethics and how they are applied in the Full Spectrum Operating Environment. The officer's role in the Uniform Code of Military Justice, counseling of subordinates, administrative actions and other aspects of everyday military life will also be discussed. (FALL ONLY).

MIL SCI 4402 Leaders in a Complex World: 3 semester hours

Prerequisites: MIL SCI 4401. Explore the dynamics of leading in the complex situation of current military operations in the contemporary operating environment. Examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. You will also explore aspects of interacting with non-government organizations, civilians on the battlefield and host nation support. Significant emphasis is placed on preparing you for your branch school and first unit of assignment. (SPRING ONLY).

MIL SCI 4411 Advanced Military Science Studies I: 3 semester hours

Prerequisites: MIL SCI 4401. This course is an in-depth study of the role of the Army officer in today's Army.

MIL SCI 4413 Military Medical Technologies Independent Study: 3 semester hours

This course explores how medical advances have improved soldiers' chances of surviving battlefield injuries from the Civil War to the Iraq War. Also explores how soldiers are now surviving more catastrophic injuries and what the implications are on long term health care for these soldiers both physically and mentally.

Military and Veterans Studies Courses**MVS 1100 Veterans Transition Seminar: 1 semester hour**

This course is designed for the student veteran who is new to UMSL but not eligible for the First Year Experience class. It will survey essential life skills (time management, financial management, physical fitness) and tools for academic success (note-taking, writing, research, oral presentation). It will familiarize students with the relationship between their education and their career and personal goals. It will also expose students to campus and veteran-specific support services. Maybe most importantly, this course will provide a venue for veterans to connect with other veterans who are facing a similar transition.

MVS 2000 Selected Topics in Military or Veterans Studies: 1-3 semester hours

Selected topics in military or veterans studies. The topics will vary each semester. May be taken more than once for credit as long as the topic differs.

MVS 2021 War and Violence in Modern Times: 3 semester hours

Same as HIST 2021. Prerequisites: Sophomore standing or consent of the instructor. This course examines the connections between warfare and resistance, gangs and poverty, and state and non-state officials as enactors of violence. It explores the effects of war and violence on the poor in Brazil and the United States, prisoners of war in Asia, and resistance fighters in Latin America and northern Africa. Students will watch films/short videos, read academic and newspaper articles, and listen to short podcasts to grapple with the issues underlying structures of violence.

MVS 2025 U.S. Foreign Relations and Military History: 3 semester hours

Same as HIST 2025. This course surveys the development of American land, sea, air, space, and cyber power from the start of the colonial era to the present, with an emphasis on the interrelationship between U.S. foreign and military policies and between diplomacy and force.

MVS 2100 Veterans in American Society: 3 semester hours

Same as SOC 2801. Prerequisite: ENGL 1100. This survey course will focus on the American veteran experience and explore basic concepts, ideas and research into veterans and veteran institutions. In a multidisciplinary manner, students will examine military culture, the unique status of veterans in our society, and veteran institutions. Students will also study the successes, challenges and obligations our society faces related to its veteran community.

MVS 2130 Gender and the Military: 3 semester hours

Same as SOC 2802 and GS 2130. This course investigates how the military treats gender difference, explores how military culture is defined, and how gender is a socially constructed concept. Topics may include military culture, gender construction, and how gender and sexuality issues affect military readiness and effectiveness.

MVS 3100 Current Issues in Military and Veterans Studies: 1-4 semester hours

Selected topics in military or veterans affairs with emphasis on current issues and trends. May be repeated as long as the topic is different for a maximum of 6 credit hours.

MVS 3300 Veteran Social Policy: 3 semester hours

Same as SOC 3802. This course provides an overview of American public policy towards military veterans. Students will research, design, and propose policy changes using various written products and presentations.

MVS 3500 Internship in Veterans Studies: 1-3 semester hours

Prerequisites: Junior Standing and consent of the department chair.

Independent study involving regular on-site work with an appropriate public or private agency serving the veteran community. A written report reflecting on the experience is required. Course may be repeated for a maximum of 6 credit hours.

MVS 4100 Veterans Studies Capstone Seminar: 3 semester hours

Prerequisites: MVS 2100 and senior standing. Mentored by a faculty member, students in this course will apply insights gained from previous coursework into a substantial Veterans Studies project. Students will work with the instructor and the class to develop a topic, establish a research or project plan, then prepare a project or paper suitable for presentation to the public. Students should expect that their work will be published or presented at an end-of-the-year symposium. This is not an independent study.

MVS 4200 Independent Study in Military and Veterans Issues: 1-3 semester hours

Prerequisite: Consent of instructor. Faculty mentored, independent study through readings, reports, or field research. No student may take more than a cumulative total of 6 hours of Independent Study.

MVS 4345 War Crimes, Genocide, and Justice in the 20th and 21st Centuries: 3 semester hours

Same as SOC 4345, POL SCI 4345, and CRIMIN 4345. Prerequisite: ENGL 3100. This course provides advanced undergraduate and Master's level students a comprehensive overview of the subject of war crimes, crimes against humanity, genocide and legal responses to these crimes in the modern era. The goal of this course is to engage students in sustained, critical thought about these issues and to foster a deeper understanding of both the causes and consequences—legal, social and human—of these egregious crimes.

Sociology

Ask yourself, ***What is this all about?***

In a country like the United States where individualism is celebrated, it is very easy to forget that the way humans behave and feel is often socially produced. Whether they be friendships, families, church groups, socioeconomic classes, complex organizations, or nations, much of our lives are socially constructed. This is the basic premise of sociology.

The science of Sociology enables you to see the world in a new light.

Sociology is the scientific study of human social relationships, social interactions, and institutions. Our field focuses on understanding institutions, processes, and groups through frames that include function, stratification, networks, conflict, cohesion, and social change. Sociology's subject matter is diverse, ranging from crime to religion, from the family to the state, from the divisions of race and social class to the shared beliefs of a common culture, and from social stability to radical change in whole societies. It provides both quantitative and qualitative tools for understanding how and why our society functions, the impact of social intuitions on individual lives, and the challenges of social interaction between individuals and society.

Student Experience

Sociology students receive training in a variety of social research methods, including questionnaire survey research, social statistical analysis, qualitative methods, interviewing, and ethnographic fieldwork. They also have the opportunity to gain hands-on experience in urban community-based research.

Sociology students work with faculty who conduct research internationally, nationally, in the St. Louis area, and on the internet. They research topics such as urbanization, gentrification, globalization, business and society, new media, the role of technology in society, memorialization, and the role of veterans in societies. We encourage our Sociology students to take advantage of opportunities to study with faculty in the Gerontology and Gender Studies Programs to explore the impact of aging and gender on both individual identity and the structure of the wider society. We also encourage our student to study leadership as a key component of social change, through our Organizational Leadership program.

The Sociology program is a leader of the University of Missouri system in innovative online education. Several courses offer the flexibility of attending an in-class lecture or accessing the lecture and course material online, according to the individual's schedule.

Department Awards and Honors

The Ray Collins Alumni Award is given annually by the Sociology Alumni Association to the top graduating senior as selected by the faculty.

The Sociology Alumni Awards are awarded by faculty annually on the basis of merit. In addition, two outstanding graduating seniors (one from Sociology and one from Organizational Leadership), a junior, and a freshman are recognized annually based on merit. The Outstanding Sociology Minor Award is presented to the graduating student with the most outstanding minor GPA record.

Department Honors are awarded to B.A. and B.S. degree candidates in sociology or organizational leadership with an overall grade point average of 3.5 or better.

Degree with Distinction in Sociology

A degree with distinction in research, scholarship or creativity in the arts is an honor that recognizes a student for outstanding accomplishments in research and/or other creative endeavors. Students majoring in Sociology who meet the criteria may apply for candidacy for a Degree with Distinction during their final year before graduation. The criteria and guidelines for applying for a Sociology Degree with Distinction can be found on our website.

Career Outlook

The Sociology Program teaches the transferable job skills that enable students to rationally analyze social issues and arrive at effective solutions. These skills are valuable for careers in health and social services; human resources; community planning; non-profit leadership; consumer marketing research and consulting; and jobs involving social research in corporate, non-profit, and government settings. Sociology also provides a solid foundation for graduate school in any of the social sciences, and for professional training in fields such as law, medicine, public policy, analysis, and social work.

Sociology Department Scholarships

The Sociology Program offers scholarships to majors in Sociology. Click the link below for more information.

Sociology Major Scholarship

The Gender Studies Program offers scholarships to students who have enrolled in the GS minor or certificate. Click the links below for more information.

Sharon Marglous Memorial Scholarship

Nanora Sweet Research Award in Gender Studies

McAffrey Family Scholarship

Leaders of Tomorrow Scholarship

Alan Ross Achievement Scholarship

In addition, the Gerontology Program offers scholarships to students who are enrolled in the Gerontology minor. Click the link below for more information.

Albert and Virginia Calsyn Scholarship in Gerontology

Go to the Financial Aid page to [Apply for a Scholarship](#) and see more information on how to apply.

Degrees

Sociology BA (p. 745)

Sociology BS (p. 746)

Organizational Leadership BA

Emphasis Areas

- Community Studies Emphasis (p. 675)
- Computing and Information Security Emphasis (p. 676)
- Corporate Communication Emphasis (p. 676)
- Criminal Justice Emphasis (p. 677)
- Executive Leadership Emphasis (p. 678)

- Health Communication Emphasis (p. 678)
- Individualized Emphasis (p. 679)
- Operational Excellence Emphasis (p. 679)
- Social Justice Emphasis (p. 680)

Affiliated Interdisciplinary Programs

Data Science and Analytics BS, Social Science Emphasis (p. 514)

Certificates

Gender Studies Graduate Certificate (p. 576)

Gender Studies Undergraduate Certificate (p. 577)

Gerontological Studies Undergraduate Certificate (p. 578)

Minors

Gerontology Minor (p. 579)

Gender Studies Minor (p. 577)

Sociology Minor (p. 748)

Urban Studies Minor (p. 763)

Veterans Studies Minor (p. 764)

Courses

Courses offered by the department can be found at the links below:

Sociology (SOC)

Gender Studies (GS)

Gerontology (GERON)

Military and Veterans Studies (MVS)

Gender Studies

Courses

GS 2066 Women and Gender in African History: 3 semester hours

Same as HIST 2066. Using documentaries, popular culture, graphic histories, and more conventional sources, this course explores the history of Africa, highlighting African women's lives, experiences, and agency, and questioning the application of Western concepts of gender to an African setting.

GS 2102 Introduction to Gender Studies (MOTR SOCI 203): 3 semester hours

Same as SOC WK 2102, HIST 2102, POL SCI 2102, and SOC 2102. This core class is required for all Gender Studies Certificate earners. This class introduces students to cultural, political and historical issues that shape gender. Through a variety of disciplinary perspectives in the humanities, social sciences, and natural sciences, the course familiarizes students with diverse female and male experiences and gendered power relationships.

GS 2130 Gender and the Military: 3 semester hours

Same as MVS 2130 and SOC 2802. This course investigates how the military treats gender difference, explores how military culture is defined, and how gender is a socially constructed concept. Topics may include military culture, gender construction, and how gender and sexuality issues affect military readiness and effectiveness.

GS 2150 Special Topics in Gender Studies: 3 semester hours

An introduction to a particular topic area in women's and gender studies (topics will be announced prior to registration) drawing on the theories and methods of such disciplines as sociology, psychology, political science, history, philosophy, art history, and others to examine particular aspects of gender in social and cultural life. Course may satisfy the distribution requirement for humanities or social sciences depending on the topic.

GS 2230 Psychology of Gender: 3 semester hours

Same as PSYCH 2230. Prerequisites: PSYCH 1003. Evaluation of psychological theories and research regarding physiological, cognitive, and personality gender differences and similarities, gender related problems in adjustment, and gender specific clinical interventions.

GS 2253 Philosophy and Feminism: 3 semester hours

Same as PHIL 2253. A critical examination of what various philosophers have said about issues of concern to women. Sample topics include oppression, racism, women's nature, femininity, marriage, motherhood, sexuality, pornography, the ethics of care.

GS 2290 Gender and The Law: 3 semester hours

Same as POL SCI 2290. Prerequisites: POL SCI 1100, or POL SCI 1200, or consent of instructor. This course examines the ways in which law has created, reinforced or transformed gender roles over time. It surveys the legal status of American women from the adoption of the U.S. Constitution to the present through court cases, statutes and other legal materials. The course will also focus on relevant legal issues in areas such as marriage and the family, reproductive freedom, voting rights, employment, education, the criminal justice system, women in the legal profession and the intersection of gender, race and class in the legal system. This course fulfills the University's general education American history and government requirement.

GS 2380 The Politics of Gender in the United States: 3 semester hours

Same as POL SCI 2380. This course examines the role of gender in political institutions, practices and policy in the United States, past for political equality, the relationship between gender and political participation, vote choice, and public opinion, and how legislative, executive, and judicial offices are gendered at the national, state, and local levels.

GS 3232 Psychology of Trauma: 3 semester hours

Same as PSYCH 3232. Prerequisites: PSYCH 1003. This course examines responses to potentially traumatic events (e.g., child abuse and neglect, physical and sexual assault, intimate partner violence, community and gun violence, war, natural disasters). Trauma exposure, posttraumatic growth, the development of trauma-related difficulties including PTSD, assessment and intervention are examined with attention to gender, cultural and lifespan issues.

GS 3243 Marriage, Family, and Kinship: 3 semester hours

Same as ANTHRO 3243 and SOC 3243. Prerequisites: ANTHRO 1019, SOC 1010, or consent of the instructor. This course will examine will examine the construction of kinship systems, marriages, families and other forms of intimate relationships from anthropological and sociological perspectives. The cross-cultural structure of this class will incorporate global case studies, including U.S. and European marriage and family structures. Students will have the opportunity to explore topics including love, dating, cohabitation, kinship calculation, alternative lifestyles, and divorce.

GS 3300 The Social Construction of Aging and Ageism: 3 semester hours

Same as SOC 3300 and GERON 3300. This course examines perspectives of age, aging, and ageism using several perspectives: the theory of social construction and the frameworks of essentialism and intersectionality. The materials, discussions, and assignments in this course will familiarize and provide students with tools to investigate age and ageism in a complex, multidimensional manner. The overarching focus of this course is located in the tension with the "nature versus nurture" debate, paralleling nature with essentialist ideas and nurture with social constructionism. Ideas, conceptions, attitudes, and understandings of age within the media, family, medical community, and other institutions will be investigated as biological and/or a development of society in effort to perpetuate social control, organization, and power dynamics. Through research, fiction and non-fiction work, creative assignments, and theoretical texts, students will approach the following questions: How do we value lived-experiences? How might situated knowledge affect social constructions of aging and ageism? What evidence is provided toward age and/or ageism as an essential or socially constructed outline within society? How are socially constructed ideas developed and perpetuated? How might one affect change in an essentialist and/or socially constructed society?.

GS 3350 Special Topics in Gender Studies: 3 semester hours

Prerequisites: GS 2102, or consent of instructor. This course focuses on special topics in Women's and Gender Studies. Topics will vary by semester.

GS 3352 Independent Studies in Gender Studies: 1-3 semester hours

Prerequisites: GS 2102, junior standing, and consent of the instructor. This course involves directed independent work in selected women's and gender studies topics through readings, research, reports and/or conferences.

GS 3700 Diversity and Social Justice: 3 semester hours

Same as SOC WK 3700. Prerequisites: SOC WK 3100; and PSYCH 2250 or SOC 2160 (prerequisites may be taken concurrently). Analyzes the structure, dynamics, and consequences of social and economic injustice, and the impact on diverse groups in American society. Examines theoretical models and practice principles for work with diverse groups.

GS 4100 Introduction to Feminist and Gender Theory: 3 semester hours

Same as SOC 4100. Prerequisites: GS 2102 or consent of instructor. This course serves as an initial intellectual investigation into gendered ideologies (such as the effects of race, ethnicity, nationality, socioeconomic class, sexuality, and religion) and functions as a bridge to later advanced gender theory and methods courses. Topics may include interdisciplinary feminist theories (with a focus on gender equality), including masculinity theory, queer theory, muted group theory, and other evolving frameworks.

GS 4325 Gender, Crime, and Justice: 3 semester hours

Same as CRIMIN 4325 and SOC 4325. Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an analysis of the role of gender in crime and in the justice system. There is emphasis on gender differences in crime commission, criminal processing, and the employment of women in criminal justice agencies. Fulfills CRIMIN diversity requirement.

GS 4330 Violence Against Women: 3 semester hours

Same as CRIMIN 4330. Prerequisites: Junior Standing, CRIMIN 1110, CRIMIN 1120, CRIMIN 2130, CRIMIN 2210, CRIMIN 2220, and ENGL 3100, or consent of instructor. This course examines the nature, extent, causes and consequences of various types of violence against women, including rape, sexual assault, stalking, and intimate partner violence. Criminal justice policy and practice regarding violence against women are also examined.

GS 4350 Special Topics in Gender Studies: 3 semester hours

Prerequisites: GS 2102 or consent of instructor. Special topics examined from a gender perspective in the fields of anthropology, art history, criminology, economics, English, foreign language, history, philosophy, political science, psychology, social work, sociology, business, or others. Topics and departments vary by semester. Course may be repeated by permission of Director of the Center.

GS 4352 Independent Study in Gender Studies: 1-3 semester hours

Prerequisites: GS 2102 or consent of instructor. Independent, directed readings and research in a women's gender related topic, to be determined in consultation with instructor.

GS 4353 Internship in Gender Studies: 3 semester hours

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GS 4360 Sociology of Minority Groups: 3 semester hours

Same as SOC 4360. Prerequisites: SOC 1010 or consent of instructor. This course is the study of dominant-subordinate group relations. Topics of focus may include religion, ethnicity, race, and gender as factors in the unequal distribution and utilization of power.

GS 4520 The Aging Body: 3 semester hours

Same as GERON 4520. Prerequisites: GERON 2170 or SOC 2170 or another introductory course (2000 or higher) in Gerontology, Sociology, Psychology, Social Work, or Nursing; or consent of the instructor. This course focuses on the aging body with respect to health and function. Physiologic and cognitive concerns of older men and women are reviewed. Contextual factors (e.g., relationships, socio-cultural, spiritual, environmental) and issues in service delivery are also addressed.

GS 4600 Masculinities: 3 semester hours

Same as SOC 4600. Prerequisites: SOC 2102, GS 2102, or consent of instructor. This course examines men and masculinity through a critical lens, looking at an institutionalized system of gender relations and practices that is assumed to be a natural phenomenon and culturally universal. The course explores various masculine behaviors, myths, ideologies, and experiences so that students can consider the relationship between masculine practice and social power and delineate choices for future directions. The course is interdisciplinary and may use tools and methods from the social sciences and the humanities. It satisfies the Gender Studies (GS) gender theory requirement.

GS 4610 Intimate Partner Violence: 3 semester hours

Same as SOC WK 4610. Prerequisites: SOC WK 3510. This course focuses on theoretical and empirical understanding of domestic violence in US society and social work practice with battered women and their families. It addresses direct services, community organizing, and public policy changes to help end violence against women. Relationships between violence against women and other forms of oppression (e.g., racism, economic exploitation, heterosexism and social class) are explored.

GS 4932 Female Gothic: 3 semester hours

Same as ENGL 4932. Prerequisites: Students must satisfy English prerequisites for 4000-level courses or obtain permission of instructor. The course examines the historical development of the female gothic, a genre which employs narrative strategies for expressing fears and desires associated with female experience. From the late 18th century to the present, we will trace the persistence of the Gothic vision in fiction and film.

GS 4933 Female Novel of Development: 3 semester hours

Prerequisites: Students must satisfy English prerequisites for 4000-level courses or obtain permission of instructor. The course covers the development of the female Bildungsroman from the late 18th century to the present. We will consider how temporary and current theories of female development help us read these novels within their particular cultural contexts.

GS 5100 Feminist and Gender Theory: 3 semester hours

Prerequisites: Graduate standing. This class serves as an intellectual investigation into gendered ideologies (such as the effects of race, ethnicity, nationality, socioeconomic class, sexuality, and religion) and functions as a bridge to later advanced gender theory and methods courses. Topics may also include interdisciplinary feminist theories (with a focus on gender equality), including masculinity theory, queer theory, muted group theory, and other evolving frameworks. Students may not receive credit for both GS 4100/SOC 4100 and GS 5100.

GS 5350 Topics in Women's and Gender Studies: 3 semester hours

This course will focus on a particular aspect of gender (to be announced prior to registration) and will draw upon recent theoretical and methodological work from a variety of disciplines.

GS 5450 Special Topics In Gender Studies: 3 semester hours

Prerequisites: Graduate standing or consent of instructor. Special topics at the Graduate level examined from a gender perspective in the field of anthropology, art history, criminology, economics, English, foreign language, history philosophy, political science, psychology, social work, sociology, business, or others. Topics and departments vary by semester.

GS 5500 Human Behavior in the Social Environment: 3 semester hours

Same as SOC WK 5500. Prerequisites: Graduate standing. This course focuses on theoretical and empirical understanding of human behavior in the social environment using a life-span perspective. It introduces biological, behavioral, cognitive, and sociocultural theories of individuals, families, and small groups, and their implications for the professional social worker's understanding of socioeconomic status, gender, disability, ethnicity, race, and sexual orientation.

GS 5635 Social Work Practice with LGBT Populations: Deconstructing the Alphabet Soup: 3 semester hours

Same as SOC WK 5635. Prerequisites: SOC WK 5100 and SOC WK 5500 or consent of instructor. This advanced-practice course focuses on developing the knowledge and skills necessary for effective social work practice with LGBT persons, families, and communities. The goal of this course is to facilitate deeper understanding of LGBT identities, relationships, health and mental health challenges, and issues of race, age, religion, spirituality, and class and how these intersect. The course treats lesbian women, gay men, bisexual, and transgender persons as four distinct communities.

GS 5700 Diversity and Social Justice for Social Work: 3 semester hours

Same as SOC WK 5700. Prerequisites: Graduate standing. This course analyzes the structure, dynamics, and consequences of social and economic injustice and the impact on diverse groups in American society. It examines theoretical models and practice principles for work with diverse groups.

GS 5940 Seminar in Gender and Literature: 3 semester hours

Same as ENGL 5940. Gender studies in literature of different periods, types, and genres; satisfies area requirement (1-6) appropriate to its period, national literature, and genre.

GS 6353 Graduate Internship in Gender Studies: 1-6 semester hours

Prerequisites: Graduate standing and consent of director. Provides an opportunity for the Graduate Gender Studies student to acquire "real world" experience working in a non-profit, political, economic, or social service organization with a gender focus.

GS 6450 Seminar in Gender Studies: 3 semester hours**GS 6452 Special Readings in Gender Studies: 3 semester hours**

Gerontology

Courses

GERON 2170 Aging in America: Concepts & Controversies: 3 semester hours

Same as SOC 2170. This course examines the major theoretical and service issues connected to the study of older adults and their families, using multidisciplinary perspectives. Students are provided with an introduction to the field of aging through an examination of current social issues and controversies. This course emphasizes student involvement through class discussion and applied activities, and is appropriate for students in the arts and sciences, business, communication, education, and nursing.

GERON 2220 Special Topics in Gerontology: 3 semester hours

Selected topics dealing with various aspects of gerontology. The specific contents of this course will vary from semester to semester. The course may be repeated with permission from the Gerontology director.

GERON 2256 Bioethics: 3 semester hours

Same as PHIL 2256. An examination of ethical issues in health care practice and clinical research and in public policies affecting health care. Topics include: abortion, euthanasia, health care, experimentation, informed consent and the right to health care.

GERON 3220 Selected Topics in Gerontology: 3 semester hours

This course covers selected topics dealing with various aspects of gerontology. The specific contents of this course will vary from semester to semester. The course may be repeated with permission from the Gerontology coordinator.

GERON 3280 Psychology of Death and Dying: 3 semester hours

Same as PSYCH 3280. Prerequisite: PSYCH 1003 or consent of the instructor. An exploration of end-of-life issues integrating the scholarly, social, and individual dimensions of death and dying. This course provides a solid grounding in theory and research, as well as practical application to students' lives.

GERON 3300 The Social Construction of Aging and Ageism: 3 semester hours

Same as SOC 3300 and GS 3300. This course examines perspectives of age, aging, and ageism using several perspectives: the theory of social construction and the frameworks of essentialism and intersectionality. The materials, discussions, and assignments in this course will familiarize and provide students with tools to investigate age and ageism in a complex, multidimensional manner. The overarching focus of this course is located in the tension with the "nature versus nurture" debate, paralleling nature with essentialist ideas and nurture with social constructionism. Ideas, conceptions, attitudes, and understandings of age within the media, family, medical community, and other institutions will be investigated as biological and/or a development of society in effort to perpetuate social control, organization, and power dynamics. Through research, fiction and non-fiction work, creative assignments, and theoretical texts, students will approach the following questions: How do we value lived-experiences? How might situated knowledge affect social constructions of aging and ageism? What evidence is provided toward age and/or ageism as an essential or socially constructed outline within society? How are socially constructed ideas developed and perpetuated? How might one affect change in an essentialist and/or socially constructed society?.

GERON 3400 Environment, Society, and Aging: 3 semester hours

Same as SOC 3400. This course examines the intersection of the environment and human society with an emphasis on aging. Drawing from research in environmental sociology, medical sociology, and gerontology, this course will address the following topics: climate change, natural disasters, community development, food production and distribution, waste and pollution, illness and disease epidemiology, and health and well-being.

GERON 4330 Advanced Topics in Gerontology: 3 semester hours

The course covers selected topics dealing with various aspects of gerontology. The specific contents of this course will vary from semester to semester. The course may be repeated with permission from the Gerontology director.

GERON 4376 Mental Health and Aging: 3 semester hours

Same as PSYCH 4376. Prerequisites: PSYCH 2245 and ENGL 3100, or consent of instructor. This writing intensive course provides a survey of theory and research on mental health issues for older populations, focusing on psychological and social aspects of mental health and functioning. The course details approaches to understanding healthy aging, along with the prevalence, etiology, assessment and treatment of psychological disorders in older adults. The course also provides an overview of health care and community-based delivery systems for behavioral health and allows students to explore information about careers in aging.

GERON 4400 Social & Community Services for an Aging Population: 3 semester hours

Same as SOC 4400. Prerequisites: GERON 2170 / SOC 2170 or consent of the instructor. This service-learning course is designed for students interested in working with and for the benefit of older adults in various settings. Students attend classes on campus and participate in defined volunteer placements with local agencies (e.g., St. Louis County Older Residents Program).

GERON 4490 Directed Readings: 1-3 semester hours

Prerequisites: Consent of instructor. Directed reading and research or field work. May be repeated for a maximum of three hours.

GERON 4520 The Aging Body: 3 semester hours

Same as GS 4520. Prerequisites: GERON 2170 or SOC 2170 or another introductory course (2000 or higher) in Gerontology, Sociology, Psychology, Social Work, or Nursing; or consent of the instructor. This course focuses on the aging body with respect to health and function. Physiologic and cognitive concerns of older men and women are reviewed. Contextual factors (e.g., relationships, socio-cultural, spiritual, environmental) and issues in service delivery are also addressed.

GERON 4620 Dying, Grief & Death in Older Adulthood: 3 semester hours

Prerequisites: Junior/senior undergraduate or graduate standing, or permission of the instructor or program director. This course examines trajectories to death in older age, the dying process, influences of medical and aging-related conditions, euthanasia and suicide, life extension and longevity, personal beliefs and existential responses, how individuals and families cope, ethical concerns, and strategies for supportive intervention. Topics are addressed from clinical, supportive care, and interdisciplinary perspectives. Ideal for those planning to work with older adults in counseling, health care, hospice, and/or community support settings.

GERON 6443 Health Care Policy: 3 semester hours

Same as P P ADM 6430, POL SCI 6443, and SOC WK 6443.

Prerequisites: Graduate standing or consent of instructor. Survey course examining current issues in health policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

GERON 6490 Directed Study: 1-3 semester hours

Prerequisite: Consent of instructor. Designed to give the student an opportunity to pursue a more in-depth study of a problem area in gerontology than is normally covered in more formal courses. May be repeated for a total of six credit hours.

Military and Veterans Studies

Courses

MVS 1100 Veterans Transition Seminar: 1 semester hour

This course is designed for the student veteran who is new to UMSL but not eligible for the First Year Experience class. It will survey essential life skills (time management, financial management, physical fitness) and tools for academic success (note-taking, writing, research, oral presentation). It will familiarize students with the relationship between their education and their career and personal goals. It will also expose students to campus and veteran-specific support services. Maybe most importantly, this course will provide a venue for veterans to connect with other veterans who are facing a similar transition.

MVS 2000 Selected Topics in Military or Veterans Studies: 1-3 semester hours

Selected topics in military or veterans studies. The topics will vary each semester. May be taken more than once for credit as long as the topic differs.

MVS 2021 War and Violence in Modern Times: 3 semester hours

Same as HIST 2021. Prerequisites: Sophomore standing or consent of the instructor. This course examines the connections between warfare and resistance, gangs and poverty, and state and non-state officials as enactors of violence. It explores the effects of war and violence on the poor in Brazil and the United States, prisoners of war in Asia, and resistance fighters in Latin America and northern Africa. Students will watch films/short videos, read academic and newspaper articles, and listen to short podcasts to grapple with the issues underlying structures of violence.

MVS 2025 U.S. Foreign Relations and Military History: 3 semester hours

Same as HIST 2025. This course surveys the development of American land, sea, air, space, and cyber power from the start of the colonial era to the present, with an emphasis on the interrelationship between U.S. foreign and military policies and between diplomacy and force.

MVS 2100 Veterans in American Society: 3 semester hours

Same as SOC 2801. Prerequisite: ENGL 1100. This survey course will focus on the American veteran experience and explore basic concepts, ideas and research into veterans and veteran institutions. In a multidisciplinary manner, students will examine military culture, the unique status of veterans in our society, and veteran institutions. Students will also study the successes, challenges and obligations our society faces related to its veteran community.

MVS 2130 Gender and the Military: 3 semester hours

Same as SOC 2802 and GS 2130. This course investigates how the military treats gender difference, explores how military culture is defined, and how gender is a socially constructed concept. Topics may include military culture, gender construction, and how gender and sexuality issues affect military readiness and effectiveness.

MVS 3100 Current Issues in Military and Veterans Studies: 1-4 semester hours

Selected topics in military or veterans affairs with emphasis on current issues and trends. May be repeated as long as the topic is different for a maximum of 6 credit hours.

MVS 3300 Veteran Social Policy: 3 semester hours

Same as SOC 3802. This course provides an overview of American public policy towards military veterans. Students will research, design, and propose policy changes using various written products and presentations.

MVS 3500 Internship in Veterans Studies: 1-3 semester hours

Prerequisites: Junior Standing and consent of the department chair. Independent study involving regular on-site work with an appropriate public or private agency serving the veteran community. A written report reflecting on the experience is required. Course may be repeated for a maximum of 6 credit hours.

MVS 4100 Veterans Studies Capstone Seminar: 3 semester hours

Prerequisites: MVS 2100 and senior standing. Mentored by a faculty member, students in this course will apply insights gained from previous coursework into a substantial Veterans Studies project. Students will work with the instructor and the class to develop a topic, establish a research or project plan, then prepare a project or paper suitable for presentation to the public. Students should expect that their work will be published or presented at an end-of-the-year symposium. This is not an independent study.

MVS 4200 Independent Study in Military and Veterans Issues: 1-3 semester hours

Prerequisite: Consent of instructor. Faculty mentored, independent study through readings, reports, or field research. No student may take more than a cumulative total of 6 hours of Independent Study.

MVS 4345 War Crimes, Genocide, and Justice in the 20th and 21st Centuries: 3 semester hours

Same as SOC 4345, POL SCI 4345, and CRIMIN 4345. Prerequisite: ENGL 3100. This course provides advanced undergraduate and Master's level students a comprehensive overview of the subject of war crimes, crimes against humanity, genocide and legal responses to these crimes in the modern era. The goal of this course is to engage students in sustained, critical thought about these issues and to foster a deeper understanding of both the causes and consequences—legal, social and human—of these egregious crimes.

Sociology

Courses

SOC 1010 Introduction to Sociology (MOTR SOCI 101): 3 semester hours

An introduction to sociological approaches to human behavior including types of social organizations, patterns of social interaction, and social influences on individual conduct.

SOC 1040 Social Problems: 3 semester hours

Conditions defined by society as social problems, as well as potential solutions, are examined from various sociological perspectives. Emphasis is given to problem issues prevalent in metropolitan settings. Analyses focus on victims and beneficiaries of both problem conditions and alternative solutions.

SOC 1241 Globalization and Social Change: 3 semester hours

Introduces sociological approaches to globalization. Covers sociological concepts such as modernization, Westernization, global capitalism, and the information society. Themes include global governance and transnational society, the global diffusion of American popular culture and consumer culture, and the role of new media. Also discusses the anti-globalization movement and forms of social resistance.

SOC 2001 Introduction to Organizational Leadership: 3 semester hours

Same as INTDSC 2001. This course surveys current research and case studies of leadership with a strong focus on self-awareness and introspection as drivers of organizational leadership success. It invites students to consider leadership as a process more than a product.

SOC 2102 Introduction to Gender Studies: 3 semester hours

Same as GS 2102, SOC WK 2102, POL SCI 2102, and HIST 2102. This core class is required for all Gender Studies Certificate earners. This class introduces students to cultural, political and historical issues that shape gender. Through a variety of disciplinary perspectives in the humanities, social sciences, and natural sciences, the course familiarizes students with diverse female and male experiences and gendered power relationships.

SOC 2103 Gender Roles in Society: 3 semester hours

This course is the study of social processes through which gender roles are developed and acquired. It covers the impact of gender roles on personal identity and social conduct, as well as the relationship between gender roles and social inequality. Last, individual and social consequences of changing gender roles in contemporary society are examined.

SOC 2160 Sociological Social Psychology: 3 semester hours

This course focuses on the relationship between the individual and larger social systems (e.g., society) and will explore a diverse set of perspectives and theories. Specific topics may include the self, social judgments, attitudes and persuasion, helping behaviors, prejudice, aggression, attraction, conformity and obedience, group processes, and individual agency in such processes. Students may not receive credit hours for both SOC 2160 and PSYCH 2250.

SOC 2170 Aging in America: Concepts & Controversies: 3 semester hours

Same as GERON 2170. This course examines the major theoretical and service issues connected to the study of older adults and their families, using multidisciplinary perspectives. Students are provided with an introduction to the field of aging through an examination of current social issues and controversies. This course emphasizes student involvement through class discussion and applied activities, and is appropriate for students in the arts and sciences, business, communication, education, and nursing.

SOC 2180 Alcohol, Drugs and Society: 3 semester hours

Same as CRIMIN 2180. Prerequisite: SOC 1010 or PSYCH 1003. This course examines the medical, legal and social aspects of alcohol and drug use. Medical aspects considered include treatment approaches and the role of physicians in controlling such behavior. In the legal realm, past and present alcohol and drug laws are explored. Cultural and social influences on alcohol and drug use are discussed.

SOC 2192 Special Topics in Sociology: 3 semester hours

This course focuses on a specific society or group of societies utilizing sociological approaches. Examines environmental, economic, social, political, ethnic, religious, linguistic and/or cultural domains. Students are exposed to basic sociological concepts for understanding diverse societies in their historical and/or contemporary contexts. May be repeated provided topic is different.

SOC 2200 Languages and World View: 3 semester hours

Same as FGN LANG 2100 and ANTHRO 2100. This course investigates the extent to which linguistic and cultural background inform our understanding of the world. Experts on a variety of major Western and non-Western languages will introduce students to differences in ideas about time, space, human relationships, and other issues based on language. The course will also analyze common cultural misunderstandings among native speakers of English and speakers of other languages.

SOC 2202 Urban Sociology: 3 semester hours

Covers classical works and contemporary theories in urban sociology from the nineteenth to the twenty-first centuries. Examines urbanism and community, forms and functions of cities, inequality and social difference, gender and sexuality, globalization and urban change, immigration and its impact on cities, and urban exclusion/social resistance. Includes reading well-known ethnographic works on such topics as sex work, homelessness, drug users and crackhouses, life in corner bars, gang members, and other alternative subcultures.

SOC 2203 The City: 3 semester hours

This course explores the central role of cities in the modern world. It covers processes of urbanization such as immigration, segregation and ghettoization, suburbanization, and sprawl. It explores the consequences of urban inequality and issues related to race and ethnicity, class, and gender in an urban context. The course also covers urban landscapes, demographics, lifestyles, and cities as centers of music and other forms of popular culture.

SOC 2280 Technology and Society: 3 semester hours

This course examines the role of technology in the development of today's industrial and post-industrial societies. Topics may include the social and cultural origins of technological innovation; the connection between technology and urbanization; and the impact of technological change on beliefs and values. The course also outlines the transition from industrial society to the post-industrial 'information society,' and the role of technology in globalization. This course fulfills the Information Literacy general education requirement.

SOC 2290 Social Welfare as a Social Institution: 3 semester hours

Same as SOC WK 2200. Prerequisites: SOC WK 2000 (may be taken concurrently). This course 1) examines the development of social welfare service and philosophies underlying existing practices and systems; 2) analyzes social welfare programs with particular emphasis given to public income maintenance provisions; 3) presents issues surrounding special needs of minority and diverse populations; and 4) provides an overview of the development of social work as a profession.

SOC 2338 Health and Society: 3 semester hours

Exploration of social dimensions and issues related to health and illness such as access to the health care delivery system; factors influencing prevention, utilization and compliance; changing relationships among health care providers and consumers; health care costs, trends, and cross-cultural variations.

SOC 2501 Introduction to Geographic Information Systems and Sciences: 3 semester hours

This course introduces Geographic Information Systems and Science (GIS). GIS is a computer-based system for storing, managing, analyzing, and displaying spatial data. Students will learn about the technology and the basic concepts of geographic science that drive it.

SOC 2701 Race and Society: 3 semester hours

In this course, students will engage with a comprehensive and historical overview of the sociocultural mechanisms through which race was established, is reproduced, and shapes peoples' lives. In particular, the course covers how race works in global, political, economic, residential, legal, educational, and social aspects of society. Students will come away from the course with a deeper understanding of race and society that they can apply in their everyday lives.

SOC 2801 Veterans in American Society: 3 semester hours

Same as MVS 2100. Prerequisite: ENGL 1100. This survey course will focus on the American veteran experience and explore basic concepts, ideas and research into veterans and veteran institutions. In a multidisciplinary manner, students will examine military culture, the unique status of veterans in our society, and veteran institutions. Students will also study the successes, challenges and obligations our society faces related to its veteran community.

SOC 2802 Gender and the Military: 3 semester hours

Same as MVS 2130 and GS 2130. This course investigates how the military treats gender difference, explores how military culture is defined, and how gender is a socially constructed concept. Topics may include military culture, gender construction, and how gender and sexuality issues affect military readiness and effectiveness.

SOC 3210 Sociological Theory: 3 semester hours

Prerequisite: SOC 1010 or consent of instructor. The nature of sociological theory. An investigation of theory from Comte through contemporary developments. Contributions made by theorists in related disciplines.

SOC 3220 Quantitative Data Analysis in Social Science Research: 3 semester hours

Same as ANTHRO 3220. Prerequisites: MATH 1020. This course examines issues and techniques of statistical analysis relevant to quantitative sociological research, such as elementary probability, measurements of central tendency and dispersion, measures of relationships including linear regression and correlation, inferential and nonparametric statistics. The course includes an introduction to computer-based statistical analysis.

SOC 3230 Social Research Methods: 3 semester hours

Prerequisites: SOC 1010 or consent of instructor. This course serves as a broad introduction to research methods in the social sciences. It provides students an experience designing research to analyze, interpret, and make sense of the social world and using the fundamental tools of social science research.

SOC 3243 Marriage, Family, and Kinship: 3 semester hours

Same as ANTHRO 3243 and GS 3243. Prerequisites: ANTHRO 1019, SOC 1010, or consent of the instructor. This course will examine will examine the construction of kinship systems, marriages, families and other forms of intimate relationships from anthropological and sociological perspectives. The cross-cultural structure of this class will incorporate global case studies, including U.S. and European marriage and family structures. Students will have the opportunity to explore topics including love, dating, cohabitation, kinship calculation, alternative lifestyles, and divorce.

SOC 3291 Current Issues in Sociology: 3 semester hours

Prerequisite: SOC 1010 or ANTHRO 1011; or consent of instructor. Selected topics in sociology, with emphasis on current issues and trends in the field. May be repeated provided topic is different.

SOC 3300 The Social Construction of Aging and Ageism: 3 semester hours

Same as GERON 3300 and GS 3300. This course examines perspectives of age, aging, and ageism using several perspectives: the theory of social construction and the frameworks of essentialism and intersectionality. The materials, discussions, and assignments in this course will familiarize and provide students with tools to investigate age and ageism in a complex, multidimensional manner. The overarching focus of this course is located in the tension with the "nature versus nurture" debate, paralleling nature with essentialist ideas and nurture with social constructionism. Ideas, conceptions, attitudes, and understandings of age within the media, family, medical community, and other institutions will be investigated as biological and/or a development of society in effort to perpetuate social control, organization, and power dynamics. Through research, fiction and non-fiction work, creative assignments, and theoretical texts, students will approach the following questions: How do we value lived-experiences? How might situated knowledge affect social constructions of aging and ageism? What evidence is provided toward age and/or ageism as an essential or socially constructed outline within society? How are socially constructed ideas developed and perpetuated? How might one affect change in an essentialist and/or socially constructed society?.

SOC 3344 Problems of Urban Community: 3 semester hours

Prerequisite: SOC 1010, junior standing or consent of instructor. Issues of inequality and identity in cities, with emphasis on the consequences of urban growth; processes of class, racial, and ethnic group formation; and urban poverty. Also covers local community organization and politics, and the role of popular culture and religion in community identities.

SOC 3380 Combating Human Trafficking: 3 semester hours

Prerequisites: Junior standing. This course provides students with a variety of approaches and tools to understand the development, character, and culture of society (city and community) behaviors that provoke different forms of human trafficking. This course also introduces students to the most popular geospatial technologies are used by anti-human trafficking sectors.

SOC 3400 Environment, Society, and Aging: 3 semester hours

Same as GERON 3400. This course examines the intersection of the environment and human society with an emphasis on aging. Drawing from research in environmental sociology, medical sociology, and gerontology, this course will address the following topics: climate change, natural disasters, community development, food production and distribution, waste and pollution, illness and disease epidemiology, and health and well-being.

SOC 3501 Social Mapping for Change: 3 semester hours

Prerequisites: Junior standing, or consent of the instructor. This course introduces sociospatial research, which examines how social phenomena are structured by space and place. In particular, students will learn essential mapping techniques in Geographic Information Systems and Science (GIS). GIS is a tool to collect, analyze, and display qualitative and quantitative data for sociospatial research and policy development. Students will conduct research with a community partner in the St. Louis area.

SOC 3600 Management and Organizational Behavior: 3 semester hours

Same as MGMT 3600. Prerequisites: Junior standing and a 2.0 campus GPA. This course involves the study of the behavior of individuals and groups in an organizational setting. Specific topics examined include: motivation, leadership, organizational design, and conflict resolution, as well as basic coverage of management principles. In covering these topics, both classic and current perspectives are provided.

SOC 3612 Professional Skills Development: 3 semester hours

Same as MGMT 3612. Prerequisites: A minimum 2.0 campus GPA and junior standing. This course focuses on career management. Topics may include job search, interviews, resumes and cover letters, presentation skills, business etiquette, entry strategies, and career alternatives.

SOC 3651 Social Leadership: 3 semester hours

Prerequisites: SOC 1010 or SOC 2001. This course, which is grounded in sociology, will examine various theories, paradigms, and approaches to leadership. Emphasis will be placed on how leaders emerge, including the nature of a leader's skills, behaviors, and the role of organizational change. Leadership of individuals, small teams, organizations, as well as leadership in a virtual world are discussed.

SOC 3691 Special Topics in Organizational Leadership: 3 semester hours

Prerequisites: SOC 2001 or consent of instructor. This topics course in organizational leadership examines current issues and trends in the field. It may be repeated provided the topic is different.

SOC 3801 The Military and Society: 3 semester hours

Prerequisites: SOC 1010 or consent of instructor. This course examines the sociological sub-field of Military Sociology. It examines issues such as military recruiting, race and gender representation in the military, combat, military families, military social organization, war and peace, and the military as welfare. Other topics may include basis of service, social representation, military organizations and bureaucracies, and the sociology of combat.

SOC 3802 Veteran Social Policy: 3 semester hours

Same as MVS 3300. This course provides an overview of American public policy towards military veterans. Students will research, design, and propose policy changes using various written products and presentations.

SOC 4001 Organizational Leadership Capstone: 3 semester hours

Same as INTDSC 4001. Prerequisites: SOC 2001 or INTDSC 2001.

This course will help students achieve and demonstrate proficiency in organizational leadership. Students will apply insights gained from previous coursework into individual and group projects that identify and address real-world leadership challenges.

SOC 4040 Survey Research Practicum for Sociology: 3 semester hours

Prerequisites: SOC 3220 or consent of instructor. This course focuses on the execution of a sample survey, including establishing study objectives, sampling, constructing a questionnaire, interviewing, coding, data analysis, and presenting the results.

SOC 4100 Introduction to Feminist and Gender Theory: 3 semester hours

Same as GS 4100. Prerequisites: GS 2102 or consent of instructor.

This course serves as an initial intellectual investigation into gendered ideologies (such as the effects of race, ethnicity, nationality, socioeconomic class, sexuality, and religion) and functions as a bridge to later advanced gender theory and methods courses. Topics may include interdisciplinary feminist theories (with a focus on gender equality), including masculinity theory, queer theory, muted group theory, and other evolving frameworks.

SOC 4200 Applied Social Research: 3 semester hours

Prerequisites: SOC 3230. This advanced course, which builds upon research and analytical skills, uses a contemporary community issue to connect sociological reasoning with research, analysis, and presentation skills. Topics, subject areas, and methodologies will vary by offering and instructor, but the focus will be on the application of sociological knowledge to practical issues faced by communities and institutions in the St. Louis area.

SOC 4221 Qualitative Methods in Social Research: 3 semester hours

Prerequisites: SOC 3230 or consent of instructor. This course presents qualitative methods, including participant observation, ethnographic fieldwork, intensive interviews, content analysis, and oral history. It considers the place of these kinds of techniques in social research, as well as the issues raised by them. It also involves participating in individual or group research projects using one or more methods learned.

SOC 4300 Communities and Crime: 3 semester hours

Same as CRIMIN 4300. Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an analysis of the sources, consequences, and control of crime within communities. There is emphasis on social and ecological theories of crime, and on population instability, family structure, and the concentration of poverty as causes of crime.

SOC 4307 Community-Based Research in Sociology: 3 semester hours

Prerequisites: SOC 4221, SOC 3230, and completion of junior-level writing requirement. This course is an advanced examination of qualitative/ethnographic modes of inquiry and builds upon research and analytical skills learned in previous courses. Some quantitative methods may supplement the research when appropriate. Students will experience the process of discovery, representation, presentation, and justification based on fieldwork and/or archival research. The focus is on applying sociological knowledge to practical issues faced by communities and institutions in the St. Louis area.

SOC 4312 Sociology of Wealth and Poverty: 3 semester hours

Prerequisite: SOC 1010, junior standing or consent of instructor. Theory and research on social stratification and inequality in contemporary societies.

SOC 4320 Forms of Criminal Behavior: 3 semester hours

Same as CRIMIN 4320. Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an examination of major types of criminal behavior including violent, property, public order, and organizational offenses. There is emphasis on theories of and responses to these crimes.

SOC 4325 Gender, Crime, and Justice: 3 semester hours

Same as CRIMIN 4325 and GS 4325. Prerequisites: ENGL 3100 (may be taken concurrently) or consent of instructor. This course provides an analysis of the role of gender in crime and in the justice system. There is emphasis on gender differences in crime commission, criminal processing, and the employment of women in criminal justice agencies. Fulfills CRIMIN diversity requirement.

SOC 4340 Race, Crime, and Justice: 3 semester hours

Same as CRIMIN 4340. Prerequisites: CRIMIN 1110, CRIMIN 1120, CRIMIN 2130, CRIMIN 2210, CRIMIN 2220, ENGL 3100 or consent of instructor. Analysis of the involvement of racial minorities in crime and the criminal justice system. Emphasis on group differences in offending, processing, victimization, and employment in criminal justice agencies. Fulfills Criminology diversity requirement.

SOC 4345 War Crimes, Genocide, and Justice in the 20th and 21st Centuries: 3 semester hours

Same as CRIMIN 4345, POL SCI 4345, and MVS 4345. Prerequisite: ENGL 3100. This course provides advanced undergraduate and Master's level students a comprehensive overview of the subject of war crimes, crimes against humanity, genocide and legal responses to these crimes in the modern era. The goal of this course is to engage students in sustained, critical thought about these issues and to foster a deeper understanding of both the causes and consequences—legal, social and human—of these egregious crimes.

SOC 4350 Special Study: 1-10 semester hours

Prerequisite: Consent of instructor. Independent study through readings, reports, and field work.

SOC 4354 Sociology of Business and Work Settings: 3 semester hours

Prerequisite: SOC 1010, junior standing or consent of instructor. The sociology of work and occupations in America, Europe, and Asia; organization structures and worker participation; worker attitude, behaviors, and commitment; the socialization of the worker; determinants of worker behavior; social problems of work and business; and the impact of community on the work place and business behavior.

SOC 4360 Sociology of Minority Groups: 3 semester hours

Same as GS 4360. Prerequisites: SOC 1010 or consent of instructor. This course is the study of dominant-subordinate group relations. Topics of focus may include religion, ethnicity, race, and gender as factors in the unequal distribution and utilization of power.

SOC 4362 Sociology of Law: 3 semester hours

Same as CRIMIN 4360. Prerequisites: ENGL 3100 or consent of the instructor. This course explores the interaction of legal, political and social forces in the US. It examines historical developments in law and politics in the US, including law and economics, crime policy, socioeconomic inequality, race relations, and state sanctioned punishment. The course also considers how America's federalist structure shapes law, politics and social relations. Last, it examines how legal and political institutions establish and shape power relations between social groups.

SOC 4380 Advanced Topics in Sociology: 1-3 semester hours

Prerequisites: SOC 1010 and junior standing or consent of instructor. Examination of a specific sociological topic of current relevance in the community. May be repeated provided the topic is different.

SOC 4385 Internship in Sociology: 1-6 semester hours

Prerequisites: Junior standing and consent of instructor. Students participate in supervised placements in positions related to the profession of Sociology.

SOC 4400 Social and Community Services for an Aging Population: 3 semester hours

Same as GERON 4400. Prerequisites: GERON 2170 / SOC 2170 or consent of the instructor. This service-learning course is designed for students interested in working with and for the benefit of older adults in various settings. Students attend classes on campus and participate in defined volunteer placements with local agencies (e.g., St. Louis County Older Residents Program).

SOC 4485 Internship in Urban Studies: 1-6 semester hours

Prerequisites: Junior standing, consent of the instructor. Students will participate in supervised placements in positions related to the field of Urban Studies. May be repeated for a maximum of 6 credit hours.

SOC 4501 Advanced Geographic Information Systems and Sciences: 3 semester hours

Same as GIS 4303. Prerequisites: SOC 2501 or SOC 3501. This advanced course further explores Geographic Information Systems and Science (GIS). Students will learn advanced techniques to acquire geospatial information from a variety of sources; manage, interpret, employ and present geospatial data for a given purpose; and how to use geographic information system software for storage, manipulation, and analysis of geospatial data.

SOC 4600 Masculinities: 3 semester hours

Same as GS 4600. Prerequisites: SOC 2102, GS 2102, or consent of instructor. This course examines men and masculinity through a critical lens, looking at an institutionalized system of gender relations and practices that is assumed to be a natural phenomenon and culturally universal. The course explores various masculine behaviors, myths, ideologies, and experiences so that students can consider the relationship between masculine practice and social power and delineate choices for future directions. The course is interdisciplinary and may use tools and methods from the social sciences and the humanities. It satisfies the Gender Studies (GS) gender theory requirement.

SOC 4651 Dilemmas in Organizational Leadership: 3 semester hours

Prerequisites: INTDSC 2001 or SOC 2001 and junior standing, or consent of the instructor. This course will examine the unique challenges faced by organizational leaders with an emphasis on building ethical competency through self-assessment, challenge, and feedback. Topics may include virtue, moral theories, moral reasoning, decision-making, influence, inclusion, ethical leadership theories, group problem-solving, organizational climate, diversity, and crisis leadership.

SOC 4685 Internship in Organizational Leadership: 1-3 semester hours

Prerequisites: Junior standing and consent of instructor. In this internship course, students participate in supervised placements in positions related to their organizational leadership emphasis area.

College of Business Administration

College of Business Administration Home Page

Purpose

We Transform Lives

Vision

To be the premier business college of choice for St. Louis and beyond.

Mission

We provide accessible, innovative, and research-informed, public education that impacts lives. We advance real-world, relevant, and impactful research. We partner with alumni and business leaders to drive regional economic development.

Core Values

We, the students, faculty, and staff of the UMSL College of Business Administration, value:

- Success...center on student success.
- Trust...act with integrity.
- Inclusion...seek out, hear, and respect all voices.
- Excellence...seek the highest standards.
- Collaboration...engage all stakeholders.

Our Strategic Priorities

- Educate The Region's Workforce
- Inform Practice And The Academy Through Impactful Research
- Connect And Engage Our Internal And External Communities

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(with emphasis areas available in)
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Admission Requirements

Students entering UMSL may declare themselves as Business majors in the College of Business Administration (COBA). They are advised by Business and may take Business courses as long as they maintain “good standing” status (see General Degree Requirements listed below) and have satisfied the prerequisites for the courses they propose to take.

Credit Hour Requirements

Student must complete a minimum number of hours in the following areas:

- 120 credit hours for the baccalaureate degree
- 48 credit hours of coursework offered by the College of Business
- 36 credit hours of upper-division coursework offered by the College of Business

Credit Hour Requirements for Transfer Students

- Students must complete a minimum of 60 hours from four-year, baccalaureate degree granting colleges or universities.
- A minimum of 50% of all business course work must be completed at UMSL.
- Students must complete a minimum of 21 graded hours in business courses.
- Students must complete their last 30 hours in residence at UMSL.

Credit for Lower Division Transfer Courses

Students seeking to use a lower division course to satisfy an upper division business requirement must validate the course being transferred. If successfully validated, the transfer course will waive the need to take the upper division equivalent course at UMSL, but the course transferred will be counted as lower division; it will not count toward the 36 upper division hours required in business.

GPA Requirements

Student must carry a minimum 2.3 GPA in the following areas in order to graduate. Grade modification may be used.

- Campus GPA
- College of Business Coursework GPA
- Major GPA
- Emphasis Area GPA

Grade Requirements

A minimum grade of C- is required for each course in the business core (except MGMT 4219); for each course which serves as a prerequisite for another course; and for each course in an emphasis area and/or major.

Satisfactory/Unsatisfactory Option

Majors may take no more than 9 satisfactory/unsatisfactory hours in the College. Satisfactory/Unsatisfactory grading is restricted to elective coursework.

Prerequisite Requirements

Business course prerequisites are enforced by the College of Business Administration and include a minimum campus grade point average of 2.0 as a condition for taking any upper division business course.

Good Standing

Students are allowed to take a maximum of 9 hours of upper-division Business classes before a “good standing” evaluation is applied to their academic records. In order to remain in good standing and continue to enroll in upper division Business courses, students must maintain a 2.3 campus and Business grade point average and must have completed the following cluster of courses (with a grade of C- or higher):

| | | |
|-----------------------------|---|---|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 or BUS AD 1107 | Basic Calculus Quantitative Methods for Business | 3 |
| MATH 1105 | Basic Probability and Statistics | 3 |

Additional Emphasis Areas

Emphasis areas may be added for up to two years following degree completion. Each additional degree from the College of Business Administration requires 15 unique hours taken at UMSL subsequent to completion of the prior business degree.

Latin Honors

In accordance with the University's Latin Honors policy (p. 23), candidates graduating from the College of Business in the 2024-2025 Academic Year must meet the following GPA qualifications:

| | |
|-----------------|-------|
| Summa Cum Laude | 3.955 |
| Magna Cum Laude | 3.867 |
| Cum Laude | 3.686 |

The College of Business Administration offers seven graduate degrees: the Doctor of Business Administration (DBA), the Doctor of Philosophy in Business Administration (Ph.D.), the Master of Business Administration (MBA), the Master of Science in Information Systems and Technology (MSIST), MS in Cybersecurity with emphasis in IST, The Master of Science in Supply Chain Analytics, and the Master of Accounting (MAcc). All programs carry the prestigious accreditation of AACSB-International.

Doctor of Philosophy in Business Administration (Ph.D.)

The Ph.D. program includes an emphasis in Logistics & Supply Chain Management (LSCM). This is the only LSCM emphasis in a doctoral business program offered in Missouri. Courses are taught by full-time, nationally known scholars who have been recognized as one of the most academically prolific faculties in America. The Ph.D. program is designed to prepare scholars who will excel in the national and international marketplace, especially in academic and research organizations, but graduates may also find opportunities in the growing private sector demand for advanced LSCM expertise.

Doctor of Business Administration (DBA)

The Doctor of Business Administration program is a three-year, cohort-based program that offers a flexible format, with limited monthly visits to campus. Over the course of the program, participants will make only three weekend trips to campus per term.

DBA students move through the program in a cohort and meet face-to-face one weekend a month, then engage and collaborate with faculty and students in the online learning platform for discussions. The first two years cover an array of cutting-edge business and management topics and the third year is spent focusing on the candidate's dissertation research.

The DBA is designed to train engaged management scholars in a learning community supported by select internationally renowned faculty with close ties to business and recognized for their research impact and expertise in graduate education.

Master of Business Administration Program (MBA)

The MBA is available in three formats: the FlexMBA, the Online MBA, and the International MBA program. All programs are fully accredited by AACSB International – The Association to Advance Collegiate Schools of Business, the premier accrediting body in collegiate business education. The MBA programs are designed to prepare students for administrative and professional positions. They also provide an appropriate foundation for students contemplating doctoral work and eventual careers in college teaching and research. The programs admit students with bachelor's degrees from accredited institutions, including those with undergraduate backgrounds in the sciences, engineering, humanities, or arts as well as business. Graduate Business program information is available at the College of Business Administration website.

The FlexMBA Program

The FlexMBA curriculum familiarizes participants with the fundamental areas of business administration. The core program is designed to generate a working knowledge of the concepts and interrelationships of four broad categories fundamental to management training:

- The external environment confronting business organizations and management's response to legal, economic, social, and political issues.
- The internal operation of various business organizations and management's role in channeling human behavior to satisfy both personal and organizational goals.
- Basic concepts, terminology, and interaction of the accounting, marketing, finance, information systems and operations management disciplines.

- Quantitative management decision-making models put to use in the context of current management principles.

Business concepts are integrated by a course in strategy formulation and implementation in the final semester of study. There is no thesis requirement; however, students interested in undertaking an individual research project may earn elective credit by enrolling in a supervised independent study course.

Emphasis Areas

MBA students may obtain an emphasis in Accounting, Business Analytics, Cybersecurity, Finance, Information Systems and Technology, International Business, Management, or Marketing, Supply Chain Management. Depending on the student's undergraduate background, courses waived, and emphasis area chosen students might require additional coursework.

Graduate Certificate Programs in Business Studies

The College of Business Administration offers seventeen graduate certificates. To be admitted to a graduate certificate program, students must meet the same requirements as those needed for a graduate degree program in business (see Admission Requirements in the Graduate Studies in Business Administration section of this Bulletin).

Certificate programs allow qualified graduate students to pursue an intensive course of study in a specialized business topic without requiring completion of a full graduate business degree program. Certificate programs provide students with the opportunity to obtain the advanced knowledge available through a graduate course of study in a relatively brief period.

In order to successfully complete a certificate program, students must earn a 3.0 cumulative GPA in certificate classes. Unless otherwise specified, the coursework must be completed within six years. Students must also comply with all requirements related to matters such as prerequisites, academic probation, and other graduate business program policies.

Licensure and Certification

As of July 1, 2024 it has been determined that the following programs meet educational requirements in for Certified Public Accountant licensure in Missouri and Illinois.

- Master of Accounting MAcc
- Masters of Business Administration - Accounting Emphasis
- Bachelors of Science in Accounting does not meet 150 total credit hours for CPA licensure. However, the program meets educational requirements for the Uniform Certified Public Accounting (CPA) Exam.
- Accelerated Master of Accounting MAcc does not meet 150 total credit hours for CPA licensure. However, the program meets educational requirements for the Uniform Certified Public Accounting (CPA) Exam.

We have not determined if the above programs meet the educational requirements for licensure in the remaining U.S states and U.S. Territories. For additional information on State Authorization and Licensure requirements, please visit <https://teaching.missouri.edu/student/state-authorization/umsi/licensure>.

Under federal regulations, we may not enroll into licensure or certification program students located in a state or territory in which our program does not meet the educational requirements to be eligible for licensure or which the University has not made a determination. However, if you plan to seek licensure and employment in any of the following states or territories listed below, you may enroll in the program after signing an attestation indicating your plans to become licensed and employed in a state that meets requirements.

If you plan to seek licensure in one of the states listed above, please contact the Graduate Business Programs office at 314-516-5885 for more information.

Business Administration Courses

BUS AD 1000 Introduction to Business: 3 semester hours

Overview of the functional business disciplines, including, but not limited to principles of Accounting, Finance, Information Systems, Law, Logistics and Operations Management, Management, and Marketing.

BUS AD 1107 Quantitative Methods for Business: 3 semester hours

Prerequisites: MATH 1030 or MATH 1045 or a satisfactory score on the UMSL Math Placement Examination, obtained at most one year prior to enrollment in this course. This course covers a broad range of quantitative methods across various business applications. Topics include but are not limited to data collection, cleaning, description, visualization, and communication. The goal is to build fundamental skills and confidence in mathematical reasoning for data-driven decision-making. It will prepare students to be successful in subsequent analytical-oriented classes.

BUS AD 1900 Introduction to Personal Law: 3 semester hours

This course introduces students to the American legal system and the basic issues every individual must deal with in our society. The course will be of interest to anyone seeking a job, leasing an apartment, buying a car or house, borrowing money, buying insurance, getting married or divorced, entering contracts, filing a law suit, writing a will, or accumulating wealth. May not be used for credit in any undergraduate business program.

BUS AD 2000 Topics in Business Administration: 1-3 semester hours

Prerequisites: Vary with topic; contact the College of Business Administration. Study of selected special problems in business and administration. May be repeated for credit with different topics.

BUS AD 2900 Legal Environment of Business: 3 semester hours

Prerequisites: Sophomore standing. This course is an introduction to the nature and meaning of law, sources of law, legal process and institutions. The legal environment of business is defined as the relationship of government toward business, the historical development of this relationship. This course emphasizes understanding and being able to apply basic legal principles in an ethical context, understanding the sources of the law (e.g. Constitution, statutes, regulations, and court decisions) and their interaction and contribution to the development of the law, and understanding and being able to apply legal concepts and principles to the business environment (torts, contracts, agency, business organizations, intellectual property, property, securities regulation and other forms of governmental regulation of business).

BUS AD 3090 Internship in Business Administration: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0; one must have completed and/or be currently enrolled in at least 6 hours of Business Administration electives, have consent of supervising instructor and Associate Dean, and a College of Business GPA of at least 2.5. Students are employed in the field of Business Administration where they apply the knowledge and skills learned in the classroom. Professional development and obtaining specialized work experience are the primary goals. A Business Administration faculty member will monitor the student's program with the student providing a formal written report at the end of the project. BUS AD 3090 may not be counted toward the minimum credit hours for any emphasis area.

BUS AD 3099 Independent Study in Business Administration: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0 and approval by the supervising professor and the Associate Dean. Special individual study in business under the supervision of a full-time faculty member.

BUS AD 3990 Internship in Business Law: 1-3 semester hours

Prerequisites: BUS AD 2900, 3 credit hours of Business Law electives, and a Business College 2.5 GPA. Must have completed and/or be currently enrolled in at least 3 credit hour of Business Law electives and have consent of supervising instructor and Area Coordinator. Students are employed in the field of Business Law where the knowledge and skills learned in the classroom are applied. Professional development and obtaining specialized work experience are primary goals. A Business Law faculty member will monitor the student's program with the student providing a formal written report at the end of the project.

BUS AD 4325 Environmental Sustainability in Business Operations: 3 semester hours

Same as SCMA 4325. Prerequisites: SCMA 3301 or consent of instructor. This course studies the environmental impacts of business operations, and it focuses especially on the principles and methods of "lean and green" operations, i.e., ways in which organizations can reduce their costs and increase profits, while reducing their environmental impacts. Specific topics include energy efficiency, resource reduction, waste reduction, design for the environment, externalities and internal pricing mechanisms, environmental technologies, life-cycle assessment, recycling, re-use, and re-manufacturing, as well as national and global environmental issues.

BUS AD 5000 Economics for Managers: 3 semester hours

Prerequisite: Graduate standing. The concepts and tools of economic analysis are applied to the production and distribution functions of organizations. The last portion is devoted to the macroeconomic influence of capital markets, the influence of interest rates, inflation, and the business cycle.

BUS AD 5001 Managerial Economic Analysis: 3 semester hours

Prerequisites: BUS AD 5000 or ECON 1001 and ECON 1002. Microeconomic analysis of consumers, firms, and government. The concepts and mathematical tools of economic analysis are applied to the production and distribution functions of organizations.

BUS AD 5002 Analysis of National Economic Environment: 3 semester hours

Prerequisites: BUS AD 5000 or ECON 1001 and ECON 1002. The character and functioning of the national economic system; analyzing and forecasting fluctuations in national income and product, employment, and prices; the influence of monetary and fiscal policies. Emphasis is on the acquisition of knowledge concerning forces affecting all business firms.

BUS AD 5100 Managerial Communication: 3 semester hours

An analysis of business writing and speaking, and the communication conventions common in organizations. Emphasis is placed on developing skills critical to career advancement and necessary for effective organizational functioning. A second goal is to prepare students for assignments in other business courses. This course must be taken within the first 12 credit hours of study, preferably in the student's first semester.

BUS AD 5198 Seminar in Business Administration: 3 semester hours

An intensive study of a specific area of business administration of some specific business or economic phenomenon, or a specific problem or theory. Several different courses may be offered under this course number.

BUS AD 5299 Individual Research: 1-3 semester hours

Prerequisite: Consent of instructor and graduate director. Special individual research topics under the guidance of a specific professor.

BUS AD 5325 Environmental Analysis and Sustainability in Business Operations: 3 semester hours

Same as SCMA 5325. Prerequisites: SCMA 5320 or permission of instructor. This course studies the environmental impacts of business operations, and it focuses especially on the principles and methods of "lean and green" operations, i.e., ways in which organizations can reduce their costs and increase profits, while reducing their environmental impacts. Specific topics include energy efficiency, resource reduction, waste reduction, design for the environment, externalities and internal pricing mechanisms, environmental technologies, life-cycle assessment, recycling, re-use, and re-manufacturing, as well as national and global environmental issues.

BUS AD 5450 Governmental Budgeting and Financial Control: 3 semester hours

Prerequisite: ACCTNG 5400. A study of municipal and federal financial control and budgeting procedures with emphasis on public policy. The impact of financial control on top management decisions and the effect of budget strategies on the allocations of public funds.

BUS AD 5900 Law, Ethics and Business: 3 semester hours

Analysis of the relationship between law and business with emphasis on the ability of, and extent to which, governments regulate business activities. Topics covered include the employer-employee relationship, protection of consumers, antitrust regulation, and securities law. Also discussed are ethical issues confronting management of the modern business enterprises.

BUS AD 6990 Strategy Formulation and Implementation: 3 semester hours

Prerequisites: FINANCE 6500, MGMT 5600, MKTG 5700, SCMA 5320 and special consent. Graduate program capstone course examining concepts and methods that integrate functional areas of business. The perspective is that of general management charged with directing the total enterprise. Interactions between the environment, organization, strategy, policies and the implementation of plans are explored. Special emphasis is given to globalization of business and ethical perspectives. This course should be taken during the semester prior to graduation. In no case may it be taken sooner than two semesters prior to graduation.

BUS AD 6991 Graduate Business Assessment Testing: 0 semester hours

Prerequisites: Concurrent enrollment in BUS AD 6990 (or INTL BUS 5289 or MGMT 4614 if taken in lieu of BUS AD 6990). A one-time lab during which a major field exam in business is administered. Course graded on a satisfactory/ unsatisfactory basis. Satisfactory grade required for graduation.

BUS AD 7001 Doctoral Research: 1-12 semester hours

Prerequisite: Must have PhD Program Director or Area Coordinator approval. Investigation of an advanced nature culminating in preparation for comprehensive examinations and/or development of dissertation proposal. The course may be repeated for credit.

BUS AD 7002 Dissertation Research: 1-12 semester hours

Prerequisites: Must have Ph.D. Program Director or Area Coordinator approval. Investigation of an advanced nature culminating preparation of a doctoral dissertation. The course may be repeated.

BUS AD 7100 Scientific Inquiry in Business: 1-3 semester hours

Prerequisites: Consent of DBA program director and graduate standing. This course provides an overview of research methods for studying business problems including extraction of information from secondary sources, and primary data collection with surveys, interviews, participant observation, action research, field experiments, controlled experiments, case studies, design sciences and simulations. The course covers foundations of business research (substantive theories, formal theories, and frameworks). Students will learn the types of variables used to test theories and develop the skills required for reviewing the literature and conceptualizing research questions that are important for practice. Ethical issues related to conducting and publishing research will be discussed. Students will become nationally certified in protecting human research participants and in responsible research conduct.

BUS AD 7101 Quantitative Research Methods I in Business Administration: 3 semester hours

Prerequisites: Consent of DBA program director. This course provides an understanding of the application of quantitative analytical techniques to problems in the planning and management of business enterprises and service operations. The course provides experience in structuring analytical models and drawing inferences from their results. Topics include techniques for descriptive, predictive and diagnostic analytics, and may cover general linear statistical models, logistical regression, techniques for extrapolating time series, and statistical methods for testing conceptual models.

BUS AD 7102 Qualitative Research Methods I in Business Administration: 3 semester hours

Prerequisites: Consent of DBA program director and graduate standing. Working in groups, students will design and execute a qualitative research project using interviews or direct observations. During the course, students will prepare a qualitative research proposal that includes well-formed research questions, clearly positions the research as a contribution to knowledge, critically reviews the academic literature relevant to the student's topic, develops qualitative research instruments (such as an interview guide), executes the research, analyzes the data and writes up the report. Students will learn how to abstract their findings into lessons for scholars and/or practitioners. One important output of this seminar is a completed research paper suitable for publication in a respected practitioner or academic outlet.

BUS AD 7103 Quantitative Research Methods II in Business Administration: 3 semester hours

Prerequisites: Consent of DBA program director and graduate standing. This course provides an advanced understanding of quantitative research with special attention to prescriptive analytics. Emulating work in prior published studies, students identify and frame research questions, determine appropriate metrics, develop hypotheses, build and test quantitative models, and discuss the advantages and shortcomings of alternative quantitative approaches. One important output of this course is a completed research paper.

BUS AD 7104 Qualitative Research Methods II in Business**Administration: 3 semester hours**

Prerequisites: Consent of DBA program director and graduate standing. Working in groups, students design and execute a qualitative research study using a case study method or action research. Students prepare a qualitative research proposal that includes well-formed research questions, clearly positions the research as a contribution to knowledge, and critically reviews the academic literature relevant to the topic. Students develop qualitative research instruments (or design an experimental intervention), execute the research, analyze the data and produce a report that presents lessons for scholars and/or practitioners. An important product of this seminar is a completed research paper suitable for publication in a respected practitioner or academic outlet.

BUS AD 7105 Special Topics in Business Administration: 3 semester hours

Prerequisites: Consent of DBA program director. This course introduces special topics from the business administration perspective. Topics may vary by semester based students' research interests. The topics of this course may include advanced theoretical perspectives, advanced analytical techniques, or other business issues that go beyond the content in the foundational topics of the curriculum.

BUS AD 7106 Strategic Business Analysis: 3 semester hours

Prerequisites: Consent of DBA program director. This course synthesizes theoretical and empirical research to provide new insights for public policy and managerial practice. Course topics may address contemporary challenges in the global economy, regulatory processes, taxation, management of innovation, management of risk and disruptive events, consequences of international agreements, environmental issues, sustainability of business practices and business alliances, corporate governance, cultural challenges in international business relations, and other contemporary problems specific to students' places of employment.

BUS AD 7107 Capstone Project Research in Business**Administration: 1-6 semester hours**

Prerequisites: Consent of DBA program director. In this course, students will develop a formal proposal for their capstone research projects that includes a draft of all parts of the project that precede the data collection. This proposal includes research questions or hypotheses based on prior research and the methodology to be employed for addressing the research questions or corroborating the hypotheses. This course will be coordinated by the Academic Director of the DBA Program, and attended by interested faculty, especially those serving as Chairs. By the conclusion of this course, each capstone project proposal is approved by a capstone project committee (consisting of the Chair of the capstone project committee and two other members).

BUS AD 7108 Dissertation Research: 1-6 semester hours

Prerequisites: Consent of DBA program director. This course involves conducting research for the student's dissertation project under the guidance of the chair, committee members, and the student's dissertation community. An important component of research progress in this course involves students working with their chair and committee within the dissertation community, meeting on residency weekends during the semester. Each student will produce a dissertation in proper academic form with the expectation of submitting it for publication and will defend the work in an oral examination.

BUS AD 7109 Doctoral Foundations Seminar: 1-4 semester hours

Prerequisites: Consent of DBA program director. This course will cover the foundation necessary to succeed in the DBA Program. This seminar will also provide the doctoral students with an understanding of the culture of research.

BUS AD 7300 Management of Supply Chains: 3 semester hours

Prerequisites: Consent of DBA program director. This course provides a comprehensive overview of supply chain management, including procurement, sourcing, operations, production and logistics, with special attention to international issues. Topics include designing and operating multinational logistics systems; managerial issues and strategies for sourcing, transportation, and inventory management; legal and financial issues in import and export; risk identification and management; and the relationship of supply chain management to other activities. The course also provides students with an understanding of quantitative techniques used in the design and management of global supply chains.

BUS AD 7301 Statistical Modeling: 1-3 semester hours

Prerequisites: SCMA 5300; consent of DBA program director. Study of multivariate analytical techniques and their application to the analysis of business systems. Topics include the construction and adaptation of statistical models and extrapolative techniques to accommodate factor interactions, nonlinearities, and periodic effects. Methodologies include multiple regression, ANOVA, and general linear model, MANOVA, structural equation modeling, and time series modeling.

BUS AD 7400 The Role of Accounting Information in Firms and Markets: 3 semester hours

Prerequisites: Consent of DBA program director. This course provides insights into various accounting theories and practices, including financial analysis to identify opportunities, archival and behavioral inquiry in accounting, the role of accounting information in valuation, the role of accounting information in firm contracting, structural cost management, executional cost management, and governance and controls.

BUS AD 7500 Finance Theory and Applications Seminar: 3 semester hours

Prerequisites: Consent of DBA program director. This course addresses contemporary issues in corporate finance, investment, financial institutions and financial markets. Extensive reviews of the literature in different finance fields are conducted. Modigliani-Miller theorem, agency theory, capital asset pricing theory, and option pricing theory are discussed and applied in research analysis.

BUS AD 7600 Managing Talent for Strategic Advantage: 3 semester hours

Prerequisites: Consent of DBA program director. This course provides insight into research on topics that explore how organizational behavior and human resource management practices contribute to developing and sustaining effective and satisfying workplaces. Topics such as conflict management, change management, motivation, cultural intelligence, compensation strategies, selection and promotion decisions, performance management and legal issues in employment decision making, will be discussed.

BUS AD 7700 Contemporary Marketing Intelligence and Decision Making: 3 semester hours

Prerequisites: Consent of DBA program director. This course examines how firms generate valuable marketing intelligence for critical decisions in pursuit of marketing objectives. Marketing strategies and consumer behavior are studied through literature reviews and examination of case studies. Students challenge assumptions, frameworks, and findings and they discuss how marketing strategy is adapted in practice for various products and services. They also learn how data mining techniques are used in the development and execution of marketing strategies.

BUS AD 7800 Management of Sustaining and Disruptive Information Technologies: 3 semester hours

Prerequisites: Consent of DBA program director. This course provides insights into contemporary sustaining and disruptive information technologies and their strategic and supporting roles in organizations and society. This course provides the student with an understanding of the processes through which information systems are adopted and used by organizations, including their sourcing, design, development, implementation, and strategic management. The course will also examine best practices for managing new information technologies, such as social media, business intelligence, and the Internet of Things. Strategic opportunities, threats and processes for achieving cyber security will be considered as students discuss the impacts such technologies have on organizations, individuals, and society.

International Business Courses***INTL BUS 3280 The Law of International Business Transactions: 3 semester hours***

Same as FINANCE 3583. Prerequisites: BUS AD 2900 or consent of instructor. This course studies the role and function of International Law and national laws in the regulation of international business transactions. The impact of various legal regimes on import/export transactions, foreign investments, and the operations of multinational enterprises will be included. The role of national governments, supra-national governmental organizations, and non-governmental organizations in forming and administering the international legal environment will be studied.

INTL BUS 3281 Business in China: 3 semester hours

Same as FINANCE 3585. Prerequisites: A minimum campus GPA of 2.0 and junior standing. This course introduces students to the practices of doing business in China. Students will be introduced to the Chinese economic and business environment. Issues related to trade and foreign direct investment in China will be discussed. The course adopts an innovative approach, utilizing lectures, case analysis, projects, and student presentations.

INTL BUS 3282 Managing the Global Workforce: 3 semester hours

Prerequisite: MGMT 3600 and at least one of the following: MGMT 3611, MGMT 3621 or enrollment in the Honors College, a minimum 2.0 campus GPA or consent of instructor. A study of the international dimensions of organizational behavior and human resource management. The course provides an overview of the tools and skills that are necessary to understand and manage people in global organizations. Topics include motivation, leadership, communication, hiring, training, and compensation.

INTL BUS 3283 International Business and Society: 3 semester hours

Encompasses the readings, lectures, company and government agency visits, and cultural visits that comprise annual Country Study Tours, (e.g., Austria, Japan, Thailand, etc.). The program includes 45 contact hours or more of classroom lectures covering aspects of the chosen country's business and society, in-depth pre-departure cross-cultural orientation and training supplemented by briefings on the country's economy and on U.S. market penetration by the Commercial Service, U.S. Embassy; a briefing by the in-country State of Missouri representative; briefings by host country agencies; company visits and factory tours; and tours of cultural sites. Student evaluation will be based on active participation and on a research paper based on readings, lectures, interviews and field observations.

INTL BUS 3285 Role of the Global Corporation: 3 semester hours

Prerequisites: A minimum 2.0 campus GPA and MGMT 3600 or permission of instructor. The purpose of this course is to create awareness of controversial issues about international business. Students will gain a better understanding of resistance to and criticism of international business and will become better prepared for dealing with these issues and problems.

INTL BUS 3286 International Business Ethics: 3 semester hours

Same as PHIL 3286. This course will deal with moral issues that are raised by the increasing globalization of business. Apart from the general issue of whether this globalization is itself a good thing, we will discuss such issues as child labor, working conditions, safety standards, environmental policies, bribery and other "corrupt" practices, respect for intellectual property, etc. Frequent short papers will be assigned.

INTL BUS 3289 Practicum in International Business: 3 semester hours

Prerequisites: At least one INTL BUS course, 2.0 campus GPA and completion of an approval form. Students will apply both their language skills and knowledge of international business by working for a three month period in an organization located outside the student's country of origin. This course requires students to prepare a research report summarizing the global experience and how it relates to the international business program.

INTL BUS 3290 Internship in International Business: 3-6 semester hours

Prerequisites: ECON 1001 and ECON 1002, ACCTNG 2400 and ACCTNG 2410, an additional 12 hours in Business Administration, a minimum overall gpa of 2.0 and concurrent enrollment in a UM overseas program. The internship will be a supervised field experience in a business/ international organization at a foreign site. Students will work for 10 weeks on projects directed by host-organization supervisors in consultation with a UM-St. Louis faculty member. Prior to the field experience students will receive training that includes familiarization with the language and practices of the country's business, the background of the host firm, and international information sources. The student will complete a written report of his/her project. Course may not be repeated for more than 6 hours credit.

INTL BUS 3299 Independent Study in International Business: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0 and approval by the supervising professor and the Area Coordinator of the specific discipline. Special individual study in international business under the supervision of an approved faculty member.

INTL BUS 3580 International Corporate Finance: 3 semester hours

Same as FINANCE 3580. Prerequisites: FINANCE 3500 and a 2.0 campus GPA. This course explores corporate finance in the context of a global environment. Financial managers for an international firm must deal with all the normal problems faced by domestic corporations plus additional foreign exchange and political risks. Class discussions will focus on applying financial techniques to decision making in foreign operations. Students are required to work in a group to undertake a project related to international finance.

INTL BUS 3582 International Investments: 3 semester hours

Same as FINANCE 3582. Prerequisites: FINANCE 3500, and a 2.0 overall GPA. This course explores the concepts of investing and hedging risk management, portfolio diversification, currency risk, asset pricing, and alternative portfolio strategies. Techniques for using derivatives are discussed in the context of hedging exchange rate risk. Reading foreign exchange quotes and understanding the functioning of global markets is central to the course. A prior course in investments is recommended but not required.

INTL BUS 3680 International Management: 3 semester hours

Same as MGMT 3680. Prerequisites: ECON 1002 and MGMT 3600, a minimum 2.0 campus GPA or consent of the instructor. A study of international business and management practices. Topics covered include an introduction to international management and the multinational enterprise, the cultural environment of international management, planning in an international setting, organizing for international operations, directing international operations, international staffing, preparing employees for international assignments, and the control process in an international context.

INTL BUS 3780 International Marketing: 3 semester hours

Same as MKTG 3780. Prerequisites: MKTG 3700 and a 2.0 overall GPA. Marketing management problems, techniques and strategies needed to apply the marketing concept to the world marketplace. Understanding a country's cultural and environmental impact on the marketing plan is emphasized, as well as competing in markets of various cultures. Worldwide consumerism, economic and social development, the spread of multinational corporations, business ethics, and current economic and marketing issues are examined.

INTL BUS 3882 Data Networks and Security: 3 semester hours

Same as INFSYS 3842. Prerequisites: INFSYS 2800 and a minimum campus GPA of 2.0; or consent of instructor. This is a foundational course in data networking and network security. It covers the fundamentals of networking and security implications of data networks with hands-on exercises. Topics include networking layers and standardization of functionality across layers, wired and wireless Local Area Networks (LANs) along with switching and physical layer technologies, Internetworking, supporting and supervisory protocols; application layer protocols such as HTTP, and fundamentals of network security. Students will also learn about network protocol analyzers such as Wireshark, virtualization, and networking in virtual environments. Credit cannot be granted for both INFSYS 3842 and INFSYS 6836.

INTL BUS 4280 International Business Experience: 0 semester hours

Students with an International Business emphasis must complete one of the following international experience requirements: (a) study abroad for three or more credit hours, (b) complete a minimum of one year international experience (e.g., Peace Corps, volunteer work, missionary work, an international posting by an organization) within 5 years of entering the program, or (c) complete an international internship approved by the International Business Institute. May be taken on a satisfactory/unsatisfactory basis only.

INTL BUS 4289 International Strategic Management: 3 semester hours

Prerequisites: INTL BUS 3282, MKTG 3780 and FINANCE 3580, a minimum 2.0 campus GPA or consent of instructor. A study of the international dimensions of strategic management. Provides an introduction to the key concepts and tools necessary for international competitive analysis. Topics include the international dimensions of strategy formulation and implementation, diversification, strategic alliances, and divestment.

INTL BUS 4381 Global Supply Chain Management: 3 semester hours

Same as SCMA 4381. Prerequisites: SCMA 3301 and a minimum campus GPA of 2.0. This course covers business logistics and supply chain strategies involving shipments across national boundaries. Topics may include the effects of international agreements and regional trading blocks on supply chain strategies, the design of global logistics networks, managerial processes and systems for international production and distribution, and risk management for international logistics.

INTL BUS 5289 International Business Strategies: 3 semester hours

Prerequisites: BUS AD 5000 and ACCTNG 5400. This course focuses on those managerial issues which follow from the definition and implementation of corporate strategy for worldwide operations, as distinguished from purely domestic firms or those only marginally involved in international activities. It aims to develop an appreciation for the unique competitive, sociocultural and political environments in which international business takes place and the skills required to deal with these changes.

INTL BUS 5290 Internship in International Business: 3 semester hours

Prerequisites: Consent of IMBA Director. Students will apply both their language skills and knowledge of international business by working in an organization located outside the student's country of origin. This course requires students to submit regular evaluations and prepare a research report summarizing their global experience and how it relates to the international business program.

INTL BUS 5381 Global Supply Chain Management: 3 semester hours

Same as SCMA 5381. Prerequisites: SCMA 5310 (may be taken concurrently). This course covers global supply chain management strategy, planning and operations. Topics include issues in global trade, global network design and facility location strategies, international logistics, import-export operations, and global supply chain risk management.

INTL BUS 5780 Seminar in International Marketing: 3 semester hours

Same as MKTG 5780. Prerequisite: MKTG 5700. An advanced seminar on topics in international or global marketing. Possible topics include the globalization of trade, export marketing, international market opportunity analysis, and negotiation for international marketers. Students who take one version of this course (e.g., globalization of trade) can take a second version of the course (e.g., negotiation for international marketers) with prior permission.

INTL BUS 6580 International Financial Management: 3 semester hours

Same as FINANCE 6580. Prerequisite: FINANCE 6500. The objective of this course is to introduce students to financial issues for multinational firms. Besides covering basic tools and techniques, the class stresses the role of the financial manager in analysis and decision-making. Topics include the impact of international accounting and tax issues, capital budgeting in a foreign environment, transfer pricing, and global funding. Conceptual skills for lifelong learning experiences are emphasized. This course employs a lecture and case format with group discussions.

INTL BUS 6581 Seminar in International Investments: 3 semester hours

Same as FINANCE 6581. Prerequisite: FINANCE 6500. This course covers topics related to the determination of exchange rates, international parity relations and portfolio diversification. In addition, methods for using foreign exchange derivatives are explored in their use for hedging exchange rate risk. Learning to read foreign exchange quotes and understanding the functioning of global markets is an integral part of the course material. Each student is assigned a foreign country to study throughout the semester with the comprehensive project report. A prior investments course is recommended but not required.

Accounting

The mission of the UMSL Accounting Department is to foster excellence in accountancy by providing a rigorous educational experience as a framework for lifelong learning. UMSL graduates earn positions at top CPA firms and corporations and rise to high-ranking positions such as "C-Suite" corporate executives, CPA firm partners, internal audit executives, information systems executives, lawyers, investment bankers, entrepreneurs, not-for-profit agency leaders, government entity leaders, and University professors. As you can see, a degree in Accounting opens many doors.

Degree Programs

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Minor

Accounting Minor (p. 390)

Certificates

Accounting Data Security Graduate Certificate (p. 388)

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Corporate Financial Reporting Graduate Certificate (p. 491)

Post-Baccalaureate Certificate in Accounting (p. 391)

Taxation Graduate Certificate (p. 760)

Courses

ACCTNG 2400 Fundamentals of Financial Accounting: 3 semester hours

Prerequisites: MATH 1030 and completion of 27 credit hours. MATH 1030 may be taken concurrently. This is a one semester course in financial accounting theory and practice. The primary emphasis is on the corporate financial statements of income, financial position and cash flow-their content and interpretation; and the impact of financial transactions upon them.

ACCTNG 2410 Managerial Accounting: 3 semester hours

Prerequisites: MATH 1030 and ACCTNG 2400. This is an advanced course that goes beyond the scope of a second-semester course in fundamentals of accounting. The development, interpretation, and use of relevant cost behavior, control, and traceability concepts for management planning, controlling and decision making are emphasized. Topics include: an introduction to product costing, the contribution concept, direct costing, performance standards and variance analysis, responsibility accounting, segment profitability, alternative choice decisions, and capital budgeting.

ACCTNG 2430 Accounting Ethics: 3 semester hours

Same as PHIL 2249. Prerequisites: ACCTNG 2400 and ACCTNG 2410 (may be taken concurrently). This course examines moral problems as they relate to the profession of accounting and the professional Codes of Conduct that govern the accounting profession. Students will apply the requirements of the Codes of Conduct to cases where ethical dilemmas or violations of professional standards may be present.

ACCTNG 3401 Financial Accounting and Reporting I: 3 semester hours

Prerequisites: MATH 1030, ACCTNG 2410, minimum 2.0 campus GPA, 57 credit hours. This course reviews the foundations of financial accounting theory and the financial statement preparation process as well as accounting theory and practice related to current assets and current liabilities (except for investments in securities). The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

ACCTNG 3402 Financial Accounting and Reporting II: 3 semester hours

Prerequisites: MATH 1030, ACCTNG 3401, minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL, minimum campus GPA of 2.0. Accounting theory and practice related to topics such as investments in securities, operational assets, current and long-term liabilities, stockholders' equity and statement of cash flows. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

ACCTNG 3411 Cost Accounting: 3 semester hours

Prerequisites: MATH 1030, ACCTNG 3401 and a minimum campus GPA of 2.0 and minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UM-St. Louis. The study of the basic principles of cost determination for, and control of, manufacturing and distribution activities. Topics include job-order costing, process costing, cost allocations, and the development and use of standard costs within a system of absorption costing.

ACCTNG 3421 Accounting Information Systems: 3 semester hours

Prerequisites: MATH 1030, INFSYS 2800, ACCTNG 2410, and a minimum campus GPA of 2.0. Examines the fundamentals of accounting information systems, including hardware and software considerations, internal controls, and transaction processing cycles. Also focuses upon the development of efficient spreadsheets as applied to financial and managerial accounting concepts.

ACCTNG 3441 Income Taxes: 3 semester hours

Prerequisites: MATH 1030 and ACCTNG 3401 and a minimum campus GPA of 2.0 and minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UM-St. Louis. Fundamentals of Federal income taxation. Topics include taxable entities, income, deductions, tax accounting methods, tax basis, and property transactions at both the conceptual and operational levels.

ACCTNG 3451 Accounting for Governmental and Not-For-Profit Entities: 3 semester hours

Prerequisites: MATH 1030, ACCTNG 3402, a minimum 2.3 GPA in all accounting courses at the 3000-level and above taken at UMSL and a minimum 2.0 campus GPA. Principles of fund accounting and financial reporting for governmental and nonprofit entities. This course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

ACCTNG 3490 Internship in Accounting: 1-3 semester hours

Prerequisites: ACCTNG 3401, a minimum campus GPA of 2.0, a minimum GPA of 2.7 in all accounting courses at the 3000-level and above taken at UM-St. Louis, consent of supervising instructor and accounting internship coordinator. Students are employed in the field of Accounting where they apply the knowledge and skills learned in the classroom. Professional development and obtaining specialized work experience are primary goals. An accounting faculty member will monitor the student's program with the student providing a formal written report at the end of the project.

ACCTNG 3495 Special Administration Problems - Accounting (VITA) Program: 1-3 semester hours

Prerequisites: ACCTNG 2400, ACCTNG 2410 and ACCTNG 3401; minimum campus GPA of 2.0, minimum GPA of 2.3 in all accounting courses at the 2000-level and above taken at UMSL; completion of nine semester hours of accounting. Enrollment in the course is restricted to Volunteer Income Tax Assistance (VITA) program student participants. The class offers practical tax experience, networking opportunities, potential managerial experience, and personal satisfaction derived from community service. It is taken on a satisfactory/unsatisfactory basis. The course offers one to three hours of undergraduate business elective credit and may be repeated for up to 3 hours credit.

ACCTNG 3499 Independent Study in Accounting: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0, a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL and approval by the supervising professor and the department chair. Special individual study in accounting under the supervision of a full-time accounting faculty member.

ACCTNG 4401 Financial Accounting and Reporting III: 3 semester hours

Prerequisites: MATH 1030, ACCTNG 3402, minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL, minimum campus GPA of 2.0. This course examines accounting theory and practice related to topics such as leases, income taxes, pensions, earnings per share, and share-based compensation. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

ACCTNG 4402 Financial Accounting and Reporting IV: 3 semester hours

Prerequisites: MATH 1030, ACCTNG 3402, minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL, minimum campus GPA of 2.0. This course examines accounting theory and practice related to topics such as business combinations, consolidated financial statements, foreign exchange transactions, foreign currency financial statements, segment reporting, and interim (quarterly) reporting. The course includes an emphasis on unstructured problem-solving skills, communication skills, and interpersonal skills.

ACCTNG 4435 Auditing: 3 semester hours

Prerequisites: MATH 1105; ACCTNG 3402; ACCTNG 3421 or INFSYS 3810; a minimum campus GPA of 2.0 and minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UM-St. Louis. An introduction to auditing practice. Includes the social role of auditing and the services offered by auditors in internal, governmental, and public accounting practice. Emphasis is on the financial auditing process, including professional ethics, audit risk assessment, study and evaluation of internal control, gathering and evaluating audit evidence, and audit reporting decisions.

ACCTNG 4441 Advanced Federal Income Tax: Business Taxation: 3 semester hours

Prerequisites: ACCTNG 3441 with a grade of B- or above; a minimum campus GPA of 2.0 and minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UM-St. Louis. Focuses on federal income taxation of corporations, S corporations, partnerships, LLCs and their owners.

ACCTNG 4450 Prescriptive Analytics and Optimization: 3 semester hours

Same as SCMA 4350. Prerequisites: MATH 1105 and a minimum campus GPA of 2.0. This course covers the construction and application of prescriptive analytical models for optimizing business decisions in a wide range of areas such as manufacturing, service, supply chains, logistics and finance. Topics include performance metrics, linear programming, integer programming, network optimization, simulation, and implementation using Excel.

ACCTNG 5400 Financial and Managerial Accounting: 3 semester hours

This course provides an introduction to accounting, with emphasis on preparation of financial statements for external parties (financial accounting) and accumulation of cost information to aid internal planning and control (managerial accounting). Topics covered include measurement of assets and liabilities, revenues and expenses, the accounting cycle, financial statements, cost terminology, cost behavior, product costing, and relevant costs for decision making. This course provides the necessary background for ACCTNG 5401.

ACCTNG 5401 Financial Reporting and Analysis: 3 semester hours

Prerequisites: ACCTNG 5400 or the equivalent. This course builds on the foundations covered in ACCTNG 5400, emphasizing in-depth analysis of published financial statements. The course begins with discussion of the role of financial accounting information in capital markets and contracting, and continues with examination of a number of specific accounting issues. Students are encouraged to look behind the numbers to better understand the economics of the underlying transactions, and properly interpret what the reported numbers mean about a firm's future prospects.

ACCTNG 5402 Professional Accounting Research: 3 semester hours

Prerequisites: ACCTNG 4401; a minimum campus GPA of 2.0; a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL. Discussion of the research tools and methods available to resolve questions concerning accounting standards and practices. Critical analysis of topics of current interest and importance in accounting practice.

ACCTNG 5403 Graduate Topics: Business Analysis and Reporting: 3 semester hours

Prerequisites: ACCTNG 4401; a minimum campus GPA of 2.0; a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL. This course provides an in-depth examination of business analysis and reporting. Topics will include advanced financial accounting and reporting topics and data analytics applied to business analysis.

ACCTNG 5404 Professional Accountancy I: 3 semester hours

Prerequisites: MATH 1030; ACCTNG 2410; a minimum 2.0 campus GPA; graduate standing. This is the first professional-level course in financial reporting. The course includes a study of the conceptual framework underlying Generally Accepted Accounting Principles (GAAP) and issues pertaining to accounting for current assets and liabilities.

ACCTNG 5405 Professional Accountancy II: 3 semester hours

Prerequisites: MATH 1030; ACCTNG 3401; a minimum campus GPA of 2.0; a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL; graduate standing. This is the second professional-level course in financial reporting. The course includes an in-depth study of issues pertaining to accounting for operational assets, liabilities and owners equity.

ACCTNG 5406 Research and Professional Writing in Accounting: 3 semester hours

Prerequisites: ACCTNG 4401 and enrollment in Master of Accounting Program. This course employs the professional accounting literature and authoritative databases to analyze contemporary issues in accounting. Students will refine their communication skills in preparation for leadership roles in the accounting profession.

ACCTNG 5408 Fraud Examination: 3 semester hours

Prerequisites: ACCTNG 3402 or ACCTNG 5405; a minimum campus GPA of 2.0; a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL. This course is designed for graduate students who are interested in fraud and its effects. Students will be introduced to theoretical concepts of fraud and practical responses to it. Course coverage includes an overview of the fraud problem; prevention and detection of fraud; elements of fraud investigation, interview techniques, fraud types, and laws governing the prosecution of fraud cases.

ACCTNG 5411 Cost Systems Analysis: 3 semester hours

Prerequisites: MATH 1030; ACCTNG 3401; a minimum campus GPA of 2.0; a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL; graduate standing. The development, interpretation, and use of accounting reports and supplementary information for management planning, control and decision making. Emphasizes the application of relevant cost behavior, control and traceability concepts in the preparation of internal accounting reports, with a secondary emphasis upon product costing techniques as appropriate to financial accounting needs. Topics include break-even analysis, operational budgeting, direct costing, absorption costing, standard costs and variance analysis, business segment analysis, responsibility accounting distribution cost accounting, and gross profit analysis.

ACCTNG 5412 Graduate Topics in Management Accounting: Controllanship: 3 semester hours

Prerequisite: ACCTNG 3411 or ACCTNG 5411; a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL. A study of advanced managerial accounting techniques useful in facilitating the planning and control process in the modern organization. Emphasis on the implementation and administration of these techniques, their integration with management information systems, and the organizational role of the corporate accountant.

ACCTNG 5421 Information Systems in Accounting: 3 semester hours

Prerequisites: MATH 1030; INFSYS 1800; ACCTNG 2410; ACCTNG 3401; a minimum campus GPA of 2.0; graduate standing. This is a professional-level course in accounting information systems. The course includes examination of transaction cycles, structured analysis and design of accounting information systems, and internal controls.

ACCTNG 5422 Graduate Topics in Information Systems and Controls: 3 semester hours

Prerequisites: ACCTNG 3421 or ACCTNG 5421. This course examines the review and evaluation of Information Systems and Controls. Topics include Systems and Organization Controls (SOC) testing, systems testing under Sarbanes-Oxley, and other required systems evaluations and reporting.

ACCTNG 5435 Graduate Topics in Auditing: 3 semester hours

Prerequisite: ACCTNG 4435; a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL. A study of advanced auditing and attestation issues, with an emphasis on operational auditing. Topics include professional ethics, risk analysis, internal control, fraud detection, analytical procedures, determining and assessing operational objectives, and reporting and implementing audit findings.

ACCTNG 5436 Systems Auditing: 3 semester hours

Prerequisites: ACCTNG 4435. This course presents a study of techniques involved in the control and audit of computer-based systems. The emphasis is on the review of internal controls at operational and administrative levels and on computer-assisted audit techniques.

ACCTNG 5441 Tax Research: 3 semester hours

Prerequisites: ACCTNG 3441; a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL; or consent of instructor. This course examines tax research tools, methods, and techniques. Students locate and evaluate relevant authoritative tax guidance and apply research tools and methods to resolve real-world questions pertaining to the tax laws. Students will learn to communicate their findings via professionally written tax research memos. A basic understanding of federal income tax law is presumed.

ACCTNG 5443 Decision Support Systems for Business Intelligence: 3 semester hours

Prerequisites: ACCTNG 4435 and SCMA 5300. This class examines the applications of data and analytics (models) to support the needs of decision makers. Descriptive, predictive and prescriptive analytics tools are coupled with Big Data and well-designed user interfaces to provide the necessary tools. Topics such as how to construct the data warehouse, how to clean and store data in the appropriate form, how to construct and implement a useful visualization of data, and how to construct and support decision makers are included. DSS component design in response to decision making and business intelligence needs are discussed. Students may not receive credit for both ACCTNG 5443 and INFSYS 6833.

ACCTNG 5444 Business Analytics and Data Mining: 3 semester hours

Same as SCMA 6345. Prerequisites: SCMA 5300 and INFSYS 5800. This course concentrates on methods for converting data into business intelligence. It provides knowledge of the principles and techniques for business analytics and data mining. Topics include clustering, pattern recognition, visualization of relationships, predictive modeling, optimization techniques and simulation.

ACCTNG 5446 Advanced Topics in Taxation: 3 semester hours

Prerequisites: ACCTNG 3441. Address advanced topics in taxation selected by the instructor.

ACCTNG 5447 Taxation of Individuals and Businesses: 3 semester hours

Prerequisites: MATH 1030; ACCTNG 3401 or both ACCTNG 5400 and FINANCE 6590 with the topic "Practice of Personal Financial Planning" with grades of B or better in both; graduate standing. This is the first professional-level course in taxation. The course includes a general introduction to the concepts of taxation. It will enable students to understand the role of taxes in evaluating decisions typically confronted by individual taxpayers and businesses.

ACCTNG 5451 Accounting and Auditing in Governmental and Not-for-Profit Entities: 3 semester hours

Prerequisite: ACCTNG 3402 and graduate standing; a minimum campus GPA of 2.0 and minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL. A study of accounting for use in the public sector and in not-for-profit organizations. Principles of fund accounting and financial reporting for governmental and not-for-profit entities, as well as auditing in the public sector.

ACCTNG 5465 Principles of Information Security: 3 semester hours

Prerequisites: ACCTNG 4435 or equivalent. This course is a survey of the vast field of Information Security (InfoSec). It addresses both management and technical aspects of security as relevant to organizations, governments, individuals, and society. Topics covered include fundamental principles of InfoSec and cyber defense, the threat environment, management of InfoSec in organizations, technologies and tools in InfoSec, cryptology/cryptography, web application security, vulnerability management, and current issues. Hands-on labs expose students to basics of penetration testing, applications of cryptography, and vulnerability management. A graduate research paper is required. Student may receive credit for only one of INFSYS 3848, INFSYS 6828, and ACCTNG 5465.

ACCTNG 5466 Management of Accounting Networks and Security: 3 semester hours

Prerequisites: ACCTNG 4435. This course focuses on the "big-picture" implications and challenges of data networking and network security within contemporary Information Technology environments. It covers fundamentals of networking and security implications of data networks with hands-on exercises. Topics include networking layers and standardization of functionality across layers, wired and wireless Local Area Networks (LANs) along with switching and physical layer technologies, Internetworking, supporting and supervisory protocols, application layer protocols, network design and management, and fundamentals of network security. Students will also learn about network protocol analyzers such as Wireshark, virtualization, networking in virtual environments, and how some common networked applications operate by utilizing the network infrastructure. Student may receive credit for only one of INFSYS 3842, INFSYS 6836, and ACCTNG 5466.

ACCTNG 5467 Advanced Data Security Concepts: 3 semester hours

Prerequisites: ACCTNG 4435 and either ACCTNG 5465 or INFSYS 6828. This course provides an in-depth examination of advanced principles of cybersecurity. A broad range of topics are covered, including penetration testing, formal verification of systems, formal models of information flow and protection, distributed system authentication, protocol design and attack, computer viruses and malware, as well as intrusion and anomaly detection models. Multi-level security architecture, active defenses, investigation and forensics, network firewalls, virtualization, anonymity and identity, mobile security, and database security models and mechanisms are also studied. The course content is largely influenced by the latest research in the field. Student may receive credit for only one of INFSYS 3858, INFSYS 6858, and ACCTNG 5467.

ACCTNG 5468 Accounting Software Assurance: 3 semester hours

Prerequisites: ACCTNG 4435 and either INFSYS 6805 or INFSYS 6806 (permission of instructor may be obtained to waive the INFSYS 6805 or INFSYS 6806 prerequisite). This course provides an overview of the vast field of software assurance. The goal is to make students aware of the fundamentals of the secure software lifecycle enabling them to apply principles of secure software development and management. The course also provides practical applications that allow the learners to experience the secure software lifecycle process by developing concrete artifacts. Students may receive credit for only one of INFSYS 3868, INFSYS 6868, and ACCTNG 5468.

ACCTNG 5469 Management of Accounting Data Security: 3 semester hours

Prerequisites: ACCTNG 4435 and either ACCTNG 5465 or INFSYS 6828. This course provides students the necessary background knowledge and skills to develop and run a systematic information security management program that is in line with organization strategy, structure, processes, and culture. Specifically, the course introduces governance, strategy, policies, implementation, operation, evaluation, and improvement of an organization's information security to achieve business objectives and be resilient to information security threats. Students may receive credit for only one of INFSYS 3878, INFSYS 6878, and ACCTNG 5469.

ACCTNG 5490 Graduate Internship in Accounting: 1-3 semester hours

Prerequisites: ACCTNG 3401 or ACCTNG 5404; a minimum graduate GPA of 3.0; a minimum GPA of 3.0 in all accounting courses at the 3000-level and above taken at UMSL; consent of supervising instructor and accounting internship coordinator. The student works in an accounting internship that contains sufficient content and rigor to merit graduate credit. The student's program will be monitored by a member of the Graduate Faculty in Accounting. The course requires several meetings with the faculty advisor and a graduate-level written assignment. The course will be graded on a Satisfactory/Unsatisfactory basis. A student who has previously taken ACCTNG 3490 may not take ACCTNG 5490.

ACCTNG 5495 Advanced Special Administrative Problems - Accounting (VITA) Program: 1-3 semester hours

Prerequisites: ACCTNG 3401 or ACCTNG 5404. Enrollment in the course is restricted to Volunteer Income Tax Assistance (VITA) program student participants. The class offers practical tax experience, networking opportunities, potential managerial experience, and personal satisfaction derived from community service. It is taken on a satisfactory/unsatisfactory basis. The course offers one to three hours of graduate business elective credit and may be repeated for up to 3 hours credit.

ACCTNG 5498 Graduate Seminar in Accounting: 3 semester hours

Prerequisites: To be determined each time the course is offered and to include a minimum 2.0 overall GPA and a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL. Study of selected special problems in accounting. May be repeated for credit with different topics.

ACCTNG 5499 Individual Research in Accounting: 1-3 semester hours

Prerequisites: Consent of instructor, department chair and graduate director; a minimum 3.0 graduate GPA; a minimum GPA of 3.0 in all accounting courses at the 3000-level and above taken at UMSL. Special individual research topics in Accounting under the guidance of a specific professor.

ACCTNG 6441 Graduate Topics in Taxation - Tax Compliance and Planning: 3 semester hours

Prerequisites: At least a B in ACCTNG 3441 or ACCTNG 5447; enrollment in Master of Accountancy or Master of Business Administration program; a minimum GPA of 2.3 in all accounting courses at the 3000-level and above taken at UMSL. This course emphasizes advanced topics in personal and business taxation building upon those examined in the previous Income Tax and Advanced Income Tax courses.

ACCTNG 6460 Data Integration: 3 semester hours

Prerequisites: ACCTNG 4435. This course discusses the theories and techniques for blending unstructured and structured data including Big Data and social media streams with relational databases, data warehouses, spreadsheets, and other sources of data. It provides hands-on experience in integrating data from diverse sources, screening and cleaning it, and producing descriptive and visual summaries in tables, graphs, maps, and text for business intelligence. Students will be introduced to tools that integrate data from different sources and provide input to dashboards for rich visualization and advanced analytics. Students may not receive credit for both ACCTNG 6460 and INFSYS 6860.

Finance and Legal Studies

The Department of Finance and Legal Studies at UMSL offers a diverse spectrum of disciplines ranging from financial technology (fintech) to corporate finance, investments, financial institutions and markets, venture capital, real estate, insurance, personal financial planning, and business law. Rooted in robust financial techniques, the program equips students with the analytical tools essential for making informed and impactful business decisions across various industries and organizational scales. Emphasizing the global dimensions of finance, the curriculum provides a nuanced understanding of international markets and practices.

Adapting to the Evolving Landscape of Finance

In response to the rapidly evolving finance landscape, UMSL remains committed to meeting the demands of employers seeking candidates with cutting-edge knowledge in finance, including fintech and artificial intelligence. This program integrates contemporary skills that set our graduates apart, providing them with a competitive edge in the job market. The program also recognizes the value of professional certifications such as CFA, CFP, SIE, and Series 7 securities exams, and seamlessly integrate certification tracks into our curriculum, enabling students to pursue these designations alongside their academic studies.

Engage with Industry Leaders and Enrich Your Learning Experience

Students benefit from the expertise of an engaged Finance Advisory Board, comprised of industry leaders from major corporations, banks, wealth management firms, insurance companies, and securities firms. These professionals contribute their insights and experience to ensure the curriculum remains aligned with industry trends and demands, while also providing invaluable opportunities for student engagement, including guest lectures, internships, and mentoring programs.

Enrich Academic Journey with Practical Experiences and Enrichment Opportunities

Students participate actively in enriching programs and initiatives, including:

- **The Student Investment Trust (SIT):** Students in this program manage a real-money portfolio exceeding \$750,000, applying classroom-taught tools and techniques to real-world trading strategies. They engage in competitions and industry events under the guidance of faculty mentors.
- **FINRA (Securities Industry Essentials, Series 7) - Exam Prep & Review:** Students prepare for a career in the securities brokerage business through comprehensive exam preparation courses covering essential industry knowledge and regulations.
- **Finance Club:** Students may join an on-campus organization dedicated to fostering career development and networking opportunities through mentoring events, panel discussions, workshops, and more.
- **Finance Career Conference:** Joining this club enables students to gain valuable insights into building a successful career in finance through keynote speakers, panel discussions, professional workshops, and networking opportunities with local companies.

Unlock Scholarship and Internship Opportunities

Students explore a range of scholarship opportunities offered by our department, in addition to internship prospects facilitated by the UMSL

College of Business Administration internship offices. The graduates have a diverse array of career options upon graduation, with over 95% securing employment or pursuing graduate degrees within six months.

Learn from Distinguished Faculty

The department boasts a distinguished faculty with PhDs from leading U.S. universities and extensive industrial experience. The faculty members hold highly respected certifications and have received numerous awards for excellence in research and teaching. With their expertise and dedication, they remain at the forefront of new developments in the field, ensuring our students receive a top-notch education.

Degrees

Business Administration BS, Finance Emphasis (p. 431)

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Financial Technology MS (p. 574)

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Minor

Finance Minor (p. 574)

Certificate

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Affiliated Interdisciplinary Programs

Actuarial Science BS (p. 392)

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Courses

FINANCE 1590 Personal Finance for Nonbusiness Majors: 3 semester hours

For future professionals who want to learn more about personal finance and how to better manage their resources. The topics include purchasing/leasing cars, home acquisitions, investing in stocks and bonds, mutual funds, retirement planning and health and life insurance. Special emphasis will be on the nontechnical aspects of these issues. Cannot be used for credit in BSBA program.

FINANCE 3500 Financial Management: 3 semester hours

Prerequisites: ECON 1002, MATH 1105, ACCTNG 2400, INFSYS 2800, and a minimum overall GPA of 2.0. The study of a firm's need for funds; the institutions, instruments and markets concerned with raising funds; and the techniques of analysis used to determine how effectively these funds, once raised, are invested within the firm.

FINANCE 3501 Financial Policies: 3 semester hours

Prerequisite: FINANCE 3500 and a 2.0 overall GPA. The intensification and application of the concepts developed in FINANCE 3500. Special emphasis is given to the development of top management policies and their application toward complex problems of finance. Techniques for identifying and dealing with these problems before they become acute will be investigated. Cases will be integrated with appropriate outside reading.

FINANCE 3503 Computer Applications in Finance: 3 semester hours

Prerequisites: INFSYS 1800, FINANCE 3500, and a 2.0 overall GPA. Financial problem solving and applications on the micro-computer. A project-oriented course with an emphasis on micro-based finance projects: Present value/IRR analysis, duration, immunization, portfolio optimization, leasing, capital budgeting, financial forecasting, options and futures.

FINANCE 3520 Investments: 3 semester hours

Prerequisites: FINANCE 3500 and a 2.0 overall GPA. Financial analysis of debt and equity instruments available on organized exchanges and in less tangible "over the counter" markets. Techniques of such analysis being presented in context with economic and management circumstances within the company, industry and economy.

FINANCE 3521 Financial Engineering: Applying Derivatives: 3 semester hours

Prerequisites: FINANCE 3500. Students engage in a comprehensive investigation of advanced risk management techniques. Futures, forwards, options and synthetic securities are explored to determine their effectiveness in generating the desired risk exposure. A comprehensive study of speculative market conditions and characteristics are assessed in conjunction with a variety of financial innovations. Valuation techniques and hedging theories are combined with mathematical models to determine their effectiveness in practical situations. Special topics are introduced as market conditions dictate. It is recommended that students take Investments (FINANCE 3520) prior to enrolling in FINANCE 3521.

FINANCE 3523 Fixed Income Analysis: 3 semester hours

Prerequisites: FINANCE 3500. This course explores key issues in fixed income securities. The topics include pricing of bonds, measuring bond yields, bond price volatility, factors affecting yields and the term structure of interest rates, treasury securities, corporate debt instruments, residential mortgage loans, collateralized mortgage/debt obligation, and analysis of bonds with embedded options. The course prepares students for the CFA exams of Level 1 in the area of fixed income analysis.

FINANCE 3524 Advanced Investment Management: 3 semester hours

Prerequisites: FINANCE 3520 or consent of the instructor. This course reviews various advanced topics in investment management. The topics include (1) portfolio management, (2) fixed income analysis, (3) equity analysis, (4) economics in a global context, (5) derivatives, (6) alternative investments, and (7) Ethical and Professional Standards. The course provides students with theoretical and practical knowledge in portfolio management techniques and advanced investment strategies. The course materials are related to the CFA (Chartered Financial Analyst) Level I Exam curriculum.

FINANCE 3525 Practicum in Investments: 1 semester hour

Prerequisites: FINANCE 3500 and a 2.0 campus GPA. Students will apply their knowledge of stocks and bonds by managing a real dollar portfolio of securities. This course requires that students perform technical and fundamental analysis, prepare research reports, present proposals and participate in group investment decisions. The University's Student Investment Trust provides the money for students to invest. Course may be repeated for credit up to a maximum of 3 credit hours.

FINANCE 3540 Introduction to Financial Institutions and Financial Markets: 3 semester hours

Prerequisites: FINANCE 3500 and a 2.0 overall GPA. This course examines how financial markets function, their role in raising capital for the economy, and institutions that facilitate the flow of funds. This course provides students with an in-depth analysis of the foundations of finance, including interest rates, risk, financial instruments, and institutions that trade them. The course will also include topics on financial technology (fintech) such as Apple Pay, Venmo, blockchain, and cryptocurrencies.

FINANCE 3541 Commercial Bank Management: 3 semester hours

Prerequisites: ECON 1002, FINANCE 3500 and a 2.0 overall GPA. Corporate finance and microeconomics are applied to matters of importance to commercial bankers. Among the subjects treated are bank-asset portfolio construction, lending policies, liabilities management, bank capital structure, short-run cash management, financial market rates and flows, and quantitative models for bank management. Commercial bank management is analyzed from an internal viewpoint in terms of what bank managers should look for in asset management and why; what market conditions they should be aware of; and what techniques they can use to meet changing economic and financial conditions.

FINANCE 3542 Principles of Real Estate: 3 semester hours

Prerequisites: FINANCE 3500 and a 2.0 campus GPA. As an introduction to the real estate industry, the course broadly explores all phases of acquisition, development and disposal of real property. Topics include legal requirements of contracts, property rights, valuation and appraisal techniques, marketing, brokerage operations and practices, mortgage financing, leasing and property management.

FINANCE 3545 Seminar in Venture Capital and Private Equity: 3 semester hours

Same as ENT 3145. Prerequisites: FINANCE 3500. This course examines venture capital and private equity firms as an important category of financial institutions. The main focus of the course is on financial, economic, and legal issues that develop between venture capital firms and their limited partners and between private equity firms and the firms in which they invest. More specifically, the course will explore the following processes: (1) how private equity and venture capital firms raise capital; (2) how they deal with firms in which they invest; and (3) how they exit investments. The course also discusses technology development process including protection through patents before they are licensed or used to establish as startup companies.

FINANCE 3560 Practice of Personal Financial Planning: 3 semester hours

Prerequisites: A minimum campus GPA of 2.0; FINANCE 3500 or consent of instructor and the department chair. Professional financial planning requires broad knowledge of investments, insurance, income taxation, retirement planning, and estate planning, as well as certification requirements and legal/ethical issues. This course introduces students to the field of financial planning, and provides an integrated overview of the topics listed above. Students interested in the Financial Planning track are encouraged to complete this course prior to taking other courses in the track.

FINANCE 3561 Principles of Insurance: 3 semester hours

Prerequisites: FINANCE 3500 and a 2.0 campus GPA. This is a survey course intended to introduce students to the basic concepts of insurance. Topics include the nature of risks, types of insurance carriers and markets, insurance contracts and policies, property and casualty coverages, life and health insurance, and government regulations. The functions of underwriting, setting premiums, risk analysis, loss prevention, and financial administration of carriers are emphasized.

FINANCE 3562 Life Insurance and Employee Benefits: 3 semester hours

Prerequisites: FINANCE 3500 or equivalent and a minimum campus GPA of 2.0. This course explores the life insurance business from the perspective of both the consumer and provider. Coverage will include an analysis of the various types of life insurance products, aspects of life insurance evaluation, reinsurance, underwriting, and uses of life insurance in financial planning. Also included is an examination of the tax, legal, and ethical requirements.

FINANCE 3563 Retirement Planning and Employee Benefits: 3 semester hours

Prerequisites: A minimum campus GPA of 2.0; FINANCE 3500 or consent of instructor and the department chair. The course is designed to give students an understanding of the retirement planning process. Students will gain an appreciation of the usefulness (and shortcomings) of employee benefits and develop an ability to counsel others on important retirement and employee benefit decisions. Corporate pension and profit sharing plans, self-employed Keough plans, IRA's, annuities, health insurance, and social security will be discussed.

FINANCE 3564 Estate Planning and Trusts: 3 semester hours

Prerequisites: A minimum campus GPA of 2.0; FINANCE 3500 or consent of instructor and the department chair. This course will focus on the responsibility of a financial planner in the formulation and implementation of an estate plan. Topics include wills, lifetime transfers, trusts, gifts, estate reduction techniques, tax implications in estate planning, business and inter-family transfers, dealing with incompetency, postmortem techniques, and the role of fiduciaries. Lectures, cases, and guest speakers will be used to stimulate analysis and discussion.

FINANCE 3565 Seminar in Financial Planning: 3 semester hours

Prerequisites: ACCTNG 3441, FINANCE 3520, FINANCE 3560, FINANCE 3561, FINANCE 3563, and FINANCE 3564; a minimum campus GPA of 2.0; or consent of instructor. This course serves as the capstone in the registered Financial Planning curriculum. Students will prepare and present comprehensive, professional-level personal financial plans. This course is required by the Certified Financial Planner Board of Standards for those who wish to sit for the Certified Financial Planner examination.

FINANCE 3570 Essentials of Fintech: 3 semester hours

Prerequisites: FINANCE 3500 or consent of the instructor. This is an introductory course to provide students an overview of Fintech (Financial Technology). The course may include the following topics: Blockchain, Cryptocurrencies, FinTech Credit, Artificial Intelligence and Big Data, Robo Advisers, FinTech Regulation and RegTech, and Algorithmic Trading. This course provides students with the foundations for the interaction of finance, technology, and regulation in the financial industry.

FINANCE 3572 Financial Data Programming: 3 semester hours

Prerequisites: FINANCE 3500 and a minimum campus GPA of 2.0. Students will learn the fundamentals of financial data programming with Python and R using structured data (tabular data such as spreadsheets) and unstructured data (text data such as social media) for application in finance fields.

FINANCE 3574 Artificial Intelligence Applications in Finance: 3 semester hours

Prerequisites: FINANCE 3572 or consent of instructor. This course introduces students to topics in artificial intelligence (AI) and its applications in finance fields. The course discusses the history of AI and machine learning (ML) and its general methodology of development of data models. The course presents AI and ML applications and real life examples in financial services industries, such as portfolio management, algorithmic trading, and credit scoring.

FINANCE 3576 Blockchain in Business: 3 semester hours

Prerequisites: FINANCE 3500 or consent of the instructor. The course is designed to provide students with an understanding of key concepts, developments and major applications of the blockchain, a peer-to-peer exchange mechanism without an intermediary. It covers the technical foundations of the blockchain, why it is needed, and how it works. It also explores a series of applications including but not limited to those in business entities. Credit cannot be granted for both FINANCE 3576 and FINANCE 6576.

FINANCE 3580 International Corporate Finance: 3 semester hours

Same as INTL BUS 3580. Prerequisites: FINANCE 3500 and a 2.0 campus GPA. This course explores corporate finance in the context of a global environment. Financial managers for an international firm must deal with all the normal problems faced by domestic corporations plus additional foreign exchange and political risks. Class discussions will focus on applying financial techniques to decision making in foreign operations. Students are required to work in a group to undertake a project related to international finance.

FINANCE 3582 International Investments: 3 semester hours

Same as INTL BUS 3582. Prerequisites: FINANCE 3500, and a 2.0 overall GPA. This course explores the concepts of investing and hedging risk management, portfolio diversification, currency risk, asset pricing, and alternative portfolio strategies. Techniques for using derivatives are discussed in the context of hedging exchange rate risk. Reading foreign exchange quotes and understanding the functioning of global markets is central to the course. A prior course in investments is recommended but not required.

FINANCE 3583 The Law of International Business Transactions: 3 semester hours

Same as INTL BUS 3280. Prerequisites: BUS AD 2900 or consent of instructor. This course studies of the role and function of International Law and national laws in the regulation of international business transactions. The impact of various legal regimes on import/export transactions, foreign investments, and the operations of multinational enterprises will be included. The role of national governments, supra-national governmental organizations, and non-governmental organizations in forming and administering the international legal environment will be studied.

FINANCE 3585 Business in China: 3 semester hours

Same as INTL BUS 3281. Prerequisites: A minimum campus GPA of 2.0 and junior standing. This course introduces students to the practices of doing business in China. Students will be introduced to the Chinese economic and business environment. Issues related to trade and foreign direct investment in China will be discussed. The course adopts an innovative approach, utilizing lectures, case analysis, projects, and student presentations.

FINANCE 3590 Internship in Finance: 1-3 semester hours

Prerequisite: A minimum campus GPA of 2.0; one must have completed and/or be currently enrolled in at least 6 credit hours of finance electives and have consent of supervising instructor and the department chair. A Business College GPA of at least 2.5 is also required. Students are employed in the field of finance where they apply the knowledge and skills learned in the classroom. Professional development and obtaining specialized work experience in a Track area are the primary goals. The student's program will be monitored by a finance faculty member with the student providing a formal written report at the end of the project. FINANCE 3590 may not be counted toward the minimum 15 credit hours of finance electives for a finance emphasis.

FINANCE 3595 Special Administration Problems - Finance: 1-10 semester hours

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 overall GPA. Study of selected special problems in business and administration. May be repeated for credit with different topics.

FINANCE 3598 Seminar in Finance: 1-3 semester hours

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 overall GPA. This course is a selected special topic in the field of finance. May be repeated for credit with different topics.

FINANCE 3599 Independent Study in Finance: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0 and approval by the supervising professor and the consent of department chair. Special individual study in finance under the supervision of a full-time finance faculty member.

FINANCE 5599 Individual Research in Finance: 1-3 semester hours

Prerequisites: Consent of instructor and graduate director. Special individual research topics in Finance under the guidance of a specific professor.

FINANCE 6500 Financial Management: 3 semester hours

Prerequisites: ACCTNG 5400 or ACCTNG 2400, SCMA 5300 or SCMA 3300, and BUS AD 5000 or ECON 1001 and ECON 1002. This course provides an in-depth analysis of corporate finance including asset pricing, risk and return, short- and long-term investment decisions, capital structure choices, dividend policy, derivatives, mergers and acquisitions, and a host of other current topics. The material is taught through lectures and problem solving.

FINANCE 6501 Advanced Financial Management: 3 semester hours

Prerequisite: FINANCE 6500 and SCMA 5300. Exposure to recent financial management theory through selected readings. Financial management problems are considered by the use of cases and simulation models. An original research project under the supervision of instructor is required.

FINANCE 6503 Computer Applications in Finance: 3 semester hours

Prerequisites: FINANCE 6500 and 3.0 overall GPA. This course focuses on modeling and data analytics in finance. Hands-on projects include applications in loan amortization, buy or lease decisions, financial statement analysis and forecasting, capital budgeting, bond and stock valuation, risk analysis, capital structure, and portfolio analysis. Students will learn basic and sophisticated Excel tools and how to build executive dashboards, interfaces, and other monitoring tools used in day-to-day business. They will also gain exposure to statistical inference, time series modeling, event study analysis, and machine learning techniques for forecasting and working with financial data.

FINANCE 6520 Security Analysis: 3 semester hours

Prerequisite: FINANCE 6500 and SCMA 5300. An in-depth study of techniques used in evaluating various financial assets as investment opportunities. Financial assets studied include common stock, preferred stock, and fixed income securities. Other related topics such as sources of investment information and current market trends are discussed.

FINANCE 6521 Financial Forensics: The Science of Derivatives: 3 semester hours

Prerequisites: FINANCE 6500. Students engage in a comprehensive investigation of advanced risk management techniques. Futures, forwards, options and synthetic securities are explored to determine their effectiveness in generating the desired risk exposure. A comprehensive study of speculative market conditions and characteristics are assessed in conjunction with a variety of financial innovations. Valuation techniques and hedging theories are combined with mathematical models to determine their effectiveness in practical situations. Special topics are introduced as market conditions dictate. It is recommended that students take Investments (FINANCE 6520) prior to enrolling in FINANCE 6521.

FINANCE 6523 Fixed Income Analysis: 3 semester hours

Prerequisites: FINANCE 6500. This course explores key issues in fixed income securities. The topics include pricing of bonds, measuring bond yields, bond price volatility, factors affecting yields and the term structure of interest rates, treasury securities, corporate debt instruments, residential mortgage loans, collateralized mortgage/debt obligation, and analysis of bonds with embedded options. The course prepares students for the CFA exams of Levels I and (part of) II in the area of fixed income analysis.

FINANCE 6524 Portfolio Analysis and Management: 3 semester hours

Prerequisites: FINANCE 6500. This course reviews various advanced topics in investment management. The topics include portfolio management, fixed income analysis, equity analysis, economics in a global context, derivatives, alternative investments, ethical and professional standards, and applications of technology in financial services such as machine learning. The course provides students with theoretical and practical knowledge in portfolio management techniques and advanced investment strategies. The course materials are related to the CFA (Chartered Financial Analyst) Level I Exam curriculum.

FINANCE 6540 Financial Institutions and Financial Markets: 3 semester hours

Prerequisites: FINANCE 6500 and graduate standing. This course provides an in-depth analysis of financial markets, financial institutions, and financial instruments. It examines how financial markets function, their role in raising capital for the economy, and institutions that facilitate the flow of funds. The course introduces the notion of Fintech which simplifies and streamlines traditional transactions and offers new products and services. The objective of the course is to provide students with an in-depth analysis of the foundations of finance, including interest rates, risk, financial instruments, and institutions that trade them.

FINANCE 6541 Commercial Bank Management: 3 semester hours

Prerequisite: FINANCE 6500. This course explores the various bank management techniques required to manage a modern commercial bank in a rapidly changing environment. Topics include asset and liability management, capital adequacy, bank holding companies, profitability, and bank market structure and regulation.

FINANCE 6542 Real Estate: 3 semester hours

Prerequisite: FINANCE 6500. This course provides a broad introduction to real estate with a focus on legal issues, market analysis, valuation, financing, leasing and investment decisions. Classes are conducted in a standard lecture format with discussion on current topics. No prior knowledge of the industry is required.

FINANCE 6545 Venture Capital and Private Equity: 3 semester hours

Prerequisites: FINANCE 6500. This course examines venture capital and private equity firms as an important category of financial institutions. The main focus of the course is on financial, economic, and legal issues that develop between venture capital firms and their limited partners and between private equity firms and the firms in which they invest. More specifically, the course will explore the following processes: (1) how private equity and venture capital firms raise capital; (2) how they deal with firms in which they invest; and (3) how they exit investments. Before discussing the main issues of the course, and as a way of introducing the subject, we begin with a brief discussion of the significance of venture capital funding in the technology transfer process and a simple example of venture capital funding from the perspective of an entrepreneur. As most new technologies are proprietaries, the course also discusses technology development process including protection through patents before they are licensed or used to establish as startup companies.

FINANCE 6570 Introduction to Fintech: 3 semester hours

Prerequisites: FINANCE 6500. This course introduces students to the major topics of fintech (financial technology), including blockchain, cryptocurrencies, fintech credit, big data, machine learning, neural network, robo advisers, and algorithmic trading, as they relate to investments and financial institutions.

FINANCE 6572 Financial Data Analytics: 3 semester hours

Prerequisites: Graduate standing. This course covers fundamentals of Python and R programming with hands-on projects and specific applications in finance. Students will learn to acquire, clean, analyze and visualize both structured (tabular data such as spreadsheets) and unstructured data (text data such as social media). Both data programming languages are used in data analytics, machine learning, and artificial intelligence in modern financial services industry including banks, brokerage houses, hedge funds, and mutual funds.

FINANCE 6574 Artificial Intelligence and Machine Learning in Finance: 3 semester hours

Prerequisites: FINANCE 6572 or consent of the instructor. This course introduces students to artificial intelligence (AI) and machine learning (ML) and the applications in finance. The course covers the historical development of fundamental ideas in AI and ML, and its general methodology of the development of data models. The course provides a sampling of successful applications of AI and ML in different areas of finance, including portfolio management, algorithmic trading, fraud analytics, and credit scoring. Each of these topics are presented with real world examples and programming applications in languages like Python and R.

FINANCE 6576 Blockchain: Applications in Finance: 3 semester hours

Prerequisite: FINANCE 6500. This course introduces blockchain technology, a system of exchange among various parties without the need for an intermediary, and covers the evolution of blockchain with discussion of its applications in the financial services industry. Credit cannot be granted for both FINANCE 3576 and FINANCE 6576.

FINANCE 6580 International Financial Management: 3 semester hours

Same as INTL BUS 6580. Prerequisite: FINANCE 6500. The objective of this course is to introduce students to financial issues for multinational firms. Besides covering basic tools and techniques, the class stresses the role of the financial manager in analysis and decision-making. Topics include the impact of international accounting and tax issues, capital budgeting in a foreign environment, transfer pricing, and global funding. Conceptual skills for lifelong learning experiences are emphasized. This course employs a lecture and case format with group discussions.

FINANCE 6581 Seminar in International Investments: 3 semester hours

Same as INTL BUS 6581. Prerequisite: FINANCE 6500. This course covers topics related to the determination of exchange rates, international parity relations and portfolio diversification. In addition, methods for using foreign exchange derivatives are explored in their use for hedging exchange rate risk. Learning to read foreign exchange quotes and understanding the functioning of global markets is an integral part of the course material. Each student is assigned a foreign country to study throughout the semester with the comprehensive project report. A prior investments course is recommended but not required.

FINANCE 6582 International Bank Management: 3 semester hours

Prerequisites: FINANCE 6500. The objective of this course is to introduce students to many challenging issues in international bank management. This is a specialized finance course dealing explicitly with global bank decision-makings of a multinational bank that uses a variety of financial tools and skills. The course will discuss the rapidly blurring distinctions between commercial and investment bankers. Conceptual skills for life-learning (evolving) experiences relevant to the global banking sector are emphasized.

FINANCE 6590 Seminar in Finance: 3 semester hours

Prerequisites: FINANCE 6500. This course incorporates a wide range of advanced topics in finance including, but not limited to, an evaluation of various financial assets as investment opportunities, trends in capital markets, derivatives and management of financial and non-financial firms.

FINANCE 6591 Finance Internship: 1-3 semester hours

Prerequisites: Students must have completed and/or be enrolled in at least 6 credit hours of finance electives and have consent of supervising faculty member and the department chair. Students work in the field of finance where they apply the knowledge and skills learned in the classroom. Professional development and obtaining specialized work experience are the primary goals. The student's program will be monitored by a finance faculty member with the student providing a formal written report at the end of the project.

Global Leadership and Management

The GLAM Area is the College of Business Administration's focal point for research, academic course work, non-credit instruction, consulting, and community service in the areas of general management, strategic management, human resource management, international management, and small business management.

The Global Leadership and Management Department is committed to:

- Providing students with a first-rate business education at the undergraduate and graduate levels.
- Conducting and disseminating basic and applied research that advances our understanding of issues relevant to the effective management of organizations.
- Creating educational value by delivering an innovative, cutting-edge management curriculum, using both traditional and nontraditional delivery methods.
- Serving the University, the St. Louis business and not-for-profit communities, the citizens of Missouri, and society at large.

GLAM faculty are widely recognized for their excellence in teaching, research, and service by their various constituencies (e.g., students, local business leaders, community organizations, faculty at other universities). During the course of their careers, GLAM faculty have won campus teaching awards, served as editors of professional journals, authored leading textbooks, chaired professional societies, consulted with major corporations, been awarded federal grants, served on community boards and provided thousands of hours of non-compensated community service. We believe that what we learn from our research and our consulting work shapes what we teach in our classes, producing an educational experience that is grounded in what goes on today in business with an eye to business in the future.

GLAM faculty are quite active in interacting with students. For example, numerous students have participated in management-oriented internships under faculty direction. Other students have worked closely with faculty on special projects of mutual interest. Still other students have benefited from working with faculty on projects that were carried out in conjunction with trips to other countries.

Degrees

Business Administration BS, International Business Emphasis (p. 434)

Business Administration BS, Management Emphasis (p. 436)

Business Administration MBA, International Program (p. 455)

Business Administration MBA, International Business Emphasis (p. 449)

Business Administration MBA, Management Emphasis (p. 450)

Minors

International Business Minor (p. 599)

Management Minor (p. 608)

Certificate

Talent Management Graduate Certificate (p. 760)

Courses

Courses offered by the department can be found at the links below:

Management (MGMT)

Faculty from the department also teach the capstone course for the MBA program:

BUS AD 6990 Strategy Formulation and Implementation: 3 semester hours

Prerequisites: FINANCE 6500, MGMT 5600, MKTG 5700, SCMA 5320 and special consent. Graduate program capstone course examining concepts and methods that integrate functional areas of business. The perspective is that of general management charged with directing the total enterprise. Interactions between the environment, organization, strategy, policies and the implementation of plans are explored. Special emphasis is given to globalization of business and ethical perspectives. This course should be taken during the semester prior to graduation. In no case may it be taken sooner than two semesters prior to graduation.

Management

Courses

MGMT 3600 Management and Organizational Behavior: 3 semester hours

Same as SOC 3600. Prerequisites: Junior standing and a 2.0 overall GPA. This course involves the study of the behavior of individuals and groups in an organizational setting. Specific topics examined include: motivation, leadership, organizational design, and conflict resolution, as well as basic coverage of management principles. In covering these topics, both "classic" and current perspectives are provided.

MGMT 3611 Advanced Management and Organizational Behavior: 3 semester hours

Prerequisites: MGMT 3600 and a 2.0 overall GPA. Building upon MGMT 3600, course provides a more detailed examination of motivation, leadership, group process, decision making, job design, and organizational development. In addition to providing more detail in terms of content, this course provides the student with considerable practical experience through the use of class exercises, case studies, and small group discussions.

MGMT 3612 Professional Skills Development: 3 semester hours

Same as SOC 3612. Prerequisites: A minimum 2.0 campus GPA and junior standing. This course focuses on career management. Topics may include job search, interviews, resumes and cover letters, presentation skills, business etiquette, entry strategies, and career alternatives.

MGMT 3621 Human Resource Management: 3 semester hours

Prerequisites: MGMT 3600 and a 2.0 overall GPA. In-depth examination of selected human resource management issues from a contemporary manager's viewpoint. Topics examined include: employee selection, performance appraisal, training and development, compensation, legal issues, and labor relations.

MGMT 3622 Industrial and Labor Relations: 3 semester hours

Prerequisite: MGMT 3600 and a 2.0 overall GPA. Emphasis is on the dynamic relationship between management, employees, unions, and government as determinants in the efficient and effective use of human resources. Current issues and case material are used to supplement text and lecture.

MGMT 3623 Industrial and Organizational Psychology: 3 semester hours

Same as PSYCH 3318. Prerequisites: PSYCH 2201 or MATH 1105 (or equivalent). This course introduces students to psychological research and theories pertaining to human behavior in the work setting. Topics covered may include: selection, performance appraisal, training, leadership, motivation, job satisfaction, and organizational design.

MGMT 3624 Employee Training and Development: 3 semester hours

Prerequisites: MGMT 3600 and a minimum overall GPA of 2.0, or permission of instructor. An intensive study of training in organizations, including needs analysis, learning theory, management development, and development of training objectives and programs. Projects and exercises are used to supplement the readings.

MGMT 3625 Leadership in Organizations: 3 semester hours

Prerequisites: MGMT 3600 and a minimum 2.0 campus GPA, or permission of instructor. This course introduces classic and contemporary perspectives on leadership. Topics will include key leadership theories, methods for developing leadership skills, and contextual issues surrounding the effective practice of leadership. Material will be discussed through an evidence-based approach, drawing from research developments to inform best practices in business organizations.

MGMT 3626 Diversity Management: 3 semester hours

This course provides students with the tools to broaden and deepen their understanding of the differences around them in the workplace. It is designed to help employees and managers work with and learn from individuals with various differences to increase intellectual engagement and understanding of the implications and benefits of diversity, equity, and inclusion. Through case analysis, in-depth discussions and projects, students will gain an appreciation and respect for these principles.

MGMT 3627 Introduction to Sustainability Management: 3 semester hours

Prerequisites: Junior standing or consent of instructor. This course equips students with an understanding of critical issues and opportunities that make global sustainability a business imperative. Students develop critical thinking skills required to analyze complex business situations and implement practical responses that can foster sustainable practices. Students also evaluate how Geographic Information Systems (GIS) enable the discovery of sustainability solutions. Students may not receive credit for both MGMT 3627 and MGMT 5634.

MGMT 3680 International Management: 3 semester hours

Same as INTL BUS 3680. Prerequisites: A minimum 2.0 campus GPA. In addition, ECON 1002 and MGMT 3600; or consent of the instructor. A study of international business and management practices. Topics covered include an introduction to international management and the multinational enterprise, the cultural environment of international management, planning in an international setting, organizing for international operations, directing international operations, international staffing, preparing employees for international assignments, and the control process in an international context.

MGMT 3690 Internship in Management: 1-3 semester hours

Prerequisites: A minimum campus GPA of 2.0; one must have completed and/or be currently enrolled in at least 6 credit hours of Management electives and have consent of supervising instructor and the department chair. A Business College GPA of 2.5 is also required. Students are employed in the field of Management where they apply the knowledge and skills learned in the classroom. Professional development and obtaining specialized work experience are primary goals. A Management faculty member will monitor the student's program with the student providing a formal written report at the end of the project. MGMT 3690 may not be counted toward the minimum 12 credit hours of management electives required for a MOB emphasis.

MGMT 3695 Special Admin Problems - Management & Organization Behavior: 1-10 semester hours

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 overall GPA. Study of selected special problems in business and administration. May be repeated for credit with different topics.

MGMT 3698 Seminar in Management: 1-3 semester hours

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 overall GPA. This course is a selected special topic in the field of management. May be repeated for credit with different topics.

MGMT 3699 Independent Study in Management: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0 and approval by the supervising professor and the Area Coordinator. Special individual study in management under the supervision of a full-time management faculty member.

MGMT 4219 Strategic Management: 3 semester hours

Prerequisites: Senior standing and FINANCE 3500, MKTG 3700, MGMT 3600; a minimum overall GPA of 2.0. This is a capstone course drawing on the subject matter covered in prerequisite courses. Emphasis is on the formulation and implementation of corporate, business and functional strategies designed to achieve organizational objectives. Topics include the role of top management, globalization of business and ethical perspectives. Case studies and research reports may be used extensively. (It is preferred that this course be taken during the student's final semester.) Concurrent enrollment in MGMT 4220 is required.

MGMT 4220 Business Assessment Testing: 0 semester hours

Strategic Management. A one-time lab during which a major field exam in business is administered. Course graded on a satisfactory/ unsatisfactory basis. Satisfactory grade required for graduation. Concurrent enrollment in MGMT 4219 is required.

MGMT 4614 Entrepreneurship/Small Business Management: 3 semester hours

Same as ENT 4114. Prerequisites: ENT 3100, BUS AD 2900, FINANCE 3500, MKTG 3700, MGMT 3600, and a 2.0 overall GPA; or consent of instructor. This integrative general management course is designed to communicate the academic principles of business management applicable to solving problems of small and medium-size businesses and assist in their development. This course will provide a background in the forms of business, the development of business plans and systems integration, venture capital, accounting, procurement, promotion, financing, distribution and negotiations for initial organization, and operation and expansion of the firm.

MGMT 5600 Managing and Leading in Organizations: 3 semester hours

Same as P P ADM 6600. Prerequisites: Graduate standing or consent of instructor. The theoretical and research contribution of the behavioral sciences to management and administration are examined and applied to selected organizational situations. Areas to be considered from the standpoint of both individual and organizational performance are communication, motivation, conflict, decision-making, goal setting, leadership, organizational design, climate, development and control. Utilizing a systems perspective, the course attempts to develop in each student an ability to analyze and solve organizational problems.

MGMT 5611 Advanced Organizational Behavior and Administrative Processes: 3 semester hours

Prerequisite: MGMT 5600. An in-depth examination of selected organizational and individual theories affecting behavior and operating performance. Organizational structure and design, formal and informal organization, decision making, communications and motivation are analyzed for their organizational impact. The course seeks to develop further the ability to analyze and evaluate organizational processes and individual behavior.

MGMT 5621 Managing Human Resources: 3 semester hours

Prerequisite: MGMT 5600. In-depth examination of selected of human resource management issues from a contemporary manager's viewpoint. Topics examined include: personnel planning; employee selection; performance appraisal, training, and development; compensation; legal issues; discipline; and labor relations. The course examines these topics as they relate primarily to operational activities in organizations.

MGMT 5622 Union-Management Relations and Collective Bargaining: 3 semester hours

Prerequisite: MGMT 5600 and BUS AD 5900. Primary concern is with the setting and the dynamics of contract negotiation and administration. Emphasis is on the development of insight and understanding of the forces affecting the decisions of the parties to a labor contract within the context of the social, political and economic environment of the organization. A dynamic approach is taken to examine difficulties that arise in attempting to administer a collectively established relationship between employer and employee.

MGMT 5624 Training and Development: 3 semester hours

Prerequisites: Graduate standing. This course provides an overview of the foundations of industrial training and the applications and considerations of building an impactful training and development program. Review of learning and memory concepts and the implications for training and development in applied settings are explored. The course includes study of methods and techniques used for analysis, design, development, and evaluation of training include and considers the impact of recent advances in computing and instructional technologies.

MGMT 5625 Talent Acquisition and Retention: 3 semester hours

Prerequisites: Graduate standing. This course provides an advanced treatment of talent acquisition and retention. Among the topics examined are job analysis, employee recruitment, on-boarding pre-employment screening devices, interviewing, test validation, promotion decisions, employee retention, and downsizing.

MGMT 5627 Employment Law: 3 semester hours

Prerequisites: Graduate standing. This course blends core case law with applied business principles to introduce common issues that arise in the employment context. It also covers the full scope of the employment relationship, including what constitutes an "employee," employee testing and selection, harassment and discrimination, wages and benefits, and terminating the employment relationship. Students will learn to recognize potential legal threats and how to proactively avoid them.

MGMT 5628 Authentic Leadership: 3 semester hours

Prerequisites: Graduate standing. This course introduces contemporary theories of authentic leadership and covers key concepts pertaining to effective leadership in organizations. The three goals of this course are learning about authentic leadership behaviors, managerial skills, and organizational awareness.

MGMT 5629 Performance Management: 3 semester hours

This course provides students with an opportunity to understand both the research and applied practice around performance management in organizations today. Applied practice content will outline the "real world" considerations of designing and implementing a performance management practice within an organization. Course content will include: purpose of performance management, measuring system effectiveness, sources of performance data, feedback in the performance management process, rating system error, and ethical issues in performance management.

MGMT 5630 HR Analytics: 3 semester hours

This course focuses on the application of data insights to strategic human resource decision-making. Students will review statistical concepts and data issues and how human resource professionals use data to inform decisions about the employee experience and lifecycle, such as recruiting and hiring, compensation and benefits, performance management, employee engagement, and turnover. The course will also explore how to use data to tell a story using a variety of visualization techniques.

MGMT 5634 Sustainability Management: 3 semester hours

Prerequisites: Graduate standing or consent of instructor. This course equips executives with the essential skills to incorporate sustainability principles into corporate strategy. Topics include global sustainability challenges, United Nations Sustainable Development Goals, sustainability leadership, sustainability measurement, reporting, and successful implementation of the triple bottom line. This course incorporates a variety of learning tools such as case discussions, experiential exercises, and projects to help students gain an appreciation for key concepts and tools for sustainability management.

MGMT 5690 Management Internship: 1-3 semester hours

Prerequisites: Students must have completed and/or be enrolled in at least 6 credit hours of management electives and have consent of a supervising faculty member and the Department Chair. The student works in the field of management where he/she applies the knowledge and skills learned in the classroom. Professional development and obtaining specialized work experience are the primary goals. The student's program will be monitored by the management faculty member supervising the internship with the student providing a formal written report at the end of the project.

MGMT 5695 Seminar in Management: 3 semester hours

Prerequisites: MGMT 5600. Topics of current interest in management. Possible topics include: human resource management, international management, and entrepreneurship.

MGMT 5699 Individual Research in Management: 1-3 semester hours

Prerequisites: Consent of instructor and graduate director. Special individual research topics in Management under the guidance of a specific professor.

Information Systems and Technology

Information Systems and Technology (IST) students complement coursework in information technology (IT) with coursework in Business Administration to gain a solid foundation in the social and technical design, development, implementation, and management of information systems. Their strength lies in the ability to apply their knowledge of IT and Business to help organizations streamline their business processes and gain strategic advantage by enabling alignment of IT plans with business plans.

UMSL's IST students are thus well-versed in varied technology landscapes as well as in sustaining and disruptive information technologies through specialized coursework in Business Intelligence, Cybersecurity, Financial Technology, IT Auditing and Legacy Systems. With strong business and communication skills, they make an immediate impact on the organizations they join after graduating from UMSL. Job roles they are employed in include application developer, business analyst, business process designer, chief information officer, cybersecurity analyst, database designer, helpdesk manager, IT manager, network administrator, pen tester, systems administrator, and web designer, among others.

To reinforce understanding of successful practices in the use and management of IT, the IST faculty constantly challenge and engage students through opportunities such as hackathons, game jams, immersion days, conferences, competitions, and student clubs.

Choosing IST as a major or a minor is a smart move for any student's career. For more information, please visit the department's website: <http://ist.umsl.edu> or contact the department chair, Dr. Dinesh Mirchandani at mirchandani@umsl.edu or 314-516-7354.

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Courses

INFSYS 1800 Computers and Information Systems: 3 semester hours

This course develops skills in technology awareness, computer fluency, computing devices, ethical use of the Internet, and business applications for problem solving, communicating, and making informed decisions, including word processors, presentation software, electronic spreadsheets, and database management systems. Students will gain skills in developing business applications and web pages. Credit cannot be granted for both CMP SCI 1010 and INFSYS 1800.

INFSYS 2800 Information Systems Concepts and Applications: 3 semester hours

Prerequisites: INFSYS 1800 or satisfactory performance on proficiency exam. This course provides an overview of the field of information systems including concepts of systems analysis and design, ethics in information systems usage, electronic business, database management, enterprise systems, information security, and JavaScript programming concepts. Business cases will be utilized to illustrate how information systems improve decision-making. Students will also gain valuable strategies for career development and networking.

INFSYS 3806 Managerial Applications of Object-Oriented Programming I: 3 semester hours

Prerequisites: INFSYS 2800 or CMP SCI 1250, and a minimum campus GPA of 2.0. This course provides an introduction to object-oriented programming. Topics include object-oriented design principles and choices, encapsulation, inheritance, and event-driven programming. Hands-on labs during class sessions and assignments help students develop applied programming skills. Students may not receive credit for both INFSYS 3806 and INFSYS 6806.

INFSYS 3807 Legacy Systems: 3 semester hours

Prerequisites: A minimum campus GPA of 2.0. This course covers structured programming techniques for legacy business applications. Students will learn COBOL syntax, structure, design and best programming practices to create, maintain, debug, compile and execute COBOL programs.

INFSYS 3810 Information Systems Analysis: 3 semester hours

Prerequisites: INFSYS 3816, minimum campus GPA of 2.0; or consent of instructor. In this course, students will learn how to identify, evaluate, and document business systems using traditional and agile methodologies. This includes how to study systems' ability to meet the business needs and information requirements of an organization, and defend alternatives that better meet needs. Students will conduct a systems analysis of an actual organization in project teams, including the identification of and defense of alternatives.

INFSYS 3815 Object-Oriented Applications in Business: 3 semester hours

Prerequisites: INFSYS 3806 and a minimum campus GPA of 2.0. This course provides a study of web application development using Java and JavaScript. Students will learn about Java Collections Framework, Spring, Hibernate, design patterns, software testing, and front-end web technologies. Credit cannot be granted for both INFSYS 3815 and INFSYS 6815.

INFSYS 3816 Managerial Application of Object-Oriented Programming II: 3 semester hours

Prerequisites: INFSYS 3806 and a minimum campus GPA of 2.0. This course builds on skills learned in INFSYS 3806 and focuses on contemporary client-server development environments and tools. Topics include database integration, web applications, and web services. Students will be provided hands-on application development experiences during class and in assignments.

INFSYS 3817 Advanced Legacy Systems: 3 semester hours

Prerequisites: INFSYS 3807 or consent of instructor. This course will build upon Contemporary z/OS COBOL 1. Topics may include JCL, file management, utilities/tools (like SORTING, File-Aid, IEB's, JCLCheck), file access (VSAM, DB2, and Sequential), scheduling, debugging, testing, and mainframe-server communication protocols. Students will be prepared for leadership roles in managing IT landscapes consisting of both legacy and modern systems. Credit cannot be granted for both INFSYS 3817 and INFSYS 6817.

INFSYS 3818 Management of Software Testing: 3 semester hours

Prerequisites: INFSYS 3806 or INFSYS 3844 or consent of instructor. This course provides the core concepts of the lifecycle of Software Assurance, Quality Control and Testing. It will emphasize the importance of testing strategies, methodologies, planning, design, staging, reporting and managing defects, test environment management and Test Driven Development. Credit cannot be granted for both INFSYS 3818 and INFSYS 6818.

INFSYS 3820 Introduction to Systems Administration: 3 semester hours

Prerequisites: INFSYS 2800 or CMP SCI 1250 or permission of Information Systems department chair. This course provides an overview of modern Information Technology (IT) infrastructure components and focuses on systems administration in Linux and Windows server environments. Students will learn to install, configure, operate, maintain, and secure servers. Topics include user management and policies, file systems, backup and recovery, network configuration, and host security among others. Virtualization and cloud environments are introduced. Basic foundations of automation and configuration management using shells and other contemporary tools are provided. Credit cannot be granted for both INFSYS 3820 and INFSYS 6820.

INFSYS 3830 Data Programming: 3 semester hours

Prerequisites: A minimum campus GPA of 2.0 or consent of instructor. In this course, students will learn the fundamentals of data programming with R and Python using structured (tabular data such as spreadsheets) and unstructured data (text data such as social media) for application in Business and Cyber Analytics, Machine Learning, and Artificial Intelligence. Credit cannot be granted for both INFSYS 3830 and INFSYS 6830.

INFSYS 3841 Enterprise Information Systems: 3 semester hours

Prerequisites: INFSYS 2800 and a minimum campus GPA of 2.0. This course provides students the skills and knowledge needed for roles as ERP business analysts, ERP configuration specialists, and consultants. Students will be introduced to integrated business processes through the application of SAP modules supporting Sales and Distribution (SD), Materials Management (MM), Financial Accounting (FI), Production Planning (PP), and Controlling (CO) as components of the SAP integrated business solution. Students will complete exercises to construct a functioning company operating in an integrated SAP R/3 environment.

INFSYS 3842 Data Networks and Security: 3 semester hours

Same as INTL BUS 3882. Prerequisites: INFSYS 2800 and a minimum campus GPA of 2.0; or consent of instructor. This is a foundational course in data networking and network security. It covers the fundamentals of networking and security implications of data networks with hands-on exercises. Topics include networking layers and standardization of functionality across layers, wired and wireless Local Area Networks (LANs) along with switching and physical layer technologies, Internetworking, supporting and supervisory protocols; application layer protocols such as HTTP, and fundamentals of network security. Students will also learn about network protocol analyzers such as Wireshark, virtualization, and networking in virtual environments. Credit cannot be granted for both INFSYS 3842 and INFSYS 6836. Course satisfies/fulfills the College of Business Global Awareness requirement.

INFSYS 3843 Decision Support Systems for Business Intelligence: 3 semester hours

Prerequisites: SCMA 3300 and a minimum campus GPA of 2.0. This class examines the applications of data and analytics (models) to support the needs of decision makers. Descriptive, predictive and prescriptive analytics tools are coupled with Big Data and well-designed user interfaces to provide the necessary tools. Topics such as how to construct the data warehouse, how to clean and store data in the appropriate form, how to construct and implement a useful visualization of data, and how to construct and support decision makers are included. DSS component design in response to decision making and business intelligence needs are discussed.

INFSYS 3844 Developing Business Applications in .NET: 3 semester hours

Prerequisites: INFSYS 2800 or CMP SCI 2250, and a minimum campus GPA of 2.0. This course will enable students to design, implement, and debug object-oriented and data driven business applications in C#.NET. Students will learn application design choices, object-oriented design principles, event-driven programming, user interface programming, user interface controls, data binding and database access, exception handling, debugging and effective ways of working with C#.NET.

INFSYS 3845 Database Management Systems: 3 semester hours

Prerequisites: INFSYS 3806, ACCTNG 2400, minimum campus GPA of 2.0. This course provides an introduction to the design and use of databases in meeting business information needs. Topics include database planning, conceptual design, and data administration. The concepts are studied with projects involving the use of a current database management system.

INFSYS 3847 Web Design: 3 semester hours

Prerequisites: INFSYS 2800 and a minimum campus GPA of 2.0. This course focuses on website planning, design, and construction. Topics include site structure, navigation, content management, markup languages, CSS, scripting languages, and important tools, libraries and frameworks.

INFSYS 3848 Introduction to Information Security: 3 semester hours

Prerequisites: INFSYS 2800 or CMP SCI 2250 or consent of instructor and a minimum campus GPA of 2.0. This course provides an introductory survey of the vast field of Information Security (InfoSec). It intersects both management and technical aspects of security as relevant to organizations, governments, individuals, and society. Topics include fundamental principles of InfoSec and cyber defense, the threat environment, management of InfoSec in organizations, technologies and tools in InfoSec, cryptology/cryptography, web application security, and current issues. Hands-on labs expose students to basics of penetration testing, applications of cryptography, and vulnerability management. Course is open to all majors. Credit cannot be granted for both INFSYS 3848 and INFSYS 6828. Course satisfies/fulfills the College of Business Global Awareness requirement.

INFSYS 3858 Advanced Security and Information Systems: 3 semester hours

Prerequisites: INFSYS 3848 or consent of department chair. This course builds upon the principles of information security. It covers topics ranging from networking, penetration testing, formal verification of systems, formal models of information flow and protection, distributed system authentication, protocol design and attack, computer viruses and malware, as well as intrusion and anomaly detection models. Students are exposed to virtualization, defensive security, offensive security, and other forms of cybersecurity. Credit cannot be granted for both INFSYS 3858 and INFSYS 6858.

INFSYS 3860 Data Integration: 3 semester hours

Prerequisites: INFSYS 2800 or consent of instructor. This course discusses the theories and techniques for blending unstructured and structured data including big data and social media streams with relational databases, data warehouses, spreadsheets, and other sources of data. It provides hands-on experience in integrating data from diverse sources, screening and cleaning it, and producing descriptive and visual summaries in tables, graphs, maps, and text for business intelligence. Students will be introduced to tools that integrate data from different sources and provide input to dashboards for rich visualization and advanced analytics. Students may not receive credit for both INFSYS 3860 and INFSYS 6860.

INFSYS 3862 Artificial Intelligence Applications for Business: 3 semester hours

Prerequisites: INFSYS 3830 or consent of instructor. This course introduces students to topics in Artificial Intelligence (AI) and its applications in Business and Cybersecurity. The course discusses the history of AI and delves into Machine Learning (ML) and its general methodology of development of data models. The course provides a sampling of successful applications of AI and ML in different areas of Business such as portfolio management, algorithmic trading, fraud analytics, and credit scoring. Credit cannot be granted for both INFSYS 3862 and INFSYS 6862.

INFSYS 3864 Applied Cryptography for Business: 3 semester hours

Prerequisites: INFSYS 3806 and INFSYS 3848, or consent of instructor. This course provides an overview of the building blocks of contemporary cryptographic solutions to address information security needs in organizations. The focus will be on understanding cryptographic primitives and applying them to assure confidentiality, integrity, authentication, and non-repudiation among other information security goals. Using best practices, students will work on projects aimed at evaluating, selecting, and implementing an appropriate mix of cryptographic solutions given particular application domains. Application areas in traditional as well as cloud-based information technology environments will be considered. Credit cannot be granted for both INFSYS 3864 and INFSYS 6864.

INFSYS 3866 Cloud Security for Business: 3 semester hours

Prerequisites: INFSYS 3843 or INFSYS 3848 or consent of instructor. This course covers the fundamentals of cloud security in public cloud computing environments with a focus on business applications. Topics include identity and access management, secure configuration of cloud services, and various security focused cloud services. Data collection and analysis of cloud-based data logging services to aid in security auditing and compliance is covered. Emerging topics, such as use of artificial intelligence-based services and tools in cloud security are also discussed. Student may not receive credit for both INFSYS 3866 and INFSYS 6866.

INFSYS 3868 Secure Software Development: 3 semester hours

Prerequisites: A first course in programming such as INFSYS 3806 or CMP SCI 2250 or consent of instructor. This course covers the concepts of software assurance and the fundamentals of the secure software lifecycle as it relates to software development. Students will experience the secure software lifecycle process by developing concrete artifacts and practicing in a lab environment. Credit cannot be granted for both INFSYS 3868 and INFSYS 6868.

INFSYS 3878 Information Security Risk Management and Business Continuity: 3 semester hours

Prerequisites: INFSYS 3848 or consent of Instructor. This course provides students the tools and concepts necessary to plan for, prevent, and when needed successfully respond to disruptions in business operations. Topics covered include security policies, frameworks, information and materials management, risk management, and regulatory compliance. Credit cannot be granted for both INFSYS 3878 and INFSYS 6878.

INFSYS 3890 Internship in Information Systems: 1-3 semester hours

Prerequisites: Minimum business GPA of 2.5, minimum campus GPA of 2.0, completed and/or currently enrolled in at least 6 credit hours of information systems electives at the 3000 level or above, consent of supervising instructor, and consent of department chair. Students are employed in the field of information systems where they apply the knowledge and skills learned in the classroom. Professional development obtaining specialized work experience are primary goals. An information systems faculty member will monitor the student's program with the student providing a formal written report at the end of the project.

INFSYS 3898 Seminar in Information Systems: 1-3 semester hours

Prerequisites: To be determined each time course is offered and to include a minimum 2.0 overall GPA. This course is a selected special topic in the field of information systems. May be repeated for credit with different topics.

INFSYS 3899 Independent Study in Information Systems: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0 and approval by the supervising professor and the Area Coordinator. Special individual study in information systems under the supervision of a full-time information systems faculty member.

INFSYS 4800 IT Leadership: 3 semester hours

Prerequisite: INFSYS 2800. This course seeks to prepare students for IT leadership roles using business cases as exemplars. Credit cannot be granted for both INFSYS 4800 and INFSYS 5800.

INFSYS 4847 IT Project Management: 3 semester hours

Prerequisites: INFSYS 2800 or consent of instructor. Effective project management ensures that a project is completed on time, within budget, and includes the necessary scope. This course explores the project management processes shared by all projects: project selection, planning, control, and closing. Traditional and Agile project management techniques will be explored in the contexts of Information Technology and Supply Chain Management. Credit cannot be granted for both INFSYS 4847 and INFSYS 6847.

INFSYS 4850 Information Systems Design: 3 semester hours

Prerequisites: INFSYS 3810, INFSYS 3816, INFSYS 3845 and a minimum campus GPA of 2.0. This course builds on the skills learned in INFSYS 3810. System design, implementation, and methods of systems installation and operation are presented. A system development project is required.

INFSYS 5800 Management Information Systems: 3 semester hours

Same as P P ADM 6800. Prerequisites: Graduate standing. This course provides an overview of issues related to the management of information systems within organizations. Course topics may include the role of the Chief Information Officer, business value from emergent information technologies (IT), enterprise systems, the impact of IT on organizational competitiveness, managing IT-enabled projects, extracting business intelligence from big data, sourcing IT, cybersecurity, ethics, intellectual property rights, and societal impacts of IT.

INFSYS 5890 Graduate Internship in Information Systems: 1-6 semester hours

Prerequisites: INFSYS 6840 or permission of instructor. The internship will be a supervised field experience in a US-based business/organization or a US-based international business/organization. Students will be employed off-campus for a 10-16 week period on projects directed by host organization supervisors in consultation with a UM-St. Louis faculty member. The project requires students to apply IS concepts to a real-world problem. The project does not duplicate, but builds upon material in the IS curriculum. A professional written report will be required.

INFSYS 5899 Individual Research in Information Systems: 1-3 semester hours

Prerequisites: Consent of instructor and graduate director. Special individual research topics in Information Systems under the guidance of a specific professor.

INFSYS 6805 Applications of Programming for Business Solutions: 3 semester hours

Prerequisite: Graduate standing. This course will enable students to design, implement, and debug object-oriented and data driven business applications in C#.NET. Students will learn application design choices, object-oriented design principles, event-driven programming, user interface programming, user interface controls, data binding and database access, exception handling, debugging and effective ways of working with C#.NET.

INFSYS 6806 Managerial Applications of Object-Oriented Technologies: 3 semester hours

Prerequisites: Graduate Standing. This course provides an introduction to object-oriented programming. Topics include object-oriented design principles and choices, encapsulation, inheritance, and event-driven programming. Hands-on labs during class sessions and assignments help students develop applied programming skills. Students may not receive credit for both INFSYS 3806 and INFSYS 6806.

INFSYS 6807 Contemporary z/OS COBOL: 3 semester hours

Prerequisites: Graduate standing. This course covers structured programming techniques for legacy business applications. Students will learn COBOL syntax, structure, design and best programming practices to create, maintain, debug, compile and execute COBOL programs.

INFSYS 6808 Advanced Object-Oriented Programming for Business: 3 semester hours

Prerequisite: INFSYS 6806. This course builds on skills learned in INFSYS 6806 and focuses on contemporary client-server development environments and tools. Topics include database integration, web applications, and web services. Students will be provided hands-on application development experiences during class and in assignments.

INFSYS 6814 Web Applications for Business: 3 semester hours

Prerequisites: Graduate standing. This course focuses on website planning, design, and construction. Topics include site structure, navigation, content management, markup languages, CSS, scripting languages, and important tools, libraries and frameworks.

INFSYS 6815 Advanced Web Applications for Business: 3 semester hours

Prerequisites: INFSYS 6806 and INFSYS 6814 or consent of instructor. This course provides a study of web application development using Java and JavaScript. Students will learn about frameworks, design patterns, software testing, and front-end web technologies. Students may not receive credit for both INFSYS 3815 and INFSYS 6815.

INFSYS 6817 Advanced COBOL and Modern z/OS System Tools: 3 semester hours

Prerequisites: INFSYS 6807 or consent of instructor. This course will build upon Contemporary z/OS COBOL 1. Topics will include JCL, file management, utilities/tools (like SORTING, File-Aid, IEB's, JCLCheck), file access (VSAM, DB2, and Sequential), scheduling, debugging, testing, and mainframe-server communication protocols.

INFSYS 6818 Management of Software Testing: 3 semester hours

Prerequisites: INFSYS 6805 or INFSYS 6806 or consent of instructor. This course provides the core concepts of the lifecycle of Software Assurance, Quality Control and Testing. It will emphasize the importance of testing strategies, methodologies, planning, design, staging, reporting and managing defects, test environment management and Test Driven Development.

INFSYS 6820 Systems and IT Infrastructure: 3 semester hours

Prerequisites: Graduate standing. This course establishes the critical role of Linux and Windows server environments in contemporary Information Technology (IT) infrastructure management. Students will explore both the technical and management aspects of server infrastructure. Technical aspects include installation, operation, maintenance, virtualization, and systems security. Management aspects include server lifecycles and management of server environments at scale using automation and configuration management tools within the context of application development, security operations, and IT operations. Credit cannot be granted for both INFSYS 3820 and INFSYS 6820.

INFSYS 6828 Principles of Information Security: 3 semester hours

Prerequisites: Graduate standing. This course is a survey of the vast field of Information Security (InfoSec). It intersects both management and technical aspects of security as relevant to organizations, governments, individuals, and society. Topics covered include fundamental principles of InfoSec and cyber defense, the threat environment, management of InfoSec in organizations, technologies and tools in InfoSec, cryptology/cryptography, web application security, vulnerability management, and current issues. Hands-on labs expose students to basics of penetration testing, applications of cryptography, and vulnerability management. A graduate research paper is required. This course is open to all majors. Credit cannot be granted for both INFSYS 6828 and INFSYS 3848.

INFSYS 6830 Data Programming for Business Intelligence: 3 semester hours

Prerequisites: Graduate standing. This course introduces students to the fundamentals of data programming with R and Python using structured (tabular data such as spreadsheets) and unstructured data (text data such as social media) for application in business and cyber analytics, machine learning, and artificial intelligence. Students may not receive credit both INFSYS 3830 and INFSYS 6830.

INFSYS 6833 Decision Support Systems for Business Intelligence: 3 semester hours

Prerequisites: SCMA 5300. This course examines the applications of data and analytics (models) to support the needs of decision makers. Descriptive, predictive and prescriptive analytics tools are coupled with big data and well-designed user interfaces to provide the necessary tools. Topics such as how to construct the data warehouse, how to clean and store data in the appropriate form, how to construct and implement a useful visualization of data, and how to construct and support decision makers are included. DSS component design in response to decision making and business intelligence needs are discussed. Credit cannot be granted for both INFSYS 3843 and INFSYS 6833.

INFSYS 6836 Management of Data Networks and Security: 3 semester hours

Prerequisites: Graduate standing. This course focuses on the big-picture implications and challenges of data networking and network security within contemporary Information Technology environments. It covers fundamentals of networking and security implications of data networks with hands-on exercises. Topics include networking layers and standardization of functionality across layers, wired and wireless Local Area Networks (LANs) along with switching and physical layer technologies, Internetworking, supporting and supervisory protocols, application layer protocols, network design and management, and fundamentals of network security. Students will also learn about network protocol analyzers such as Wireshark, virtualization, networking in virtual environments; and how some common networked applications operate by utilizing the networking infrastructure. Credit cannot be granted for both INFSYS 6836 and INFSYS 3842.

INFSYS 6838 Business Processes: Design, Management and Integration: 3 semester hours

Prerequisite: INFSYS 5800. Business design methodologies are used to create new, or improve existing processes. Examples of business processes include: call centers, order-flow processing in financial services, manufacturing, hospital emergency services, and more. Special attention is paid to the role of information technology during the design process. Specific business process design methods we will cover are: SIPOC (supplier-input-process-output-customer), Process Flow Mapping, Simulation Modeling, Performance Scorecards, Quality Functional Deployment, Failure Mode and Effects Analysis, and Theory of Constraints. Case studies are used to illustrate the concepts and guest speakers will discuss their applications of the latest business process design methods and software.

INFSYS 6840 Information Systems Analysis: 3 semester hours

Prerequisite: INFSYS 6805 or INFSYS 6806. In this course, students will learn how to identify, evaluate, and document business systems using traditional and agile methodologies. This includes how to study systems' ability to meet the business needs and information requirements of an organization, and defend alternatives that better meet needs. Students will conduct a systems analysis of an actual organization in project teams, including the identification of and defense of alternatives.

INFSYS 6845 Database Management Systems: 3 semester hours

Prerequisites: INFSYS 5800 and either INFSYS 6805 or INFSYS 6806. This course provides an introduction to the design and use of databases in meeting business information needs. Topics include database architecture, design, administration, and implementation. The concepts are studied with projects involving the use of a current database management system.

INFSYS 6847 Project Management: 3 semester hours

Prerequisite: INFSYS 5800. Effective project management ensures that a project is completed on time, within budget, and has high quality. The purpose of this class is to examine the task of project resource management with a focus on IT and services. It will cover conventional aspects of project management, such as the project evaluation, planning, roles, responsibilities, scheduling, and tracking. In addition, this class will examine risk management, change management, critical chain management, build vs. buy analysis, package vs. custom solutions, vendor qualification and selection, and the roles of certification in the process. The class will also cover the management of programs or a portfolio of IT projects.

INFSYS 6849 Data Warehouse Design and Implementation: 3 semester hours

Prerequisites: INFSYS 6845 or consent of instructor. Course will cover different design configurations for structuring and organizing data in a data warehouse. Formal methodologies for the development of data warehouses will also be discussed and implemented.

INFSYS 6850 Information Systems Design: 3 semester hours

Prerequisites: INFSYS 6840 and INFSYS 6845. This course builds upon the analysis techniques presented in INFSYS 6840. It requires the student, usually working in a group to design and implement a system in a real-world environment. Advanced design concepts are presented to support the students in their project work.

INFSYS 6851 Practicum in Business Intelligence: 3 semester hours

Prerequisites: INFSYS 6833. This course will provide the context for students to integrate, synthesize and apply their Business Intelligence skills in an actual business organization. Project work will be jointly supervised and coordinated by a faculty member and a supervisor in the relevant business organization.

INFSYS 6858 Advanced Cybersecurity Concepts: 3 semester hours

Prerequisites: INFSYS 6828. This course provides an in-depth examination of advanced principles of cybersecurity. A broad range of topics are covered, including penetration testing, formal verification of systems, formal models of information flow and protection, distributed system authentication, protocol design and attack, computer viruses and malware, as well as intrusion and anomaly detection models. Multi-level security architecture, active defenses, investigation and forensics, network firewalls, virtualization, anonymity and identity, mobile security, and database security models and mechanisms are also studied. The course content is largely influenced by the latest research in the field. Credit cannot be granted for both INFSYS 6858 and INFSYS 3858.

INFSYS 6860 Advanced Data Integration: 3 semester hours

Prerequisites: Graduate standing. This course discusses the theories and techniques for blending unstructured and structured data including big data and social media streams with relational databases, data warehouses, spreadsheets, and other sources of data. It provides hands-on experience in integrating data from diverse sources, screening and cleaning it, and producing descriptive and visual summaries in tables, graphs, maps, and text for business intelligence. Students will be introduced to tools that integrate data from different sources and provide input to dashboards for rich visualization and advanced analytics. Students may not receive credit for both INFSYS 3860 and INFSYS 6860.

INFSYS 6862 Artificial Intelligence Applications for Business and Cybersecurity: 3 semester hours

Prerequisite: Graduate standing. This course introduces students to topics in artificial intelligence (AI) and its applications in business and cybersecurity. The course starts with a historical development of fundamental ideas in AI and their relationship to the state of the art. The course then introduces one of the most successful branches of AI—machine learning (ML), and its general methodology of the development of data models. The course provides a sampling of successful applications of AI and ML in different areas of business such as portfolio management, algorithmic trading, fraud analytics, and credit scoring. Credit cannot be granted for both INFSYS 3862 and INFSYS 6862.

INFSYS 6864 Applied Cryptography for Business Applications: 3 semester hours

Prerequisites: INFSYS 6805 or INFSYS 6806, and INFSYS 6828, or consent of instructor. This course provides an overview of the building blocks of contemporary cryptographic solutions to address information security needs in organizations. The focus will be on understanding cryptographic primitives and applying them to assure confidentiality, integrity, authentication, and non-repudiation, among other security goals. Students will work on projects aimed at evaluating, selecting, and implementing an appropriate mix of cryptographic solutions, based on best practices, given particular application domains. Application areas in traditional as well as cloud-based Information Technology (IT) environments will be considered. Students will also learn about important considerations and pitfalls in managing cryptographic solutions at scale in modern IT environments. Students may not receive credit for both INFSYS 3864 and INFSYS 6864.

INFSYS 6866 Cloud Security Management: 3 semester hours

Prerequisites: INFSYS 6828 or INFSYS 6833 or consent of instructor. This course covers the fundamentals of cloud security in public cloud computing environments with a focus on business applications. Topics include identity and access management, secure configuration of cloud services, and security focused cloud services such as the analysis of cloud-based data logging to aid in security auditing and compliance, and new artificial intelligence-based tools. Students may not receive credit for both INFSYS 3866 and INFSYS 6866.

INFSYS 6868 Software Assurance: 3 semester hours

Prerequisites: INFSYS 6805 or INFSYS 6806 or consent of instructor. This course provides an overview of the vast field of software assurance. The goal is to make students aware of the fundamentals of the secure software lifecycle enabling them to apply principles of secure software development and management. The course also provides practical applications that allow the learners to experience the secure software lifecycle process by developing concrete artifacts. Credit cannot be granted for both INFSYS 6868 and INFSYS 3868.

INFSYS 6878 Management of Information Security: 3 semester hours

Prerequisites: INFSYS 6828. This course provides students the necessary background knowledge and skills to develop and run a systematic information security management program that is in line with organizational strategy, structure, processes, and culture. Specifically, the course introduces governance, strategy, policies, implementation, operation, evaluation, and improvement of an organization's information security to achieve business objectives and be resilient to information security threats. Credit cannot be granted for both INFSYS 6878 and INFSYS 3878.

INFSYS 6886 Information Systems and Cybersecurity Auditing: 3 semester hours

Prerequisites: INFSYS 6828. This course will provide students with an introduction and overview of the field of Information Systems (IS) and Cybersecurity Auditing. Students will gain an understanding of risks in the IS environment, general computer and application control concepts, IS auditing, IS governance, Information Security controls, business continuity planning and resilience, and related guidelines and standards from organizations such as NIST, ISO, and ISACA.

INFSYS 6888 Capstone in Information Security: 3 semester hours

Prerequisites: INFSYS 6828 and one of either INFSYS 6858 or CMP SCI 5782. This course provides students an opportunity to participate in the full information security lifecycle in an applied setting using a project-based approach. Students from technical and non-technical backgrounds will work together in teams. Major tasks may include creating an information security management plan, conducting risk assessments, implementing technical and administrative controls to mitigate information security risks, and managing security operations with a focus on incident detection and response. Students may work on projects through an actual organization and demonstrate application of knowledge gained through all prior courses in the degree program. This course must be taken the last semester prior to graduation. Cannot receive credit for INFSYS 6888 and CMP SCI 5888.

INFSYS 6891 Seminar in Information Systems: 3 semester hours

Prerequisites: INFSYS 5800. Topics of current interest in management information systems. Topics may include international information systems, electronic commerce, decision support systems, information systems strategy, telecommunications, and information systems management.

Marketing and Entrepreneurship

The mission of the Marketing and Entrepreneurship Department is to deliver an excellent marketing program that prepares our students for successful careers and leadership roles in business and society. We are committed to provide a program that develops a rich understanding of marketing concepts and improves managerial abilities in the most exciting areas of marketing. We provide high quality, high value education to advance the professional aims of our students in the competitive and dynamic local, national and international environments. Our faculty conducts research on cutting edge issues and real-world problems. We integrate into our curricula the latest and most relevant marketing theories and industry practices. And we partner with the St. Louis community to promote the economic development of the whole region and the State of Missouri.

COBA's Marketing Department offers the Bachelor of Science in Business Administration (BSBA) and the Master of Business Administration (MBA) degrees. Students can also earn a minor in Marketing, a Minor in Transportation Studies, and a Graduate Certificate in Digital and Social Media Marketing. In response to the market's evolving needs, starting this year, the Department offers a distinct Tracks in Digital and Social Media Marketing. Marketing faculty will also play important roles in the new Doctor of Business Administration (DBA) program, teaching required courses and supervising theses.

As part of the College, the Department is accredited by the top accrediting body for higher education business programs: the Association to Advance College Schools of Business (AACSB).

Degrees

Business Administration BS, Marketing Emphasis (p. 437)

Business Administration BS, Entrepreneurship Emphasis (p. 429)

Business Administration MBA, Marketing Emphasis (p. 451)

Minors

Digital Marketing Communications Minor (p. 518)

Marketing Minor (p. 609)

Certificates

Digital and Social Media Marketing Graduate Certificate (p. 517)

Entrepreneurship Undergraduate Certificate (p. 572)

Entrepreneurship Graduate Certificate (p. 571)

Marketing Management Graduate Certificate (p. 608)

Affiliated Interdisciplinary Programs

Transportation Studies Minor (p. 762)

Courses

Courses offered by the department can be found at the links below:

Entrepreneurship (ENT)

Marketing (MKTG)

Entrepreneurship

Courses

ENT 1100 Introduction to Entrepreneurship: 3 semester hours

This course allows students of any major to develop a working knowledge of fundamental entrepreneurial concepts, vocabulary, skills, and tools that can enhance professional efficacy, whether at a startup or an established business.

ENT 2130 Business in the Arts: 3 semester hours

This course takes an in-depth look at business aspects through the lens of the arts, with an emphasis on cultivating and developing an entrepreneurial perspective.

ENT 3100 Applications of Entrepreneurship: 3 semester hours

This course allows students to apply and analyze entrepreneurial principles essential to successfully launching and scaling new ventures in both startups and existing organizations. Topics include opportunity recognition, ideation, design thinking, business and revenue model development, market experimentation, bootstrapping, and more.

ENT 3133 Customer Relationship Management (CRM): 3 semester hours

Same as MKTG 3733. Prerequisites: MKTG 3721 and MKTG 3722 or consent of instructor. The marketing and sales technology framework covered in this course includes project management, automation and email, Customer Experience Platforms (CMS), Customer Relationship Management (CRM) systems, E-Commerce, data analytics and internet sources. We'll cover best-in-class technologies for use in small businesses through enterprises. Students will learn how to immediately apply the marketing technology roadmap and choose the right digital marketing tools to execute successful campaigns. Students may not receive credit for both MKTG 3733 and MKTG 5733.

ENT 3140 Creativity and Systems for Innovation: 3 semester hours

Prerequisites: ENT 3100 or consent of instructor. This course examines systems theory, and its application to entrepreneurship and intrapreneurship. Students will develop the ability to understand and solve problems and initiate opportunities by thinking in new ways. Students will learn about the entrepreneurial ecosystem, including the economic, social, and political factors acting on it, and how to use it to increase good outcomes.

ENT 3145 Seminar in Venture Capital and Private Equity: 3 semester hours

Same as FINANCE 3545. Prerequisites: FINANCE 3500. This course examines venture capital and private equity firms as an important category of financial institutions. The main focus of the course is on financial, economic, and legal issues that develop between venture capital firms and their limited partners and between private equity firms and the firms in which they invest. More specifically, the course will explore the following processes: (1) how private equity and venture capital firms raise capital; (2) how they deal with firms in which they invest; and (3) how they exit investments. The course also discusses technology development process including protection through patents before they are licensed or used to establish as startup companies.

ENT 3150 Entrepreneurial Opportunity Evaluation: 3 semester hours

Prerequisites: ENT 3100. This course allows students who want to understand how to evaluate the potential of an entrepreneurial opportunity by examining its market desirability, technical feasibility, and financial viability.

ENT 3161 Entrepreneurial Product Development: 3 semester hours

Same as MKTG 3761. Prerequisites: ENT 3100 or consent of instructor.

This course allows students who want to learn how to transform an abstract idea for a new product into a concrete product development project, whether in a structured corporate environment or as entrepreneurs presenting to, and working with, external stakeholders.

ENT 3190 Internship in Entrepreneurship: 3 semester hours

Prerequisites: ENT 3100. This course is focused on helping students who are employed in an entrepreneurial setting develop professionally by applying knowledge and skills learned in the classroom to their particular entrepreneurial setting.

ENT 4100 Entrepreneurship Capstone: 3 semester hours

Prerequisites: ENT 3100. In this course students will systematically pursue a self-selected, real-world entrepreneurial or intrapreneurial opportunity at an existing or potential business.

ENT 4114 Entrepreneurship/Small Business Management: 3 semester hours

Same as MGMT 4614. Prerequisites: ENT 3100, BUS AD 2900, FINANCE 3500, MKTG 3700, MGMT 3600, and a 2.0 overall GPA; or consent of instructor. This integrative general management course is designed to communicate the academic principles of business management applicable to solving of problems of small and medium-size businesses and assist in their development. This course will provide a background in the forms of business, the development of business plans and systems integration, venture capital, accounting, procurement, promotion, financing, distribution and negotiations for initial organization, and operation and expansion of the firm.

ENT 4147 Introduction to Project Management: 3 semester hours

Same as SCMA 4347. Prerequisites: SCMA 3301 and a minimum campus GPA of 2.0. This course introduces the concepts and practices of Project Management with a focus on supply chain and analytics related projects. It covers conventional aspects of project management, such as the project evaluation, planning, roles, responsibilities, scheduling, and tracking. In addition, this class introduces agile project management as applicable to projects where there is not the specificity of goals or solutions to be applicable to traditional project management.

ENT 4199 Independent Study in Entrepreneurship: 3 semester hours

Prerequisites: ENT 3100 and consent of instructor. In this course students will pursue individual study in entrepreneurship under the supervision of an entrepreneurship faculty member, subject to the approval of the supervising professor.

ENT 5614 Entrepreneurship and Innovation: 3 semester hours

Prerequisites: Graduate standing. This course focuses on students acquiring skills to capitalize on competitive strengths and market opportunities in dynamic entrepreneurial environments. A major focus will be placed on students developing personal and professional competencies aimed at enabling them to launch successful entrepreneurial ventures via innovation, collaboration, disruption, overcoming obstacles, and having a bias toward action.

ENT 5618 Accelerate Entrepreneurial Experience: 3 semester hours

Prerequisites: Graduate standing. This course focuses on development of entrepreneurial skills and perspectives that facilitate development and testing of actionable product or service ideas. Customer ethnography, the business model canvas, and the development and execution of prototypes or minimum viable products (MVPs) are used to successfully address real world problems.

ENT 5650 Advanced Experiential Entrepreneurship: 3 semester hours

Prerequisites: Graduate standing. Students will work in teams mentored by experienced entrepreneurs to generate innovative ideas and transform them into business models for economically viable entities. Experiential learning will be used in customer discovery, prototyping, and market feasibility analysis. Students will identify potential sources of funding and develop business plan pitch decks.

Marketing

Courses

MKTG 3700 Principles of Marketing: 3 semester hours

Prerequisites: ECON 1001, junior standing and a minimum overall GPA of 2.0. An examination of the character and importance of the marketing process, its essential functions and the institutions performing them. Attention is focused on the major policies (such as distribution, product, price, and promotion) which underlie the multifarious activities of marketing institutions and the managerial, economic, societal implications of such policies.

MKTG 3710 Consumer Behavior: 3 semester hours

Prerequisites: MKTG 3700, and a minimum overall GPA of 2.0. A study of such consumer functions as decision-making, attitude formation and change, cognition, perception, and learning. The marketing concepts of product positioning, segmentation, brand loyalty, shopping preference and diffusion of innovations are considered in context with the environmental, ethical, multicultural and social influences on an increasingly diverse American consumer.

MKTG 3720 Advertising and Promotion: 3 semester hours

Prerequisites: MKTG 3700, minimum campus GPA of 2.0. A study of the design, organization and implementation of the marketing "communications mix." Various methods such as advertising, personal selling, and publicity are analyzed as alternatives for use alone, or in combination to stimulate demand, reseller support, and buyer preference. Particular topics considered include media selection, sales promotionals, packaging, selling strategy and their relationships in the promotion process.

MKTG 3721 Introduction to Digital Marketing Strategies: 3 semester hours

Prerequisites: MKTG 3700 and a minimum campus GPA of 2.0. This course explores the world of digital media marketing and how it impacts and is integrated along with our traditional marketing channels. It explores how the balance of power has shifted between brands and consumers. Consumers are becoming more active in the marketing process and in influencing how brands communicate with them. This course explores the latest digital marketing trends, how to build a strong website from an organic perspective, search strategies for success, website intelligence and tracking using Google Analytics, retaining customers via Email marketing, online display advertising, and developing an integrated marketing plan.

MKTG 3722 Introduction to Social Media Marketing: 3 semester hours

In this course, students will learn how to create a brand presence on social networks, understand the differences between earned and paid media, be introduced to the various tools (free and paid) used to listen and engage with consumers, discuss how brands manage healthy communities, and learn techniques used by social media managers to identify influencers. Students will also learn how to create various forms of content for consumption by consumers on these platforms including livestreaming, video, blogs, podcasts, memes, and more. Students will support the College of Business social media platforms via content creation, curation, production and distribution.

MKTG 3733 Customer Relationship Management (CRM): 3 semester hours

Same as ENT 3133. Prerequisites: MKTG 3721 and MKTG 3722 or consent of instructor. The marketing and sales technology framework covered in this course includes project management, automation and email, Customer Experience Platforms (CMS), Customer Relationship Management (CRM) systems, E-Commerce, data analytics and internet sources. We'll cover best-in-class technologies for use in small businesses through enterprises. Students will learn how to immediately apply the marketing technology roadmap and choose the right digital marketing tools to execute successful campaigns. Students may not receive credit for both MKTG 3733 and MKTG 5733.

MKTG 3734 Seminars in Digital and Social Media Marketing: 3 semester hours

Prerequisites: MKTG 3721 or MKTG 3722 or consent of instructor if prior digital/social media experience. In this course, the students will be attending three one, or three day intensive workshops covering various digital and social media marketing topics in depth. Topics may include CRM and email marketing strategy, advanced Facebook advertising, Google Analytics, strategic search engine marketing, paid search, LinkedIn strategy, data analytics and visualization, video production/editing, and podcasting strategy. All seminars are on various Fridays and Saturdays. Contact the instructor for the exact schedule for these workshops.

MKTG 3738 Advertising Technique: 3 semester hours

Same as MEDIA ST 3338. Prerequisites: COMM 1100 or MKTG 3700 or consent of instructor. Techniques for creating advertising messages and campaigns to reach target audiences. Focus on the process of persuasion, importance of advertising in modern economics, rationale for company advertisement, evaluation of advertising effectiveness, and assessment of advertising myths and truths. Practical application of messages and campaigns will be stressed.

MKTG 3740 Marketing Analysis: 3 semester hours

Prerequisites: INFSYS 1800, MKTG 3700, SCMA 3300, and a 2.0 Overall GPA. An investigation of the acquisition, presentation, and application of marketing information for management. Particular problems considered are defining information requirements, evaluating research findings, and utilizing information. Statistical methods, models, and/or cases are employed to illustrate approaches to marketing intelligence problems, such as sales forecasts, market delineation, buyer motives, store location, and performance of marketing functions.

MKTG 3750 Sales Management: 3 semester hours

Prerequisites: MKTG 3700 and MGMT 3600. (MGMT 3600 may be taken concurrently). Also a minimum campus GPA of 2.0. The aim of this course is to provide an understanding of how selling is critical to the success of marketing. The course will promote critical thinking skills as well as practical selling skills needed in a competitive marketplace. Course topics include, among others, selling principles & techniques, understanding of the tasks and roles of the sales manager, the management of sales professionals within an organization, developing and applying effective persuasive communications, creating a vision, developing and implementing a sales-team strategy, structuring sales-force, designing and assigning territories, recruiting, training, motivation and evaluating salespeople, methods of compensation, and forecasting sales. The emphasis will be on ways the sales-force can be molded to build long-lasting relationships with customers through the systematic analysis and solution of customer's problems.

MKTG 3751 Personal Selling: 3 semester hours

Prerequisites: MKTG 3700 and junior standing, or consent of instructor. This course presents the business-to-business and customer-focused selling processes and their application through discussion, role-play, individual and group activities. Essential skills such as the appropriate use of communication tools, effective time-management and an understanding of various selling environments are also incorporated into the course.

MKTG 3760 Business to Business Marketing: 3 semester hours

Prerequisites: MATH 1105, MKTG 3700, overall GPA of 2.0 and senior standing. A study of the nature of the business-to-business (organizational) marketplace, concentrating on those aspects that differentiate it from consumer markets. The major focus of the course is marketing strategy, starting with analysis of the market wants and segments, concepts of pricing, the distribution arrangements, and buyer/seller relations. In this last area, consideration will be given to service, personal selling, sales promotion, and advertising, as found in the organizational marketplace. At all times emphasis is given to relating business-to-business marketing strategy to basic concepts in underlying business disciplines. Lectures and case discussions are used heavily in the course.

MKTG 3761 Entrepreneurial Product Development: 3 semester hours

Same as ENT 3161. Prerequisites: ENT 3100 or consent of instructor. This course allows students who want to learn how to transform an abstract idea for a new product into a concrete product development project, whether in a structured corporate environment or as entrepreneurs presenting to, and working with, external stakeholders.

MKTG 3765 Sports Marketing: 3 semester hours

Prerequisite: MKTG 3700. This course is a study of how the principles of marketing are applied in the sports industry. The course examines the marketing of sports, teams, athletes, etc., as well as the use of sports to market products (e.g., sponsorship and promotional licensing).

MKTG 3770 Introduction to Transportation: 3 semester hours

Same as SCMA 3370. Prerequisite: A minimum campus GPA of 2.0. This course provides an overview of the transportation sector, including history, providers, users, government regulation, and the central role of transportation in supply chain management. The course covers the importance of domestic and global transportation, the operational aspects of the various transportation modes (rail, water, motor, air, and pipeline), the role of transportation intermediaries, the demand and supply of transportation, and the managerial aspects of transport in both the commercial and urban environment.

MKTG 3780 International Marketing: 3 semester hours

Same as INTL BUS 3780. Prerequisites: MKTG 3700 and a 2.0 overall GPA. Marketing management problems, techniques and strategies needed to apply the marketing concept to the world marketplace. Understanding a country's cultural and environmental impact on the marketing plan is emphasized, as well as competing in markets of various cultures. Worldwide consumerism, economic and social development, the spread of multinational corporations, business ethics, and current economic and marketing issues are examined.

MKTG 3785 Women in International Entrepreneurship: 3 semester hours

Prerequisites: MKTG 3700; MKTG 3780 or INTL BUS 3780; and junior standing. This course is an integration of international business and entrepreneurship, with a focus on women entrepreneurs. It is designed to help students learn how entrepreneurs create and grow their ventures internationally. We will examine how entrepreneurs search, evaluate, and exploit opportunities across national boundaries to market goods and services effectively. We will explore the unique circumstances faced by women entrepreneurs and the appropriate strategies developed in order to sustain international growth.

MKTG 3790 Internship in Marketing: 1-3 semester hours

Prerequisites: A minimum campus GPA of 2.0; one must have completed and/or be currently enrolled in at least 6 credit hours of Marketing electives and have consent of supervising marketing instructor and the department chair. A Business College GPA of 2.5 is also required. Students are employed in the field of Marketing where they apply the knowledge and skills learned in the classroom. Professional development and obtaining specialized work experience are primary goals. A Marketing faculty member will monitor the student's program with the student providing a formal written report at the end of the project. MKTG 3790 may be counted toward the minimum credit hours of marketing electives required for a marketing emphasis.

MKTG 3795 Special Administration Problems - Marketing: 1-10 semester hours

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 overall GPA. Study of selected special problems in business and administration. May be repeated for credit with different topics.

MKTG 3798 Seminar in Marketing: 1-3 semester hours

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 overall GPA. This course is a selected special topic in the field of marketing. May be repeated for credit with different topics.

MKTG 3799 Independent Study in Marketing: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0 and approval by the supervising professor and the area coordinator. Special individual study in marketing under the supervision of a full-time marketing faculty member.

MKTG 4700 Marketing Management: 3 semester hours

Prerequisites: MATH 1105, MKTG 3700, three other marketing elective courses, senior standing, and a 2.0 campus GPA. An intensive analysis of major marketing decisions facing the firm, such as level, mix, allocation, and strategy of marketing efforts. Specific decision areas investigated include market determination, pricing, physical distribution, product policy, promotion, channel management, and buyer behavior. Competitive, political, legal, and social factors that may affect such areas of decisions are discussed. Cases, models, and problems are used heavily.

MKTG 5700 Integrated Marketing Strategies: 3 semester hours

Prerequisites: BUS AD 5000. This course is designed for students with no prior course work in the field of marketing. A wide spectrum of marketing institutions and activities is covered. The impact of marketing on the total firm, the economy, and society in general is assessed. The course is intended to develop and organize the fundamental marketing concepts necessary to an analytical study of consumer behavior, the economic environment and four managerial aspects of marketing. The acquisition and utilization of marketing research data for problem solving is stressed. Relation and integration of basic marketing knowledge to the successful development of sound marketing policy, planning, and strategy is developed.

MKTG 5701 Marketing Planning and Strategy: 3 semester hours

Prerequisite: MKTG 5700. Emphasizes the development of a total marketing program through an analytical study of the marketing-mix, the diagnosis of the business situation, along with the influence of exogenous variables and the development of an effective overall marketing strategy. Stresses importance of an integrated marketing plan and utilizes modern decision-making tools. Supplementary readings, journal articles, and current periodicals are used to place the theoretical framework of the course into the contemporary environment of the market place.

MKTG 5702 Brand Management: 3 semester hours

The course covers the building blocks and principles of branding and strategy, the importance of brand equity, and how to build and manage brand equity. This course provides an opportunity to internalize the concepts, principles and tools important in successful branding.

MKTG 5710 Consumer Motivation and Behavior: 3 semester hours

Prerequisite: MKTG 5700. An analysis of the socio-psychological foundations of consumer behavior including personality differences, needs and wants, status symbols, social change and mobility, fads and fashions. Consumer spending and saving habits, product preferences, leisure-time patterns, shopping behavior and motivation research also are examined for their impact on advertising, selling and marketing management.

MKTG 5721 Digital Marketing Strategies and Measurement: 3 semester hours

Prerequisites: MKTG 5700. This course provides students with the theoretical understanding of the internet marketplace necessary to adapt to its many changes, while also introducing them to the real-world internet marketing problems. The following topics will be covered: (1) an overview of the digital landscape and status quo; (2) digital advertising and promotion including search advertising and display advertising; and (3) transitioning to digital: product, price, and place.

MKTG 5722 Social Media Marketing Strategy: 3 semester hours

Prerequisites: MKTG 5700. This course teaches students how to create a brand presence on social networks, understand the differences between earned and paid media, understand the various tools used to listen and engage with consumers, how we manage healthy communities, techniques used to identify influencers, crisis management, rules of engagement for high profile individuals and corporations, the importance of transparency, and the various ways engagement is measured. Students will also learn how to create various forms of content for consumption by consumers on various social media platforms, including livestreaming, video, blogs, podcasts, and memes, and will become Hootsuite Certified by the end of the semester.

MKTG 5731 Special Seminars in Digital and Social Media Marketing: 3 semester hours

Prerequisites: MKTG 5721 or MKTG 5722 or consent of instructor if prior digital/social media experience. This course provides students with three one, two or three day intensive workshops covering various digital and social media marketing topics in depth. Topics may include CRM and email marketing strategy, advanced Facebook advertising, Google Analytics, strategic search engine marketing, paid search, LinkedIn strategy, data analytics and visualization, video production/editing, and podcasting strategy. All seminars are on Fridays and Saturdays. Contact the instructor for the exact schedule for these workshops.

MKTG 5733 Customer Relationship Management Strategies: 3 semester hours

Prerequisites: MKTG 5721 and MKTG 5722, or consent of instructor. The course covers project management, automation and email, Customer Experience Platforms (CMS), Customer Relationship Management (CRM) systems, E-Commerce, data analytics and internet sources. Best-in-class technologies for use in small businesses through enterprises will be covered. Students may not receive credit for both MKTG 3733 and MKTG 5733.

MKTG 5740 Marketing and Business Analytics: 3 semester hours

Prerequisites: MKTG 5700 and SCMA 5300. A broad approach to marketing research as a model for acquiring, retrieving, and analyzing decision-making information. Includes market measurement, evaluation of sales and cost effectiveness, sales forecasting and primary marketing research studies aimed at solving specific problems. Emphasis is placed also on building a theoretical and analytical framework to provide flexibility in the design of marketing experiments and in judging recent research innovations.

MKTG 5761 Business to Business Marketing: 3 semester hours

The course provides graduate students with an understanding of the role of business to business marketing as it pertains to business, government, and institutional customers. The course places a heavy emphasis on buyer-seller interaction embodying business to business marketing. In addition to discussing the standard theories and covering the subject domain of business marketing, the course focuses on the finer aspects of business to business marketing negotiations using exercises and readings. Student groups enact complex industrial buyer-seller negotiations striving to achieve their respective organizational goals.

MKTG 5770 Supply Chain Management Strategy: 3 semester hours

Prerequisite: Consent of instructor. Course addresses supply chain management and its implications, with a focus on what firms can do to maintain competitiveness in the quickly changing business landscape. Topics may include, but are not limited to, value chain analyses, marketing business-to-business, supply chain analytics, procurement, production, logistics, and inventory management within supply chains.

MKTG 5780 Seminar in International Marketing: 3 semester hours

Same as INTL BUS 5780. Prerequisite: MKTG 5700. An advanced seminar on topics in international or global marketing. Possible topics include the globalization of trade, export marketing, international market opportunity analysis, and negotiation for international marketers. Students who take one version of this course (e.g., globalization of trade) can take a second version of the course (e.g., negotiation for international marketers) with prior permission.

MKTG 5790 Internship in Marketing: 1-3 semester hours

Prerequisites: Students must have completed and/or be enrolled in at least 6 credit hours of marketing electives and have consent of supervising faculty member and the department chair. This course allows students to apply the knowledge and skills learned in the classroom as they work in the field of marketing. This internship provides professional development and specialized work experience. A marketing faculty member will monitor the student's program, and the student will provide a formal report at the end of the project.

MKTG 5795 Seminar in Marketing: 3 semester hours

Prerequisites: MKTG 5700. This course addresses advanced problems in contemporary marketing. Topics may include, but are not limited to, marketing strategy, marketing communications and advertising, product management, consumer behavior, channels of distribution, international marketing, and marketing research.

MKTG 5799 Individual Research in Marketing: 1-3 semester hours

Prerequisites: Consent of instructor and graduate director. Special individual research topics in marketing under the guidance of a specific professor.

Supply Chain and Analytics

The Supply Chain & Analytics Department is responsible for a broad range of topics in the areas of supply chain management and business analytics. It offers comprehensive supply chain programs at the undergraduate, Master and PhD levels. The department faculty are recognized as supply chain and analytics thought leaders who are most connected to the region's businesses.

Supply Chain Management (SCM) is the cornerstone of modern economies and includes all of the activities needed to get the right product to the right place in the right quantity at the right time. This requires effective procurement and sourcing, transportation and logistics, manufacturing and service delivery, inventory and warehousing, distribution, sales and customer service, as well as the associated information and financial management. SCM professionals are involved in every facet of an organization as they work to create a sustainable competitive advantage. **Business Analytics** includes a wide range of techniques, skills, statistical methods, and modeling to develop better understanding and new insights for data-driven decision making. Departmental programs cover descriptive, predictive and prescriptive analytics, including optimization and simulation, as well as effective communication of results from analytics projects. Graduates in Supply Chain & Analytics are in high demand in all types of service, manufacturing and government organizations.

Supply Chain & Analytics faculty and students are involved in a wide range of theoretical and applied research activities in collaboration with academic colleagues and industry partners, especially through its Supply Chain Risk and Resilience Research Institute (SCR3) and Laboratory of Advanced Supply Chain Analytics (LASCA). The department is supported by a very active and engaged departmental Advisory Board of leading companies and organizations in the St. Louis region.

Degrees

Business Administration BS, Supply Chain Management Emphasis (p. 439)

Supply Chain Analytics MS (p. 758)

Supply Chain Analytics MS Accelerated Master's Program (p. 759)

Business Administration MBA, Business Analytics Emphasis (p. 444)

Business Administration MBA, Supply Chain Management Emphasis (p. 452)

Business PhD, Supply Chain and Analytics Emphasis (p. 456)

Minors

Supply Chain Management Minor (p. 759)

Transportation Studies Minor (p. 762)

Certificates

Business Intelligence Graduate Certificate (p. 458)

Logistics and Supply Chain Management Graduate Certificate (p. 607)

Courses

SCMA 3300 Business Analytics and Statistics: 3 semester hours

Prerequisites: MATH 1105, INFSYS 1800, and a minimum campus GPA of 2.0. This course covers all three pillars of analytics (descriptive, predictive and prescriptive) for business applications. Topics include, but are not limited to, hypothesis testing, regression analysis, time series, forecasting and optimization. Students will learn to identify and define data-driven decision problems, build predictive and prescriptive optimization models, perform analysis and interpret results. It lays the foundation for students to be successful in more advanced analytical-oriented courses.

SCMA 3301 Introduction to Supply Chain Management: 3 semester hours

Prerequisites: A minimum campus GPA of 2.0. This course provides an understanding of fundamental concepts of supply chain management. All functional areas of supply chain management are explored in an integrated view of procurement, manufacturing and operations management, transportation and logistics, inventory and warehousing, demand planning, scheduling, network design, collaboration and performance measurement. Topics also cover supply chain financial metrics, strategy and change management for demand driven value networks.

SCMA 3320 Advanced Supply Chain and Operations Management: 3 semester hours

Prerequisites: SCMA 3301 or MATH 1320 and a 2.0 campus GPA . This course covers supply chain management with special focus on understanding manufacturing and service operations. Emphasis is on the application of quantitative methods to the solution of strategic, tactical and operational problems. Topics include demand planning, capacity, new product design and launch, process selection, facility layout, production planning, scheduling, inventory, process control, waiting lines, lean production, etc.

SCMA 3321 Procurement: 3 semester hours

Prerequisites: SCMA 3301 and a 2.0 campus GPA. This course covers procurement processes and supplier management, with emphasis on managing a supplier base for both products and services. Topics include the strategic role of procurement in supply chains, sourcing options, identification and evaluation of requirements, the role of product design, make-versus-buy decisions, and supplier selection and evaluation.

SCMA 3331 Data Visualization for Business Applications: 3 semester hours

Prerequisites: BUS AD 1107 or SCMA 3300. This course introduces students to the principles of effective data visualization, and how to visualize Key Performance Indicators across the strategic, tactical, and operational levels of business processes including supply chains, marketing, finance, among others. Visualization tools including Microsoft Excel, Tableau and ArcGIS are introduced. Topics covered include fundamental theory on display of quantitative information, the use of maps to analyze business data, and how to organize figures to tell a story.

SCMA 3345 Predictive Analytics and Data Mining: 3 semester hours

Prerequisites: SCMA 3300 and a minimum campus GPA of 2.0. This course focuses on predictive analytics in business settings. Topics may include applications of multivariate analyses to problems in marketing, finance, transportation and logistics. The course covers use of decision trees, regression and logistic regression to explain phenomena and predict future outcomes. Students acquire experience in the use of modern tools for data mining.

SCMA 3370 Introduction to Transportation: 3 semester hours

Same as MKTG 3770. Prerequisites: A minimum campus GPA of 2.0.

This course provides an overview of the transportation sector, including history, providers, users, government regulation, and the central role of transportation in supply chain management. The course covers the importance of domestic and global transportation, the operational aspects of the various transportation modes (rail, water, motor, air, and pipeline), the role of transportation intermediaries, the demand and supply of transportation, and the managerial aspects of transport in both the commercial and urban environment.

SCMA 3371 Traffic and Transportation Management: 3 semester hours

Prerequisites: SCMA 3370 or MKTG 3770, and a minimum campus GPA of 2.0. This course focuses on transportation management as a function of a firm's logistics and supply chain strategy. The course covers the management of the various transportation modes (rail, motor, air, water, and pipeline), strategic use of transportation intermediaries such as 3PL's, and linkages between transportation and warehousing. This course is designed to provide a basic understanding of the issues and work performed by transportation managers, including costing and pricing, transportation procurement, transportation technology, and cross border trade management.

SCMA 3376 Transportation Security and Risk: 3 semester hours

Prerequisites: SCMA 3370 or MKTG 3770 and a minimum campus GPA of 2.0. This course emphasizes risk and security issues related to transportation systems and supply chains, including highway, aviation, pipeline, waterway, transit, and rail networks, as well as port facilities. This course also provides an overview of transportation safety issues including passenger and employee safety, and hazardous materials. It addresses transportation and supply chain risk management and continuity strategies to prepare for, and respond to, disruptions as from terrorism events or natural disasters.

SCMA 3390 Internship in Supply Chain and Analytics: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0, consent of supervising instructor and department chair. Students are employed in the field where they apply the knowledge and skills learned in the classroom. Professional development and obtaining specialized work experience are the primary goals. A departmental faculty member will monitor the student's program with the student providing a formal written report at the end of the project. Students cannot receive credit towards the emphasis for both SCMA 3390 and SCMA 4389. Repeatable for a maximum of 9 credit hours.

SCMA 3398 Seminar in Supply Chain Management and Analytics: 1-3 semester hours

Prerequisites: To be determined each time the course is offered and to include a minimum 2.0 campus GPA. This course is a selected special topic in the fields of supply chain management and analytics. May be repeated for credit with different topics.

SCMA 3399 Independent Study in Supply Chain and Analytics: 1-3 semester hours

Prerequisites: Minimum campus GPA of 2.0 and approval by the supervising professor and the department chair. Special individual study in supply chain and analytics under the supervision of a full-time faculty member of the department.

SCMA 4322 Lean Production in Manufacturing and Service Operations: 3 semester hours

Prerequisites: A minimum campus GPA of 2.0 or graduate standing; also SCMA 3320. Study of Lean Production philosophy and techniques in manufacturing and service operations. Topics include process analysis and continuous improvement techniques, quick set-ups, total productive maintenance, kanban scheduling, cellular production, team organization of workers, supplier relations, quality management, and the environmental aspects of production.

SCMA 4325 Environmental Sustainability in Business Operations: 3 semester hours

Same as BUS AD 4325. Prerequisites: SCMA 3301 or permission of instructor. This course studies the environmental impacts of business operations, and it focuses especially on the principles and methods of "lean and green" operations, i.e., ways in which organizations can reduce their costs and increase profits, while reducing their environmental impacts. Specific topics include energy efficiency, resource reduction, waste reduction, design for the environment, externalities and internal pricing mechanisms, environmental technologies, life-cycle assessment, recycling, re-use, and re-manufacturing, as well as national and global environmental issues.

SCMA 4330 Business Logistics: 3 semester hours

Prerequisites: SCMA 3301 and a minimum campus GPA of 2.0. This course addresses the analysis of business logistics systems, their design, and operation in light of cost and service tradeoffs. Topics include performance measures and management, logistics and supply chain network design, facility location, transportation, vehicle routing, storage and handling, capacity planning, inventory management, customer service and the role of technology.

SCMA 4331 Applied Supply Chain Modeling: 3 semester hours

Prerequisites: SCMA 3300 and SCMA 3301 and a 2.0 minimum campus GPA. This course introduces applied models and technology for supply chain management through hands-on experience using state-of-the-art software and tools for the design and operation of supply chains. The course covers the economic tradeoffs involved in such decisions, data requirements, operating parameters, application of software packages and performance management and analytics.

SCMA 4347 Introduction to Project Management: 3 semester hours

Same as ENT 4147. Prerequisites: SCMA 3301 and a minimum campus GPA of 2.0. This course introduces the concepts and practices of Project Management with a focus on supply chain and analytics related projects. It covers conventional aspects of project management, such as the project evaluation, planning, roles, responsibilities, scheduling, and tracking. In addition, this class introduces agile project management as applicable to projects where there is not the specificity of goals or solutions to be applicable to traditional project management.

SCMA 4350 Prescriptive Analytics and Optimization: 3 semester hours

Same as ACCTNG 4450. Prerequisites: MATH 1105 and a minimum campus GPA of 2.0. This course covers the construction and application of prescriptive analytical models for optimizing business decisions in a wide range of areas such as manufacturing, service, supply chains, logistics and finance. Topics include performance metrics, linear programming, integer programming, network optimization, simulation, and implementation using Excel.

SCMA 4381 Global Supply Chain Management: 3 semester hours

Same as INTL BUS 4381. Prerequisites: SCMA 3301 and a minimum campus GPA of 2.0. This course covers business logistics and supply chain strategies involving shipments across national boundaries. Topics may include the effects of international agreements and regional trading blocks on supply chain strategies, the design of global logistics networks, managerial processes and systems for international production and distribution, and risk management for international logistics.

SCMA 4389 Supply Chain Management Practicum: 3 semester hours

Prerequisites: SCMA 3320. This course engages students with local organizations to provide practical experience in critical thinking, analysis, and communication in a supply chain context. This allows students to integrate, synthesize and apply supply chain management knowledge and skills in a real business/organization through projects jointly supervised by a faculty member and a supervisor from the organization. Students cannot receive credit towards the emphasis for both SCMA 3390 and SCMA 4389.

SCMA 4398 Advanced Topics in Supply Chain and Analytics: 1-3 semester hours

Prerequisites: SCMA 3301 or permission of the instructor and a minimum 2.0 campus GPA. An intensive study of a specific aspect, problem or technique in the areas of supply chain management, analytics, logistics, or operations management. Different topics may be offered under this course number, so the course (with different topics) can be repeated for credit.

SCMA 5300 Business Analytics: 3 semester hours

Prerequisites: MATH 1030 and spreadsheet modeling or equivalent competency. This course covers all three pillars of analytics (descriptive, predictive and prescriptive) for data-driven business applications at the graduate level. Topics include, but are not limited to, probability, hypothesis testing, regression analysis, time series, linear/integer programming and data mining. Real world examples and case studies in various business domains, including supply chain, finance, marketing and information systems will be introduced. It lays the foundation for students to be successful in more advanced analytical-oriented courses.

SCMA 5310 Supply Chain Strategies: 3 semester hours

Prerequisites: Graduate standing. This course addresses supply chain management and its implications, with a focus on what firms can do to maintain competitiveness in the quickly changing business landscape. Topics may include fundamentals of supply chain management, value chain analyses, supply chain analytics, procurement, production, logistics, inventory management, and marketing business-to-business.

SCMA 5320 Supply Chain and Operations Management: 3 semester hours

Prerequisites: SCMA 5310 (may be taken concurrently). This course addresses decision-making in supply chains, operations and related business functions. Topics include product and process design, facility location and layout, aggregate planning, inventory management, and scheduling, as well as analytical methods of linear programming, decision analysis and queuing.

SCMA 5322 Lean Production: 3 semester hours

Prerequisites: SCMA 5310. This course covers the study of Lean Production philosophy and techniques in manufacturing and service operations. Topics include process analysis and continuous improvement, set-up reduction, total productive maintenance, kanban scheduling, cellular production, work teams, supplier relations, quality management, and the environmental aspects of production. Cases and a course project will be used to integrate and apply the course material.

SCMA 5325 Environmental Analysis and Sustainability in Business Operations: 3 semester hours

Same as BUS AD 5325. Prerequisites: SCMA 5310 or consent of instructor. This course analyzes the environmental impacts of business operations, and it focuses especially on the principles and methods of "lean and green" operations, i.e., ways in which organizations can reduce their costs and increase profit, while reducing their environmental impacts. Specific topics include energy efficiency, resource reduction, waste reduction, design for the environment, externalities and internal pricing mechanisms, environmental technologies, life-cycle assessment, recycling, re-use, and re-manufacturing, as well as national and global environmental issues.

SCMA 5334 Internship in Logistics and Supply Chain Management: 1-3 semester hours

Prerequisites: Consent of instructor. Students receive practical experience in the area of logistics or supply chain management. The internship is supervised by a professional in the host organization in consultation with a faculty member.

SCMA 5381 Global Supply Chain Management: 3 semester hours

Same as INTL BUS 5381. Prerequisites: SCMA 5310 (may be taken concurrently). This course covers global supply chain management strategy, planning and operations. Topics include issues in global trade, global network design and facility location strategies, international logistics, import-export operations, and global supply chain risk management.

SCMA 5389 Supply Chain Management Practicum: 3 semester hours

Prerequisites: SCMA 5300 or equivalent; SCMA 5310 or equivalent (may be taken concurrently). This course engages students with local organizations to provide practical experience in critical thinking, analysis, and communication in a supply chain context. This allows students to integrate, synthesize and apply supply chain management knowledge and skills in a real business/organization through projects jointly supervised by a faculty member and a supervisor from the organization. Students may not count both SCMA 5398 and an internship toward the SCMA emphasis.

SCMA 5399 Individual Research in Logistics and Operations Management: 1-3 semester hours

Prerequisites: Consent of instructor and graduate director. Special individual research topics in Logistics and Operations Management under the guidance of a specific professor.

SCMA 6321 Strategic Sourcing: 3 semester hours

Prerequisites: SCMA 5310 (may be taken concurrently). This course provides a strategic focus on the acquisition of goods and services and management of suppliers in business-to-business transactions. The course covers the strategic sourcing process, including categorizing the buy, conducting a market analysis, developing a supply strategy, analyzing prices and cost, developing bids, selecting suppliers, negotiating, and managing the supply base.

SCMA 6330 Business Logistics Systems: 3 semester hours

Prerequisites: SCMA 5310 (may be taken concurrently). This course focuses on analysis of business logistics systems and their role in supply chain management. It covers design and operation of logistics systems and their components. Topics include network design, facility location, transportation, vehicle routing, inventory management, customer service, sustainability, and reverse logistics.

SCMA 6331 Supply Chain Modeling: 3 semester hours

Prerequisites: SCMA 5300 and SCMA 5310 (may be taken concurrently) or consent of the instructor. This course introduces model-building techniques for data-driven decision-making in supply chains. It covers math programming (linear and integer programming), network optimization, and constraint programming, with their applications in production planning, MRP, transportation, network design and configuration. It provides hands-on experience by using state-of-the-art optimization tools and commercial software.

SCMA 6345 Business Analytics and Data Mining: 3 semester hours

Same as ACCTNG 5444. Prerequisites: SCMA 5300 and INFSYS 5800. This course concentrates on methods for converting data into business intelligence. It provides knowledge of the principles and techniques for business analytics and data mining. Topics include clustering, pattern recognition, visualization of relationships, predictive modeling, optimization techniques and simulation.

SCMA 6347 LOM Project Management: 3 semester hours

Prerequisites: SCMA 5310. This course addresses the concepts and processes of project management as applicable to logistics and operations management. Students will study organizational design, project specification, integrated project planning, risk management and project control, and how globalization, environmental and sustainability issues, quality control, and cultural factors drive project management. Students may not receive credit for both SCMA 6347 and INFSYS 6847.

SCMA 6350 Management Science Methods: 3 semester hours

Prerequisites: SCMA 5300 or consent of the instructor. This course provides comprehensive coverage of management science and operations research methodologies. It introduces data-driven optimization approaches to solving business problems, construction of mathematical models, and sensitivity analysis for managerial decision-making. Topics include linear programming, integer programming, network optimization, and simulation.

SCMA 6360 Supply Chain Integration: 3 semester hours

Prerequisites: SCMA 5310 (may be taken concurrently). The course covers the connections between supply chain capabilities and corporate competitiveness, the management of business relationships with customers and suppliers, collaboration and coordination approaches, the role of technology, and the link between supply chain performance and overall financial measures. Students will learn how to leverage the competitiveness of a firm by integrating and coordinating strategies, business relationships and key supply chain processes across the network of suppliers and customers in the supply chain and among the various departments within a firm.

SCMA 6370 Supply Chain Analytics Practicum: 3 semester hours

Prerequisites: SCMA 5300 and SCMA 6350. This course engages students with local organizations to provide practical experience in critical thinking, problem solving, analysis, and communication in supply chains. This allows students to integrate, synthesize and apply supply chain management knowledge and analytical skills in a real business/organization through projects.

SCMA 6395 Seminar in Logistics and Operations Management: 3 semester hours

Prerequisites: SCMA 5310. This course covers topics of current interest in logistics and operations management. Topics may include just-in-time and lean production, quality management, manufacturing and service systems, transportation and logistics, quantitative management tools, etc.

SCMA 7380 Advanced Data Analysis: 3 semester hours

Prerequisites: SCMA 5300 and admittance into the PhD Program, or consent of instructor. This course provides a study of multivariate analytical techniques and their application to the analysis of business systems. Topics may include, but are not limited to, the construction and adaptation of statistical and machine learning models and extrapolative techniques to accommodate factor interactions, nonlinearities, and periodic effects. Methodologies include multiple regression, general linear model, time series analysis, neural networks, and Bayesian methods, among others.

SCMA 7382 Empirical Research Methods: 3 semester hours

Prerequisites: Admittance into the Business Administration PhD Program or consent of instructor. This course focuses on the application of research methods used in collecting and analyzing data from organizations or businesses to build and test supply chain theory. Research methods and their application in supply chain scholarship discussed in this course can include, but are not limited to, surveys, expert panels, field experiments, controlled experiments, structured and semi-structured interviews, archival data analysis, Delphi techniques, case studies, and action research.

SCMA 7383 Advanced Optimization: 3 semester hours

Prerequisites: SCMA 6350 and admittance into the Business Administration PhD Program, or consent of instructor. This doctoral seminar focuses on the theories and methodologies in deterministic optimization. It covers topics including the simplex method and duality theory in linear programming, network optimization, branch-and-bound, branch-and-cut, decomposition methods in integer linear programming, and various heuristics and metaheuristics for solving NP-hard combinatorial optimization problems.

SCMA 7390 Research Seminar in Supply Chain and Analytics: 3 semester hours

Prerequisites: Admittance into the Business Administration PhD Program or consent of instructor. This course covers research approaches, methodologies, and findings in Supply Chain and Analytics. This course may be repeated for credit when the subject matter is different.

SCMA 7393 Special Topics in Supply Chain & Analytics: 3 semester hours

Prerequisites: Admittance into the Business Administration PhD Program or consent of instructor. This course provides an in-depth analysis of special topics in Supply Chain & Analytics research. This course may be repeated for credit when the subject matter is different.

College of Education

College of Education Home Page

About the College

The College of Education offers a variety of programs at all levels that lead to exciting and rewarding career opportunities. It takes many types of education professionals to prepare our children, youth and adults for an ever-changing world. The College's faculty, staff, and community partners are committed to providing experiences to build the knowledge and skills needed for individuals to be successful in multiple educational settings and occupations. These careers include teachers, principals, and superintendents for K-12 districts, schools, and classrooms; teachers and administrators for informal education organizations like museums, zoos, and nature centers; counselors and mental health professionals for schools, hospitals, corporate employee assistance programs, clinics and private settings; careers in sport management; student services personnel who provide oversight for college access and workforce preparation initiatives within the institution and community; and postsecondary leaders and instructors for community colleges, career technical schools, and four-year colleges and universities.

The College has 46 full-time faculty, of which six are endowed professors and two are UM-System Curator's Distinguished Research Professors. Additionally, the College has approximately 164 part-time clinical faculty who have years of direct classroom experience. The College offers six undergraduate degrees, 32 undergraduate and post-baccalaureate teaching certificates, seven Master's degrees, many graduate certificate programs, two Educational Specialist degrees, and two Doctoral degrees. In collaboration and partnership with a vast array of educational, business and community resources, our College can provide opportunities for faculty and students to develop professional connections which will improve their careers as well as their communities.

Support Services

Student support is provided through the **Office of Advising and Student Services (OASIS)**, 116 South Campus Classroom Building. This office contains a staff of professional undergraduate and graduate academic advisors who provide both undergraduate and M.Ed. students with the academic support they need to satisfy the requirements for state teacher certification as well as undergraduate and M.Ed. degree program requirements.

The **Office of Clinical Experiences and School Partnerships**, 269 Marillac Hall, houses professional staff who coordinate teacher education clinical experiences.

Accreditation

Program quality in the College of Education is recognized nationally through multiple outside professional bodies. The college is accredited by the Association for Advancing Quality in Educator Preparation and the Missouri Department of Elementary and Secondary Education for the preparation of early childhood, elementary, middle, secondary, physical, special educators, school counselors, school psychologists, principals, and superintendents. Additionally, the Council for Accreditation of Counseling and Related Educational Programs accredits our Counseling programs and the National Association for School Psychology accredits our School Psychology program.

Centers and Initiatives

The College hosts many centers and initiatives that enhance the experience of students in our programs. Among these are: the PACT program; the Center for Character and Citizenship; the E. Desmond Lee Technology and Learning Center; the Gateway Writing Project; the Richard Burnett Literacy Clinic; the Counseling and Social Advocacy Center; the Dr. Matthew D. Davis Racial & Social Justice Institute; and the Office of Inclusive Postsecondary Education, which provides multiple pathways for students with intellectual and developmental disabilities to access higher education. We also sponsor six charter schools within the City of St. Louis.

Course Designations in the College of Education

The following abbreviations are used to indicate instructional areas in the course listings and descriptions in the College of Education.

Counselor Education Courses (**CNS ED**)
 Early Childhood Education Courses (**ECH ED**)
 Educational Administration Courses (**ED ADM**)
 Educational Foundations Courses (**ED FND**)
 Educational Psychology Courses (**ED PSY**)
 Educational Research and Evaluation Methods Courses (**ED REM**)
 Educational Technology Courses (**ED TECH**)
 Elementary Education Courses (**ELE ED**)
 Middle Education Courses (**MID ED**)
 Higher Education Courses (**HIGHERED**)
 Health and Physical Education Courses (**HLTH PE**)
 Physical Education (**PHY ED**)
 College#Wide Education Courses (**EDUC**)
 Secondary Education Courses (**SEC ED**)
 Special Education Courses (**SPEC ED**)
 Sports Management (**SPTMGT**)
 Teacher Education Courses (**TCH ED**)

Teacher Education

Degrees and Areas of Concentration

Students may earn teacher certification in the fields of elementary education/special education, elementary education/TESOL endorsement, elementary education/special education/TESOL endorsement, early childhood education/early childhood special education, middle school, music education, physical education, art education, as well as the secondary education areas of biology, chemistry, English, foreign languages (French, Spanish), mathematics, physics, and social studies.

Students with a Bachelor's degree can combine educator preparation and Master's-level work in selected areas. Graduate programs leading to certification are also offered in counseling, reading, school administration (elementary and secondary principal, school superintendent), and special education.

The following certification programs are designed to provide the following learning outcomes. Upon successful completion of the programs, education candidates will:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply understanding of (a) content and pedagogical

knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.

- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

General Education Requirements

Students in the College of Education must meet university and departmental general education requirements (p. 30) specified for their degree programs.

Academic Residence

Students must be in residence for 30 of the last 30 semester hours of credit. Courses graded on a satisfactory/ unsatisfactory basis are not accepted within these last 30 semester credit hours. This residency requirement applies to students seeking a degree or teacher certification.

Education Majors

Professional education courses must be completed with a grade point average of 2.5 and no grade lower than a C (2.0).

The Cumulative, Content Area, and Professional Education grade point averages required for admission to the Teacher Education Program at UMSL are subject to changes in grade point average requirements promulgated by the Department of Elementary and Secondary Education.

Admission to the College of Education

Any students who designate education degree programs as their intended degree paths will have Education as their assigned academic unit. Students admitted to the College of Education and seeking teacher certification must also be admitted to the Teacher Education Program.

Application and Admission to the Teacher Education Program

The application can be found at <http://coe.umsml.edu/portal>

All students seeking teacher certification must be admitted to the Teacher Education Program. Applications to the Teacher Education Program are processed through the Office of Advising and Student Services (OASIS). Eligibility is based upon fulfillment of the following requirements:

- Submission of qualifying scores on a qualifying exam approved by the Missouri Department of Elementary and Secondary Education in areas of English, writing, mathematics, science and social studies. Students should consult OASIS for test descriptions, cost, required scores, dates of administration, retest policies, etc. (Students who have an earned bachelor's degree are not required to pass the qualifying exam).
- Completion of 60 hours of college or university courses (at UMSL or another accredited school).
- A grade point average of 2.75 or higher.
- Approved results of the Family Care Safety Registry.
- A clear TB test or chest x-ray, if appropriate.

General Information

It is important that students meet with an academic advisor in the Office of Advising and Student Services once each semester. Students should contact the office at 314-516-5937 to schedule an advising appointment.

Application to Practica

The application can be found at <http://coe.umsml.edu/portal>. Deadlines for the Formal Application are May 31 for January Practicum I candidates, December 31 for August Practicum I candidates and August 1 for Teach in 12 certification candidates who are approved to enroll in classes in August.

Upon receipt, formal applications for both pre- and post-degree (Teach in 12) students are checked to ensure they have met the following requirements:

- Admission to the teacher education program for both pre- and post degree (Teach in 12) students.
- A cumulative grade point average of at least 2.75 or above by the semester prior to the semester in which students plan to student teach. A 2.75 grade point average must be attained in order to graduate with a B.S. in education degree and/or be certified to teach in the state of Missouri. A 3.0 grade point average must be attained in professional education courses.
- Grade point average of 3.0 in the teaching field (secondary education students only).
- A grade of C or higher in all professional education courses. Lists of these courses are available in the OASIS office and from advisors.
- Completion of TB screening, Missouri Family Care Safety Registry check, FBI check and Missouri substitute certificate.
- Undergraduate students are required to have passed all sections of the qualifying exam designated by the Missouri Department of Elementary and Secondary Education.

The Practicum II experience in art, music, and physical education provides opportunities in a variety of settings. Students will be expected to student teach on a full-day basis for 15 weeks during an entire semester. Practicum II must be completed in residence.

For further information regarding requirements and certification, contact the Office of Advising and Student Services, 314-516-5937, 116 SCCB or consult the College of Education Advising Home Page.

Application for Degree and/or Certificate

Bachelor of Science in Education (B.S. Ed.)

Candidates for the B.S.Ed. degree must complete the graduation application; and undergraduate music and art students, as well as candidates interested in master's-level teacher certification must complete a certification application form in the Office of Advising and Student Services when they apply for admission to Practicum or during the semester before the one in which they expect to complete degree requirements. See information below on the state-required exit examination.

Bachelor of Educational Studies (B.E.S.)

Candidates should consult with the Office of Advising and Student Services or call (314) 516- 5397 for more information. This degree offers four areas of study. **It does not qualify students for Missouri Teacher Certification.** Visit the Education Sciences and Professional Programs Department home page for more information.

Certification

In cooperation with the Missouri State Department of Elementary and Secondary Education (DESE), the College of Education is responsible for recommending all qualified students for state teacher certification. The curriculum usually meets all requirements for the Missouri Department of Elementary and Secondary Education (DESE) Teacher Certification. DESE requirements, however, are subject to change and additional courses beyond degree requirements may be needed to obtain certification.

All teacher education candidates must pass the appropriate Missouri Content Assessment(s) in order to satisfy the degree requirements to earn the Bachelor of Science in Education degree. This exam must be taken during Practicum I.

Latin Honors Requirements

In accordance with the University's Latin Honors policy (p. 23), candidates graduating from the College of Education in the 2024-2025 Academic Year must meet the following GPA qualifications:

| | |
|-----------------|-------|
| Summa Cum Laude | 4.000 |
| Magna Cum Laude | 3.984 |
| Cum Laude | 3.919 |

Degrees and Areas of Emphasis

The College of Education offers Master of Education (M.Ed.), Educational Specialist (Ed.S.), and doctoral degrees at the graduate level. The M.Ed. degrees and the emphasis areas are:

Counseling

- Clinical and Mental Health Counseling (p. 492)
- School Counseling (p. 494)

Educational Administration

- Community Education (p. 546) (The College of Education is not accepting applications for this emphasis area)
- School Administration (p. 547)

Educational Psychology (p. 548)

Education

- Curriculum and Instruction Emphasis (p. 531)
- Early Childhood Education Emphasis (p. 532)
- Elementary and Special Education Teacher Certification Emphasis (p. 533)
- Elementary Teacher Certification (p. 535)
- Interdisciplinary Studies (p. 536)
 - for Teacher Residency (p. 537)
 - for Temporary Authorization Certification (p. 538)
- Reading Emphasis (p. 539)
- Secondary Teacher Certification (p. 540)

Higher Education (p. 581)

Special Education

- Behavior Principles and Interventions Emphasis (p. 749)
- Inclusive Education Emphasis (p. 749)
- Transition Studies Emphasis (p. 750)

Ed.S. Programs

Ed.S. degree programs are available in school psychology (p. 725) and educational administration (p. 529).

Doctoral Programs

Programs leading to the Ph.D. degree are offered in the areas of Counseling (p. 542), Educational Psychology (p. 544), Teaching-Learning Processes (p. 545), and Educational Leadership and Policy Studies (p. 543). The Ed.D in Educational Practice admits students to the thematic learning communities announced in December for study commencing the following fall.

Master of Education Degree

The Master of Education Degree programs are designed for graduates to attain the following learning outcomes:

- Understand the major theories in the discipline of study.
- Attain a solid foundation in the overall field of education in general, including areas of social justice, educational leadership and advocacy, educational psychology and research.
- Attain a depth of knowledge in the primary discipline.
- Think critically.
- Develop skills as a reflective practitioner to be able to create and sustain change.
- Conduct teacher research.

Admission and General Requirements

The College of Education follows Graduate School policies relating to admissions, academic standards, residency, transfer credit, time limitations, and thesis options (see Graduate Study in this Bulletin). In addition to meeting the general requirements of the Graduate School, applicants for counseling and educational administration must complete a separate application (see graduate studies in the Counseling Department and the Educational Leadership and Policy Studies Department pages in this Bulletin). The minimum number of hours required for the M.Ed. degree is 30 credit hours, except that the K-12 school counseling and mental health emphasis areas require 60 credit hours. The school has adopted a flexible policy on exit requirements, which are determined departmentally.

Advisement and Program Planning

Upon admission, each M.Ed. student is assigned a faculty advisor but should make an advising appointment to meet with an OASIS (College of Education Advising Office) advisor for the first semester of coursework only. A faculty advisor typically advises the student regarding registration and program planning thereafter. A program plan for the master's degree must be completed during the first semester that the student's academic program commences. This form includes all coursework required for the academic program and the exit requirement.

Students working toward teacher certification as graduate students should complete state certification forms in OASIS (College of Education Advising Office) one year before those requirements will be completed. Just remove this sentence).

Faculty Advisor Assignment Information

All M.Ed. students will be assigned an advisor by OASIS, the College of Education Advising Office, located in 116 SCCB. If any M.Ed. student determines that an advisor assignment has not been appropriately documented in MyView, please contact OASIS (College of Education Advising Office) at 516-5937. If a student would like to change their faculty advisor assignment for any master's degree program, please contact OASIS for further information. The faculty advisor information will subsequently be updated in MyView.

Educational Specialist Degree

The Ed.S. degree is intended for school personnel preparing for a specific role, either that of a school psychologist or that of a school building or district administrator. The programs require 60 hours of postbaccalaureate course work designed to meet the respective Missouri certification requirements. The Ed.S. in School Psychology degree program requires three years of intensive, full-time training but students may be able to complete up to half of the curriculum as a part-time student. The Ed.S. in Educational Administration can be pursued on a part-time or a full-time basis and can include credits taken in an M.Ed. in Educational Administration program.

The Educational Specialist Degree program is designed for graduates to attain the following learning outcomes:

- Expand their knowledge of the major theories in their area of specialty.
- Attain a solid foundation in the field of education in general and a depth of knowledge in the specialty.
- Think critically.
- Develop skills to become a reflective practitioner.
- Mentor teachers and other practitioners as a specialist in a specific area.
- Understand research methods in education.
- Conduct research.
- Demonstrate leadership skills and attributes.

Admission and General Requirements

The College of Education follows Graduate School policies (p. 45) relating to admissions, academic standards, residency, transfer credit, time limitations, and exit requirements. Specific materials required for application vary by program, but generally applicants should submit an application to The Graduate School, transcripts of previous college work, and letters of recommendation.

Advisement and Program Planning

For advising and program planning, school psychology students should contact the Department of Education Sciences and Professional Programs, 469 Marillac Hall, 314-516-5944. Educational administration students should contact the Office of Advising & Student Services (OASIS), 116 South Campus Classroom Building, at 314-516-5937.

Doctor of Education Degree

The Doctor of Education program (Ed.D.) with an emphasis in Educational Practice provides an accelerated doctoral experience structured to leverage the benefits of the collaborative dissertation model and immerse students in action research as part of a cohort community.

Scholar-practitioners typically work as part of a dissertation team of two or more students to investigate a high-impact Problem of Practice (PoP). The research experience encompasses the scholarly process of conducting

research and possibly collaborating with community stakeholders to review extant data related to the Problem of Practice. Students explore solutions to the Problem of Practice that impacts the local community and the educational workplace, and they also investigate national implications.

Students are admitted to the degree program and simultaneously to a Learning Community of Practice that is formed around a central theme. Learning Communities begin during the Fall semester. Members of the learning community advance through the program together as a cohort and complete the degree requirements within 3 to 3 ½ years. Students enroll in approximately 5-7 credits each semester. A collaborative Dissertation in Practice (DIP) is the culminating capstone project.

Doctor of Philosophy Degree

The Ph.D. degree in Education is designed for educators who desire directed research experiences promoting scholarly inquiry in education. Four emphases are available:

- Teaching-learning processes
- Educational leadership and policy studies
- Educational psychology
- Counseling

The Ph.D. program is designed for graduates to attain the following learning outcomes:

- Understand the major theories in their primary and secondary disciplines;
- Attain a breadth of knowledge in education in general and a depth of knowledge in the primary discipline;
- Think critically;
- Locate literature in the primary and secondary disciplines;
- Understand research methods in education;
- Conduct research; and
- Demonstrate leadership skills and attributes

Licensure and Certification

As of July 1, 2024 it has been determined that the following programs meet educational requirements for DESE Certification in Missouri.

- Early Childhood Ed BSEd
 - Special Education
- Elementary Ed BSEd
 - Special Education
 - TESOL
 - Special Education and TESOL
 - Middle School Education
- Physical Ed BESd
 - Physical Ed K-12
- Secondary Education BSEd
 - English
 - Mathematics
 - Modern Foreign Language- French
 - Modern Foreign Language- Spanish
 - Science-Biology
 - Science-Chemistry
 - Science-Physics
 - Social Studies

- Ed Administration MEd
 - School Administration
 - Elementary Education
 - Secondary Education
- Educational Admin EdS
 - Initial Principal Certification
 - Executive Superintendency
- Education MEd
 - Early Childhood Education
 - Elementary and Special Education Teacher Certification (Teach in 12)
 - Elementary Teacher Certification (Teach in 12)
 - Secondary Teacher Certification (Teach in 12)
 - Interdisciplinary Studies: Teacher Residency
 - Reading
 - Teaching English to Speakers of Other Languages (TESOL)
- Applied Behavioral Analysis MS
- Applied Behavioral Analysis Graduate Certificate
- Elementary School Teaching- Graduate Certificate
- Elementary and Special Ed Teaching - Graduate Certificate
- Elementary Math Specialist - Graduate Certificate
- Secondary School Teaching- Graduate Certificate
- Teaching English to Speakers of other Languages- Graduate Certificate
- Counseling MEd
 - Clinical Mental Health Counseling
 - School Counseling
- School Counseling (Post-Master's) Graduate Certificate
- School Psychology EdS
- Studio Art, Bachelor of Fine Arts
- Music, Bachelors of Music

We have not determined if the above programs meet the educational requirements for licensure in the remaining U.S states and U.S. Territories.

For additional information on State Authorization and Licensure requirements, please visit <https://teaching.missouri.edu/student/state-authorization/umsl/licensure>.

Under federal regulations, we may not enroll into licensure or certification program students located in a state or territory in which our program does not meet the educational requirements to be eligible for licensure or which the University has not made a determination. However, if you plan to seek licensure and employment in any of the following states or territories listed below, you may enroll in the program after signing an attestation indicating your plans to become licensed and employed in a state that meets requirements.

If you plan to seek licensure in one of the states listed above, please contact the College of Education Advising Office at 314-516-4970 for more information.

Education Sciences and Professional Programs

The College of Education at the University of Missouri-St. Louis is comprised of two departments: the Department of Educator Preparation and Leadership (EPL) and the Department of Education Sciences and Professional Programs (ESPP). Teacher educator and educational administrator preparation and certification occur in EPL, whereas ESPP supports these efforts via educational foundations, psychological development, counseling, educational technology, and research methods and evaluation courses and offers assorted undergraduate and professional graduate degrees that include Sport Management, Adult and Higher Education, Educational Psychology, three Counseling (CACREP-accredited) programs, Educational Studies, and a National Association of School Psychologists-approved (NASP) School Psychology Program.

The following degrees and programs are available through the Department of Education Sciences and Professional Programs:

Bachelor of Educational Studies

Bachelor of Science in Sport Management

- Career Counseling

Minors:

- Counseling and Human Development
- Sport Management

Master of Education:

- Higher Education
- Clinical Mental Health Counseling (CACREP-accredited)
- Educational Psychology
- School Counseling (CACREP-accredited)

Educational Specialist:

- School Psychology (NASP-approved)

Doctor of Education

- Assorted Learning Communities

Doctor of Philosophy in Education with an Emphasis in:

- Counseling (CACREP-accredited)
- Educational Psychology

Graduate Certificates:

- Career Counseling
- Character and Citizenship Education
- Couple, Marriage and Family Counseling
- College Access, Student Success and Student Services Leadership
- Multicultural and Social Justice Counseling
- School Counseling (Post-Master's)
- Program Evaluation in Education
- Social Justice in Education

Degrees

Educational Studies BES

- Early Childhood Emphasis (p. 548)
- Exercise Science and Wellness Emphasis (p. 550)
- Park and Museum Programs Emphasis (p. 551)
- Social Entrepreneurship Emphasis (p. 552)
- Youth and Adult Development Emphasis (p. 553)

Sport Management BS (p. 751)

Counseling MEd

- Clinical Mental Health Emphasis (p. 492)
- School Counseling Emphasis (p. 493)

Educational Psychology MEd (p. 548)

Higher Education MEd (p. 581)

School Psychology EdS (p. 725)

Education Ph.D.

- Counseling Emphasis (p. 542)

Minors

Counseling and Human Development (p. 491)

Sport Management (p. 752)

Certificates

Career Counseling Graduate Certificate (p. 458)

Character and Citizenship Education Graduate Certificate (p. 459)

Couple, Marriage and Family Counseling (p. 494)

College Access, Student Success and Student Services Leadership Graduate Certificate (p. 476)

Multicultural and Social Justice Counseling (p. 637)

School Counseling (Post-Master's) Graduate Certificate (p. 724)

Program Evaluation in Education Graduate Certificate (p. 702)

Social Justice in Education Graduate Certificate (p. 742)

Student Affairs Administration and Leadership Graduate Certificate (p. 753)

Courses

Courses offered by the department can be found at the links below:

Adult Education (ADULT ED)

Counselor Education (CNS ED)

Education (EDUC)

Educational Foundations (ED FND)

Educational Psychology (ED PSY)

Educational Research and Evaluation Methods (ED REM)

Higher Education (HIGHERED)

Sport Management (SPMGT)

Adult Education

Courses

ADULT ED 6230 Adult Learning and Development: 3 semester hours

Prerequisites: ED PSY 6210 or ED PSY 6111, or ADULT ED 6410. A study of how life stage theories and theories of learning pertain to the adult learner. The research bases of these theories will be explored in relationship to instructional practice with adult learners.

ADULT ED 6410 The Adult Learner: 3 semester hours

This course is designed for those who help adults learn in a variety of settings. A study will be made of the characteristics of Adult Learners and various theories of how they learn, as well as the implications of these characteristics and theories for Adult Education Research, Programming, Curriculum, Planning, and Instructional Practice.

ADULT ED 6411 History of Adult Education: 3 semester hours

Prerequisites: ADULT ED 6410. In this course the historical foundation of the field of Adult Education in America will be studied. This will include the major theorists and their contributions; together with the continuing education of the adult in a progressive social context.

ADULT ED 6412 Philosophical Foundations of Adult Education: 3 semester hours

Prerequisites: ADULT ED 6410 or consent of instructor. A comprehensive, systematic philosophical foundation for adult education. In this course the philosophical underpinnings of the various approaches to the education of adults will be explored. These include the role of the learner, the teacher, and overall objectives within each philosophy.

ADULT ED 6413 Improvement of Instruction in Adult Education: 3 semester hours

Prerequisite: ADULT ED 6410 or consent of instructor. A study of selected methods and instructional techniques appropriate for the teaching of adults. An examination of current research will be made as it relates to the problems of instructing adults.

ADULT ED 6414 Curriculum Theory and Development in Adult Education: 3 semester hours

Prerequisite: ADULT ED 6410 or consent of instructor. A study of curriculum theory and its application to adult education. Particular emphasis will be placed on the development of model curricula for various programs in adult education.

ADULT ED 6416 Survey of Adult Distance Education: 3 semester hours

Prerequisites: ADULT ED 6410. This course is designed as a survey of distance education covering the concept, theories, history, present practice, delivery systems, major issues and future directions of the field of distance learning. Emphasis is on research and practice in the U.S.; however, since much of the literature in the field has been written by educators in other countries, the course will explore topics and issues in distance education from an international perspective, identifying similarities and differences among countries as they relate to adult learning.

ADULT ED 6417 Multicultural Issues in Adult Education: 3 semester hours

Prerequisites: ADULT ED 6410. In this course the learners will discuss cultural diversity from an adult education perspective. Topics include cultural self-awareness, challenges/issues in intercultural educational settings, theoretical perspectives of multicultural education, and practitioner concerns and strategies for implementing multiculturalism in adult education settings.

ADULT ED 6418 Assessment in the Adult Classroom: 3 semester hours

Prerequisites: ADULT ED 6410 and ED REM 6707 or consent of instructor. This course addresses assessing how effectively adult educators are facilitating adult learning. Emphasis will be on knowledge and skills, learner characteristics, and learner reactions to instruction through the use of formative assessment of both student learning and instructional effectiveness in the adult classroom. Special attention will focus this assessment in the adult classroom within educational, corporate, community, and non-formal settings.

ADULT ED 6497 Problems in Adult Education: 1-10 semester hours

Prerequisite: ADULT ED 6410 or consent of instructor. Independent study on topics in adult education.

ADULT ED 6990 Internship: 1-10 semester hours

Prerequisite: ADULT ED 6410 or consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

Counselor Education

Courses

CNS ED 2000 Introduction to the Helping Professions: 3 semester hours

This course provides an overview of common mental health challenges, such as depression and anxiety, crisis, trauma, suicide, and substance use and abuse. The roles of various mental health professionals, such as school counselors, school social workers, clinical mental health counselors, psychologists, and psychiatrists will be examined to develop familiarity with the variety of professionals available to help meet student and consumer needs. Finally, students will explore their own career interests, values, aptitudes, and beliefs.

CNS ED 2030 Cultural Diversity and Social Advocacy: 3 semester hours

This course focuses on building student cultural competence by deepening their awareness of, exposure to, and appreciation of diverse populations. The course also covers understanding individual and community needs in order to engage with social advocacy in a responsible way. Students will be exposed to a variety of approaches to social advocacy.

CNS ED 3200 Interpersonal Skills in Helping Relationships: 3 semester hours

This course will enhance the student's ability to communicate clearly, build healthy relationships with others, resolve conflicts, advocate appropriately, and promote a positive and inclusive learning environment among individuals and groups and to be prepared to work well with diverse populations.

CNS ED 3220 Counseling Individuals with Special Needs: 3 semester hours

Prerequisite: TCH ED 3313 or equivalent, or consent of instructor. A course emphasizing counseling skills for individuals who plan to work with people with disabilities. Emphasis is placed on using counseling strategies with school-age children with disabilities.

CNS ED 6010 Theories of Counseling: 3 semester hours

Prerequisites: Admission to the MEd program in counseling, or graduate standing and consent of instructor. This course explores the philosophical foundations of counseling theory. The major constructs of contemporary counseling approaches are included and the practical applications of these theories are analyzed.

CNS ED 6020 Ethical and Professional Issues in Counseling: 3 semester hours

Prerequisites: Admission to the MEd program in Counseling, or graduate standing and consent of instructor. This course explores ethical, legal, and professional issues related to counseling. Ethical dilemmas in the provision of counseling services to individuals, couples, families, and groups are defined. Specific ethical codes of professional organizations are examined.

CNS ED 6030 Foundations for Multicultural Counseling: 3 semester hours

Prerequisites: CNS ED 6010 and CNS ED 6020, or graduate standing and consent of instructor. This course focuses on (1) reviewing knowledge and research in the area of multicultural counseling, (2) developing and/or enhancing skills useful in counseling with individuals from minority populations, and (3) developing levels of personal awareness about stereotypes, and learning how feelings and attitudes about these may impact counseling with individuals from minority populations.

CNS ED 6040 Group Procedures in Counseling: 3 semester hours

Prerequisites: CNS ED 6010 and CNS ED 6020, or graduate standing and consent of instructor. This course examines the process dynamics of groups, including group development, leadership, norms and therapeutic factors. Group counseling theories and approaches used for other group work including skills, personal growth, support, vocational, and developmental guidance groups are explored. Knowledge and skills of how to facilitate therapeutic groups are included. Students are required to be participant-observers or facilitators of a group outside of class time.

CNS ED 6050 Assessment in Counseling: 3 semester hours

Prerequisites: Graduate standing. This course develops students' abilities in statistical concepts, assessment psychometrics, and the assessment process. Students evaluate the usage of a variety of types of assessments with diverse clients in clinical mental health and school settings. Additionally, students think critically and practice how to select, administer, score, interpret assessments, and communicate assessment results to clients.

CNS ED 6060 Helping-Relationship Skills: 3 semester hours

Prerequisites: CNS ED 6010 and CNS ED 6020, or graduate standing and consent of instructor. This course includes the knowledge and application of counseling techniques and helping skills with an emphasis on experiential learning. Attention is focused on the development of the helping relationship, including helping processes and rapport building, skills used in the counseling process, and increased awareness of how students' values, beliefs, and behaviors are related to counselor effectiveness.

CNS ED 6070 Psychopathology and Diagnosis: 3 semester hours

Prerequisites: Graduate standing. Covers etiology, assessment and diagnosis of mental disorders using contemporary diagnostic systems. Course topics and assignments address the dynamics of adjustment and treatment implications for counselors, school psychologists, and other professionals.

CNS ED 6200 Foundations of School Counseling: 3 semester hours

Prerequisites: Admission to the MEd program in counseling, or graduate standing and consent of instructor. This course gives students a foundation for understanding the history, philosophy, and development of school counseling programs. The course examines the role functions of the school counselor within a developmental, comprehensive program, along with communication skills necessary for consultation with students, parents, school support staff, and resource people in the community.

CNS ED 6220 Counseling Individuals with Disabilities: 3 semester hours

Prerequisite: Graduate standing. This course provides instruction and practice in the basic communication, de-escalation, and evidence-based counseling skills and techniques used to support children, adolescents, and young adults with disabilities. The social-emotional needs of this population and impact on the family system will be discussed.

CNS ED 6270 School Counseling Practicum: 3 semester hours

Prerequisites: CNS ED 6200, CNS ED 6020, and either CNS ED 6000 or CNS ED 6060. This course requires 100 clock hours of supervised practice in counseling. It provides opportunity for students to pragmatically integrate and process materials, theories, techniques, and methodologies as they are applied in the counseling profession with emphasis on school counseling.

CNS ED 6280 School Counseling Internship: 1-6 semester hours

Prerequisites: CNS ED 6040 and CNS ED 6270, or graduate standing and consent of instructor. This course requires 100 clock-hours of internship for each semester credit hour of enrollment. Students are closely supervised under the direction of a graduate faculty member. Students must demonstrate counseling competencies and skillful ethical practice. Students receive a minimum of 1.5 contact hours of group supervision weekly by a graduate faculty member and 1 contact hour of individual supervision weekly by an internship site supervisor during terms of enrollment. Course may be repeated for a maximum of 6 semester credit hours.

CNS ED 6300 Foundations of Clinical Mental Health Counseling: 3 semester hours

Prerequisites: CNS ED 6070. This course provides a survey of counseling in a variety of mental health settings and introduces the basic philosophical, historical, and psychological foundations of clinical mental health counseling. Students explore the foundations and roles of the professional counselor in various community and agency settings.

CNS ED 6370 Clinical Mental Health Counseling Practicum I: 3 semester hours

Prerequisites: CNS ED 6060 with a grade of B- or better, CNS ED 6030, CNS ED 6040, CNS ED 6300. This course is 100 clock-hours of supervised practice in counseling to provide the opportunity for students to pragmatically integrate and process materials, theories, techniques, and methodologies as they are applied in the counseling profession, focusing on clinical mental health counseling. This course may be repeated for a maximum of 6 credit hours.

CNS ED 6380 Clinical Mental Health Counseling Internship: 1-6 semester hours

Prerequisites: CNS ED 6370 with a grade of S, or graduate standing and consent of instructor. This course is one hundred clock-hours of internship for each semester-credit-hour of enrollment. Students will be closely supervised under the direction of a graduate faculty member. Students must demonstrate counseling competencies and skillful ethical practice. Students will receive 1.5 contact hours of group supervision weekly by a graduate faculty member and 1 contact hour of individual supervision weekly by an internship site supervisor during terms of enrollment. This course may be repeated for a maximum of 6 credit hours.

CNS ED 6400 Career Counseling and Development: 3 semester hours

Prerequisites: Admission to the Counseling program, or graduate standing and consent of instructor. This course introduces theories of career development and decision-making and methods for career counseling with clients across the lifespan. Students learn strategies for culturally responsive career counseling, the impact of career development on mental health issues, and strategies for advocating for employment support for all clients.

CNS ED 6410 Advanced Career and Leadership Development: 3 semester hours

Prerequisites: CNS ED 6400 or consent of instructor. This course emphasizes current theories of career and leadership development, career counseling, advocacy, and leadership methods and skills. The focus is on issues of career development for culturally diverse populations and leadership in the counseling profession. Students explore and discuss the role of career theory in the planning, development, and delivery of a career development program.

CNS ED 6420 Rehabilitation Counseling and Career Assessment: 3 semester hours

Prerequisites: CNS ED 6050 and CNS ED 6400 or consent of instructor. This course provides an overview of the vocational rehabilitation process, addressing counseling and assessment issues specific to clients with disabilities. The course will review medical aspects of disabilities and provides a summary of state and federal vocational rehabilitation programs. It describes vocational and psychological assessment techniques used in rehabilitation counseling, especially the assessment of career interests, work values, work environment, work skills, work capacity, and career development stages.

CNS ED 6497 Problems: 1-10 semester hours**CNS ED 6500 Introduction to Systems in Counseling: 3 semester hours**

Prerequisites: CNS ED 6010 or consent of instructor. This course is an introduction to a systems perspective in relationship counseling with a focus on couples and families. Students learn major constructs of system-oriented theories and develop skills for assessment and case conceptualization to effectively work with diverse families facing challenges across the lifespan. This course also addresses ethical, professional, and legal issues related to couples and family counseling.

CNS ED 6510 Marriage and Relationship Counseling: 3 semester hours

Prerequisites: CNS ED 6500 or consent of instructor. This course focuses on the theory and techniques of marital, relationship, and couples counseling. Students learn models and methods for the prevention and treatment of relationship concerns in the context of the cultural and developmental needs of the relationship. Students develop critical skills necessary to be effective marriage and relationship counselors.

CNS ED 6520 Family Counseling: 3 semester hours

Prerequisites: CNS ED 6500. This course provides an exploration of topics, theories, and evidence-based practices relevant to working with diverse families. Students develop skills for applying theory and research-driven concepts, techniques, and interventions to family counseling.

CNS ED 6600 Counseling Children and Adolescents: 3 semester hours

Prerequisites: CNS ED 6010, or graduate standing and consent of instructor. This course focuses on theories and skills for counseling children and adolescents. Students apply developmental counseling approaches with attention to a variety of presenting concerns for children and adolescents. Students learn individual, group, and family intervention techniques and consultation skills, as well as ethical, legal, and multicultural considerations for counselors in school or clinical mental health settings.

CNS ED 6610 Introduction to Play Therapy: 3 semester hours

Prerequisites: CNS ED 6010 and ED PSY 6210 or ED PSY 6222. This course provides students with a foundation for understanding the history, theories, and application of play therapy. Discussion focuses on working with children in both agency and school settings, as well as how play therapy skills can be incorporated into the student's developing theoretical framework. This course can count toward the Registered Play Therapist credential.

CNS ED 6620 Advanced Play Therapy: 3-4 semester hours

Prerequisites: CNS ED 6040 and CNS ED 6610. This course helps students further develop their play therapy skills, especially in the area of client-centered play therapy. The course examines the use of play therapy with traumatized children and aggressive children in both school and agency settings. Group play therapy and sand tray therapy as additional modalities are explored. Ethical and legal issues, as well as supervision in play therapy, are emphasized. This course can count towards the Registered Play Therapist credential.

CNS ED 6630 Career Development in K-12 Schools: 3 semester hours

Prerequisites: CNS ED 6010, CNS ED 6020, CNS ED 6200 and CNS ED 6400. This course emphasizes knowledge and skills for addressing the career development needs and decision making of K-12 students. The course addresses the creation, implementation, and evaluation of sequential and developmentally appropriate career curricula and interventions, as well as contextual influences on career development. The course is intended for school counseling graduate students, and those interested in college and career preparation and advising.

CNS ED 6680 School Counseling in the Classroom: 3 semester hours

Prerequisites: CNS ED 6200 and SPEC ED 6412. This course covers curriculum design and delivery and classroom management for school counselors who are teaching classroom lessons focused on academic, career, and social/emotional content areas. The course emphasizes student-centered pedagogies, methods of conducting needs assessments and evaluations of student learning, and differentiation strategies to meet the needs of diverse learners.

CNS ED 6700 Introduction to Addiction Counseling: 3 semester hours

Prerequisites: CNS ED 6010 or consent of instructor. This course focuses on the nature, cause, prevention, and treatment of addictions through the lens of both harm reduction and abstinence models of recovery. The course explores a variety of topics and issues related to addiction counseling, with a focus on the social stigma and bias surrounding persons who struggle with substance use.

CNS ED 6730 Counseling for Loss, Crisis, and Trauma: 3 semester hours

Prerequisites: CNS ED 6030, CNS ED 6060, and (ED PSY 6210 or ED PSY 6222). This course introduces students to theory and practice in counseling response to loss, crisis, and trauma experiences. Topics include models of grief counseling, the impact of crises, disasters, other trauma-causing events, and counseling skills and therapeutic interventions appropriate for individuals, families, and groups experiencing loss, crisis, and trauma.

CNS ED 6810 Integrating Religion and Spirituality in Counseling: 3 semester hours

Prerequisites: CNS ED 6030. This course examines the methods to integrate religion and spirituality in counseling. It also addresses counseling strategies for persons of various religious backgrounds, the link between health and religion, and ethics involved in the assessment and integration of religion and spirituality in practice.

CNS ED 6820 Counseling Women Across the Lifespan: 3 semester hours

Prerequisites: CNS ED 6030. This course provides increased awareness and understanding of women's experiences influencing the counseling process. The course focuses on women's lifespan development, the diversity in this population, intersectional experiences, and an overview of clinical issues most common for women clients using a global perspective.

CNS ED 6830 Counseling Black Clients: 3 semester hours

Prerequisites: CNS ED 6030. This course promotes an increased awareness and understanding of the mental health needs of Black clients. Students explore assumptions made and practices used that can impede clinical progress with Black clients in clinical mental health or school settings. Students develop awareness, knowledge, and skills for culturally-attuned counseling with Black clients.

CNS ED 6840 Sexual Orientation and Gender Diversity in Counseling: 3 semester hours

Prerequisites: CNS ED 6030. This course focuses on affirmative perspectives regarding sexual orientation and gender diversity in counseling. Current information on LGBTQIA+ issues necessary for adequate practice or research in this area is covered.

CNS ED 6850 Social Class and Poverty in Counseling: 3 semester hours

Prerequisites: CNS ED 6030. This course focuses on social class and poverty in the United States by examining the circumstances of poverty, the consequences of living in poverty (on behaviors, aspirations, relationships, education, and health, including mental health), and the impact of poverty on a helping relationship. Students examine the personal, social, and cultural aspects of poverty in rural and urban settings. Students explore specific attitudes and techniques designed to maximize the quality of counselors' work with clients experiencing poverty.

CNS ED 6860 Human Sexuality in Counseling: 3 semester hours

Prerequisites: CNS ED 6030. This course focuses on integrating issues of human sexuality into the counseling process. The psycho-sexual development of the individual from birth throughout the lifespan is discussed and compared to other developmental tasks at each age. This course covers themes related to influences from family, culture, environment, socioeconomic, ethnic, and religious perceptions of sexuality and relationship orientation.

CNS ED 6870 Counseling and Cultural Competence in a Global Society: 3 semester hours

Prerequisites: CNS ED 6030 or consent of instructor. Through a mixed methods approach of cultural immersion, readings, class activities, and forums with cultural and educational leaders, counselor candidates will acquire strategies to collaborate with culturally diverse families and develop systemic approaches to equalize the experiences for every child/adolescent/adult client. Counselor candidates will broaden their world view and global perspective, and identify and develop culturally sensitive interventions for a range of counseling issues and settings. Candidates will also examine the impact of contemporary socio-cultural viewpoints.

CNS ED 7000 Advanced Theories and Practice of Counseling: 3 semester hours

Prerequisites: Doctoral standing or instructor consent. This course is an integrated seminar and practicum that is focused on traditional, contemporary, and emergent theories as applied to practice with diverse clients. Students maintain an active caseload of clients for 100 clock hours of supervised counseling practicum and receive weekly supervision while enhancing professional knowledge and counseling skills.

CNS ED 7010 Advanced Multicultural Counseling: 3 semester hours

Prerequisites: CNS ED 6030 and doctoral standing or consent of instructor. This advanced course addresses theories and research in multicultural counseling.

CNS ED 7020 Seminar in Counseling Research: 3 semester hours

Prerequisites: ED REM 6710, doctoral standing or consent of instructor. The purpose of this course is to review and analyze current counseling research literature. Ethical issues will be addressed.

CNS ED 7025 Advanced Counseling Research: 3 semester hours

Prerequisites: CNS ED 7020 or consent of instructor. Engages students in the conduct of an empirical research project. Building from the research proposal developed in CNS ED 7020, students will obtain IRB approval, collect data, analyze the data, and write a manuscript reporting the results in journal article format.

CNS ED 7030 Counselor Education and Supervision of Individuals and Groups: 3 semester hours

Prerequisites: CNS ED 7000, or graduate standing and consent of instructor. This course examines theories, models, and research in supervision (individual and group). Students will supervise master's level students in practicum, group, and field experience courses in counseling.

CNS ED 7035 Counselor Education and Supervision Internship: 3 semester hours

Prerequisites: CNS ED 7030, or graduate standing and consent of instructor. This course is an advanced counseling supervision seminar and internship that requires 100 clock hours of counseling supervision practice. Students maintain an active caseload of master's-level counselors in training as supervisees. During class sessions, students receive group supervision and learn about models and theories of counseling supervision.

CNS ED 7060 Professional Issues in Counselor Education: 1-2 semester hours

Prerequisites: CNS ED 7000. This course explores professional issues in counselor education, including models of leadership and advocacy. Students identify professional values, behaviors, and competencies for their success as doctoral students and counselor educators within academic settings.

CNS ED 7075 Teaching, Learning, and Technology in Counselor Education: 3 semester hours

Prerequisites: CNS ED 7000, or graduate standing and consent of instructor. This course examines the pedagogy and epistemology of counselor education. Philosophies of teaching, instructional design, instructional methods, assessment of learning, and the impact and use of technology in teaching will be explored within the framework of the eight core courses as defined by the Council for Accreditation of Counseling & Related Educational Programs (CACREP). Students will both learn and apply classroom teaching knowledge and skills.

CNS ED 7700 Advanced Counseling Internship: 3 semester hours

Prerequisites: CNS ED 7000. This course is an integrated seminar and internship that requires 100 clock hours of supervised practice in counseling. Students maintain an active caseload of clients and receive weekly supervision while enhancing professional knowledge and counseling skills.

CNS ED 7780 Doctoral Internship: 1-6 semester hours

Prerequisite: CNS ED 7000. This course is a one hundred clock-hour field experience for each semester-credit hour of enrollment under the direction of a graduate faculty member. Students provide counseling services to clients at field sites, teach and supervise beginning counseling trainees, conduct research projects, and engage in leadership and advocacy. This course may be repeated for a maximum of 9 credit hours.

Education

Courses

EDUC 1002 UMSL Succeed First Year Experience: 1 semester hour

Prerequisite: Consent of UMSL Succeed director. This course, required of all new UMSL Succeed students, is designed to assist students in making the transition to the university experience and to UMSL by giving students the knowledge and tools needed to succeed as a scholar. The course will also familiarize students with the relationship between their education and their career and personal goals, and will assist in developing positive connections with faculty, staff, and peers at UMSL. Students will learn about faculty expectations, support services, and student life, as well as academic disciplines. The course counts toward the requirements for completing the UMSL Succeed certificate.

EDUC 1004 UMSL Succeed Special Topics: 1-3 semester hours

Prerequisites: Consent of UMSL Succeed director. This course supports students in the UMSL Succeed program in successfully accessing coursework at the university. UMSL Succeed students have the opportunity to co-enroll in courses that align with their interests and abilities through a mutual agreement between Succeed staff and UMSL course instructors that meet student and faculty expectations. This course may be repeated for up to 6 credit hours.

EDUC 2002 Social Entrepreneurship: 3 semester hours

This course examines the mindsets, skills, and approaches that social entrepreneurs use to solve problems in society. Students explore the role of social entrepreneurs with an emphasis on how they create change in people's lives and their impact on local to global scales. Students identify sustainable models for social innovation and formulate social entrepreneurship action plans. This course requires students to participate in up to 20 hours of community-engaged learning at local organizations.

EDUC 2204 Special Topics in Education: 1-3 semester hours

Prerequisite: Completion of 75 hours and consent of instructor.

Examination of a special area or topic within the field of education. Topics to be considered will be announced prior to registration and may vary. For elective credit only. This course may be repeated for different topics. Not to exceed a total of six hours credit.

EDUC 2222 Interpretation: Connecting Audiences and Meaning: 3 semester hours

Interpretation is a process for forming intellectual and emotional connections between the interests of an audience and the inherent meanings within a resource. This class covers interpretive methods for development and delivery of thematic, non-formal presentations to various audiences. The class also introduces informal exhibit design, customer service and social media as they relate to interpretation.

EDUC 2297 Independent Study: 1-3 semester hours

Prerequisite: Completion of 75 hours and consent of instructor.

Independent study through readings, research, reports and conferences designed to provide depth in areas of study previously introduced in education courses. For elective credit only. May be repeated. Not to exceed a total of three hours credit.

EDUC 3170 Grant Proposal Writing for Educators: 3 semester hours

Prerequisites: ENGL 1100 or equivalent and junior standing. An introduction to grant proposal writing for educators and other professionals in community agencies, cultural institutions, and childcare centers. Students will practice writing the customary parts of a grant proposal as they learn essential concepts in fundraising, nonprofit management, and social entrepreneurship. Writing assignments include cover letters, problem statements, organizational profiles, project descriptions, budget narratives, and evaluation plans. Collaboration and peer review are required. Emphasis is on clarity, conciseness, format, style, tone, persuasiveness, and evidence basis.

EDUC 4989 Internship I: 1-3 semester hours

Prerequisites: Junior Standing, 12 credit hours of Bachelor of Educational Studies or Education Minor coursework, or consent of instructor and successful internship application. Supervised field experience in educational settings to prepare for planning, research, evaluation, and other professional activities in the student's emphasis area of concentration that will be carried out in EDUC 4990 and EDUC 4991.

EDUC 4990 Internship II: 6 semester hours

Prerequisites: C or better in EDUC 4989, senior standing, or consent of instructor and successful internship application. Supervised field experience in an approved setting.

EDUC 4991 Internship III: 6 semester hours

Prerequisites: EDUC 4990 (may be taken concurrently), C or better in EDUC 4990 if not taken currently, or consent of instructor, and successful internship application. Supervised field experience in an approved setting.

EDUC 5006 Graduate Workshop: 1-10 semester hours

Prerequisite: Consent of instructor.

EDUC 5612 Intrapreneurial Leadership: 3 semester hours

Prerequisite: Graduate standing. This course helps graduate students bring people and resources together to create value within existing organizations. Intrapreneurial leadership focuses on identifying and leveraging opportunities to enhance organizational responsiveness, growth, and vitality.

EDUC 5616 Accelerate Intrapreneurial Experience: 3 semester hours

Prerequisites: Graduate standing. This course equips graduate students to apply theories of leadership, entrepreneurship, innovation, and systems thinking within real-world organizational or business contexts. Students propose and implement a new program, product, or service model that builds organizational capacity and financial sustainability.

EDUC 6404 Seminar: 1-10 semester hours

Seminar on an educational topic or special issue not normally included in the regular curriculum.

EDUC 6408 Graduate Seminar: 1-10 semester hours

Prerequisites: Consent of instructor. Intensive study of selected issues in education.

EDUC 6491 Staff Development and Professional Growth: 1-10 semester hours

Designed in conjunction with an individual school district or educational agency and related to problems of education confronting that specific district or agency.

EDUC 6998 Thesis Research: 1-10 semester hours

Prerequisite: Consent of instructor.

EDUC 7050 The Research Process I: Framing Research Questions in Education Research: 3 semester hours

Prerequisites: Admission to the EdD or PhD in Education. This course is an overview of the essential elements of writing a research proposal including, identifying a problem statement and conceptualizing critical research questions. The course emphasizes exploring the research literature, framing research questions, and justifying them based on the literature.

EDUC 7200 English Academic Support: 1-3 semester hours

This course addresses the language needs of international doctoral students as they perform scholarly analysis and write at the doctoral level. The course contributes to the development of skills necessary for the successful completion of the dissertation. This course may be repeated for a maximum of 27 credit hours.

EDUC 7215 Data Analysis for Educational Practitioners: 3 semester hours

Prerequisites: Admission to an EdD cohort or consent of instructor. This course provides an overview of the quantitative skills needed for research including using software for statistical data analysis. The course facilitates an understanding and application of statistical techniques used for survey research.

EDUC 7220 Designing Research for Educational Practitioners: 1 semester hour

Prerequisites: Admission to an Ed.D. cohort or consent of instructor. Guided workshop, applying the principles of research design, to design a study of the research issues selected by the learning community. Course covers how to develop research questions, choose among quantitative and qualitative methods, and consider the best, ethical practices.

EDUC 7305 Representing Data for Educational Practitioners: 1 semester hour

Prerequisites: Admission to an Ed.D. learning community or permission of instructor. Methods for presenting and displaying various types of data to a range of target audiences. Means of assuring accurate representation and the advantages and disadvantages of various methods are reviewed. Displays include tables, graphs, and charts. Current software programs to aid representation are reviewed.

EDUC 7310 Integrating Technology in Learning for Educational: 1 semester hour

Prerequisites: Admission to an Ed.D. cohort or consent of instructor. Appropriate technology tools for carrying out individual or group research and assessment projects will be identified and integrated. The appropriate tools will be learned and applied to present, analyze and complete projects.

EDUC 7320 Financial and Budgeting Skills for Educational Practitioners: 1 semester hour

Prerequisites: Admission to an Ed.D. cohort or consent of instructor. Examines budgeting and finance systems of educational institutions, both from the perspective of theory, research and policy development, and from the perspective of actual budgeting and practice. There will also be an emphasis on the impact of federal and state policy regarding the finance of educational institutions, as well as the processes by which budgets are developed and resources allocated.

EDUC 7325 Grant Writing for Educational Practitioners: 1 semester hour

Prerequisites: Admission to an Ed.D. cohort or consent of instructor. Provides hands-on help for current and would-be grant writers. Examines search tools to locate likely request for proposals, explores text and sub-text issues, develops a timeline for grant development and submission, provides practice on how a peer review system works, considers issues related to revision and follows the real processes engaged in by successful grant recipients.

EDUC 7395 Research and Technical Writing for Educational Practitioners: 2 semester hours

Prerequisites: Admission to a doctoral program or consent of instructor. This course facilitates the preparation of components of a research proposal framework for individual and co-authored dissertation proposals, including the introduction, problem statement, conceptual framework, purpose statement, research questions, and literature review.

EDUC 7415 Topics in Education: 3 semester hours

Prerequisite: Admission to the doctoral program. Intensive study of a topic in education.

EDUC 7490 Directed Readings in the Education Research Literature: 1-6 semester hours

Prerequisite: Doctoral standing. Independent study of the education research literature in an area defined in consultation with an advisor.

EDUC 7600 Learning Community of Practice I: 1-6 semester hours

Prerequisites: Admission to an EdD cohort. This course requires students in the Ed.D. learning communities to apply the scholarship of teaching and learning through asset mapping, inquiry formation, and selected readings. Students develop professional connections, explore their interests and beliefs, and reflect on a problem of practice.

EDUC 7610 Learning Community of Practice II: 1-6 semester hours

Prerequisites: EDUC 7600. This course requires students to identify and examine research problems by developing skills of inquiry, integrating prior knowledge, and evaluating extant research.

EDUC 7620 Learning Community of Practice III: 1-6 semester hours

Prerequisites: EDUC 7610. This course assists students in the selection and definition of a problem of practice addressed through research by the learning community members. This includes building relationships within and outside the learning community and designing structure to support inquiry into a problem of practice.

EDUC 7625 Building Socially Just and Ethical Educational Communities: 3 semester hours

Prerequisites: Admission to the EdD program. This course examines the role of culture, analyzes social justice components, and considers ethical and legal issues for learning communities.

EDUC 7630 Learning Community of Practice IV: 1-6 semester hours

Prerequisites: EDUC 7620. This course requires students to design and pilot a research study. Students select tools of inquiry, locate study resources and supports, and analyze data.

EDUC 7640 Learning Community of Practice V: 1-6 semester hours

Prerequisites: EDUC 7630. This course requires students to prepare a dissertation proposal. This involves selection of research tools, establishment of study procedures at research sites, and adherence to high ethical standards for conducting research.

EDUC 7642 Sociocultural Perspectives in Education: 3 semester hours

Prerequisite: Doctoral standing and consent of instructor. Investigation of sociocultural theory with a focus on educational applications. Topics include the social formation of mind, language as cultural tool, methodological issues in social science research, and dialogic inquiry as pedagogy.

EDUC 7650 Learning Community of Practice VI: 1-6 semester hours

Prerequisites: EDUC 7640. This course is a continuation of EDUC 7640, which requires preparation of a dissertation proposal, selection of research tools, establishment of study procedures at research sites, and adherence to high ethical standards in research.

EDUC 7660 Learning Community of Practice VII: 1-6 semester hours

Prerequisites: EDUC 7650. This course requires preparation of a dissertation proposal, selection of research tools, establishment of study procedures at research sites, and adherence to high ethical standards in research.

EDUC 7670 Learning Community of Practice VIII: 1-6 semester hours

Prerequisites: EDUC 7660. This course requires students to prepare the final chapters of the dissertation, understand and perform data analysis, interpret the results for a problem of practice, provide recommendations for future research, and disseminate the results to applicable audiences.

EDUC 7680 Learning Community of Practice IX: 1-6 semester hours

Prerequisites: EDUC 7670. This course assists students to prepare the final chapters of the dissertation, understand and perform data analysis, interpret the results for a problem of practice, provide recommendations for future research, and disseminate the results to applicable audiences.

EDUC 7690 Learning Community of Practice X: 1-6 semester hours

Prerequisites: EDUC 7680. This course prepares students to defend the dissertation. This includes assistance with the dissertation manuscript and the oral defense.

EDUC 7710 Research Methods and Design for Educational Practitioners: 3 semester hours

Prerequisites: Students must be admitted to the EdD program in order to enroll in this course. This course prepares educational practitioners to identify and understand research questions and develop appropriate research designs to answer them. Students learn how to critically evaluate research reports.

EDUC 7880 Research Internship I: 3 semester hours

Prerequisites: Nine hours of research methods or statistics and consent of instructor. Supervised experience in the conduct of research studies or scholarly inquiry.

EDUC 7881 Research Internship II: 3 semester hours

Prerequisites: EDUC 7880 and consent of instructor. Supervised experience in the conduct of research studies or scholarly inquiry.

EDUC 7882 Research Internship III: 3 semester hours

Prerequisites: EDUC 7881 and consent of instructor. Supervised experience in the conduct of research studies or scholarly inquiry.

EDUC 7889 Laboratory of Practice: 1-6 semester hours

Prerequisites: Admission to an Ed.D. cohort. Field experience that bridges theory and practice in solving complex, situated problems of practice.

EDUC 7950 Preparation for Writing the Dissertation Proposal: 1-3 semester hours

Prerequisites: Completion of research methods course requirements. This course provides an in-depth examination of the essential elements of a dissertation proposal. Particular emphasis is placed on examining the validity and reliability or the trustworthiness of the design of proposed research. Tools for identifying strengths and weaknesses are applied to proposals. Critique of proposals is employed. Also reviewed is the process of presenting and defending a proposal.

EDUC 7998 Dissertation in Practice Research: 1-8 semester hours

Prerequisite: Admission to pre-candidacy in the EdD program.

EDUC 7999 Dissertation Research: 1-12 semester hours

Prerequisite: Admission to pre-candidacy in the PhD in Education program.

Educational Foundations

Courses

ED FND 3251 Black Americans in Education: 3 semester hours

An examination and analysis of conditions affecting the education of black Americans and their schools, with emphasis on relationships between schools and the black community, and needed changes in education.

ED FND 4330 History of American Education through the Lens of Social Justice: 3 semester hours

Prerequisite: A course in American History or consent of instructor. An overview of the evolutionary development of American educational theory and practice from the early colonial period to the present. Attention is also given to selected issues in professional education. This course will examine the history in light of contemporary concerns over social justice.

ED FND 6200 Demographic Contexts of Education: 3 semester hours

Prerequisites: Graduate standing. This course is a critical examination of the impact of population changes on schools. Students will have the opportunity to investigate the social and economic dimensions of demographic shifts that affect demand for and organization of education services.

ED FND 6201 Race, Trauma, and Education: 3 semester hours

This course examines the recent move toward trauma-informed care and explores routine instances of in-school trauma that are not addressed.

ED FND 6202 Race and Culture in Educational Reform and Policy: 3 semester hours

Prerequisites: Graduate Standing. Schools have played a pivotal role in mediating social tensions in the broader society over race and culture. However, many of the discussions in educational reform and policy fail to acknowledge how deeply that race and culture shape our thinking and influence our actions with regard to educational policy and reform. This course highlights how these factors have historically shaped and continue to shape the rhetoric and the reality of school reform and educational policies. In this course, students are encouraged to explore and examine the underlying assumptions about the purposes of schooling, the beliefs that underpin educational reform historically, and in contemporary society, and the actions by educational leaders and policymakers to change schools.

ED FND 6203 Political Contexts of Education: 3 semester hours

Prerequisites: Graduate standing. This course is a critical examination of those aspects of local, state, and federal politics which significantly influence the political contexts within which education policies are constituted and their concomitant practices implemented.

ED FND 6204 Intersectional Justice in Education: 3 semester hours

This course explores the intellectual contributions of Black women and intersectional theory originating out of Black feminist thought.

ED FND 6430 Ecological Context of Urban Education: 3 semester hours

Prerequisites: Graduate standing. The issues facing urban education in the 21st century are not limited to what occurs within schools and school districts, but also emanate from the larger socio-historical, political, and economic forces in U.S. society. With its emphasis on the ecology of urban education, this course examines urban schools in relation to the communities they serve, and how other institutions such as businesses and faith-based institutions shape the dynamics of schools and communities. Students will explore critical social, cultural, and policy issues in urban education by taking a macro and an interdisciplinary approach. We will explore the historical, political, and economic factors that have shaped urban education.

ED FND 6431 History of African American Education: 3 semester hours

Prerequisites: Graduate standing. Exploration of the history of education for African Americans. Among the topics investigated will be provision of schooling by the community and/or state; curriculum debates (i.e., vocational vs. classical), and official policies (and informal practices) surrounding segregation, desegregation, and resegregation. Also explores contested interpretations and the myriad ways that memories and meanings intersect through individuals and communities over education and its value.

ED FND 6497 Problems: 1-10 semester hours

Educational Psychology

Courses

ED PSY 2212 Child and Adolescent Development: 3 semester hours

Studies physical, emotional, social, and cognitive factors of growth and development of children from birth through adolescence. Major theories of learning and development are examined. Additional attention is given to understanding individual differences and the important influences of family and culture on development.

ED PSY 6111 Educational Psychology: 3 semester hours

Prerequisite: Graduate standing. This course examines current theories of learning, cognition, and memory and the corresponding implications for curriculum development and instructional practices. The impact of biological and social factors on learning and behavior also are considered.

ED PSY 6115 Personality and Social Development: 3 semester hours

Prerequisites: Graduate standing. A foundational course integrating major theoretical perspectives on personality and social development. Emphasis is on the dynamic interplay of sociocultural influences on personality and identity development, including the impact of social contexts such as the school on development.

ED PSY 6210 Life-Span: Individual and Family Development: 3 semester hours

Prerequisites: Graduate standing. Critical analyses of theories of human development including readings from empirical research and cross-cultural comparisons focusing on strategies to enhance developmental outcomes through relationship and environmental opportunity.

ED PSY 6215 Psychology of Early Childhood Development: 3 semester hours

Prerequisites: ED PSY 6111 or consent of instructor. A survey of the theories, concepts and research which inform the field of early childhood development and help caregivers and teachers understand the cognitive, social, and emotional changes that take place from birth through the primary years of schooling.

ED PSY 6220 Development of School-Age Students: 2 semester hours

Prerequisite: Graduate standing. Examines theories and concepts regarding the physical, cognitive, social-emotional, and moral development of school-age students. Particular attention is given to the influences of individual and cultural diversity on development.

ED PSY 6222 Advanced Studies in Child and Adolescent Development: 3 semester hours

Prerequisites: Graduate standing. Investigates current psychological theories and research regarding the physical, cognitive, and social-emotional development of children and adolescents.

ED PSY 6222T Advanced Studies in Child & Adolescent Development for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency. This course supports teachers in residence in the investigation of current psychological theories and research regarding the physical, cognitive, and social-emotional development of children and adolescents.

ED PSY 6226 Mental Health and Development of Children and Youth: 3 semester hours

Prerequisites: A graduate or undergraduate developmental psychology course and graduate standing or consent of instructor. This course examines the psychological impact of common developmental challenges affecting the mental health of children, adolescents, and young adults. It reviews research-based options for prevention and early intervention at the individual, family, and cultural levels.

ED PSY 6310 Psychology of Learning Processes: 3 semester hours

Prerequisites: ED PSY 6111. Advanced study of learning and instructional theories. The historical and theoretical bases of instructional practice are examined.

ED PSY 6474 Understanding the Psychosocial Development of Emerging Adults: 3 semester hours

Same as HIGHERED 6474. Prerequisites: Graduate standing. This course provides a biopsychosocial perspective on the current psychological theories related to the development of the emerging adult student, beginning with late adolescence. An emphasis is placed on issues related to late adolescence and emerging adults, and more specifically, college student populations. This course also explores topics related to learning and memory that provide a theoretical foundation for understanding the behaviors of emerging adults, patterns of growth and development, and attitudinal changes.

ED PSY 6497 Problems: 1-10 semester hours***ED PSY 6530 Foundations of School Psychology: 3 semester hours***

Prerequisites: Admission to the School Psychology Program or consent of instructor. Examines the professional roles, responsibilities, and functions of psychologists in schools. Focuses on educational foundations of school psychology including the history of the profession, organization and operation of schools, and diversity among students and their families.

ED PSY 6532 Psychoeducational Differences: 3 semester hours

Prerequisites: Graduate standing. Examination of classification systems used with children and adolescents in the diagnosis and treatment of educational and physical disabilities, mental disorders, and other developmental challenges.

ED PSY 6540 Psychoeducational Interventions: 3 semester hours

Prerequisites: Grades of B- or better in ED PSY 6545 and ED REM 6718, or consent of instructor. Examines academic and instructional interventions, both preventive and remedial, that are delivered in schools and related settings with children and adolescents. Emphasizes linking assessment and intervention via use of direct and indirect service delivery.

ED PSY 6542 Social-Emotional and Behavior Interventions: 3 semester hours

Prerequisites: Grade of B- or better in SPEC ED 6325 or ED PSY 6545, or consent of instructor. This course provides instruction and practice in the use of the problem-solving model to address common social-emotional and behavior problems found in schools. The course emphasizes research-based, early intervention, and targeted intervention techniques that improve student behavior. Students must have a concurrent placement in a school or related setting to complete course assignments.

ED PSY 6545 Consultation in Schools and Related Settings: 3 semester hours

Prerequisites: Admission to the School Psychology or Special Education Program, or consent of instructor. Examines the theories, research, and legal/ethical issues related to consultation in schools and related settings. Emphasis on understanding the process of consultation using a problem-solving approach. Includes instruction in interviewing, observation, and development and evaluation of interventions.

ED PSY 6550 Professional Issues in School Psychology: 3 semester hours

Prerequisites: Grade of B- or better in ED PSY 6530 or consent of instructor. Advanced examination of professional issues - specifically the legal, ethical, and cultural factors - that influence the practice of school psychology.

ED PSY 6590 School Psychology Practicum I: 3 semester hours

Prerequisites: Grades of B- or better in ED PSY 6550 and ED REM 6719. This course provides an introductory supervised experience in providing psychoeducational assessment and interventions for academic and behavior problems in schools and related settings. Settings and responsibilities are to be determined in consultation with program faculty and site supervisor.

ED PSY 6591 School Psychology Practicum II: 3 semester hours

Prerequisites: Grade of B- or better in ED PSY 6590. Advanced supervised experience in consultation, problem solving, psychoeducational assessment and interventions for academic and behavior problems in schools and related settings. Settings and responsibilities determined in consultation with program faculty and site supervisor.

ED PSY 6598 School Psychology Internship I: 3 semester hours

Prerequisites: Grade of B- or better in ED PSY 6591. Supervised field-based placement in an approved school or educational setting under the supervision of an appropriately credentialed school psychologist. Course is eligible for graduate equivalency credit.

ED PSY 6599 School Psychology Internship II: 3 semester hours

Prerequisites: Grade of B- or better in ED PSY 6598. Advanced supervised field-based placement in an approved school or educational setting under the supervision of an appropriately credentialed school psychologist. Course is eligible for graduate equivalency credit.

ED PSY 6990 Internship: 1-10 semester hours

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

Educational Research And Evaluation Method

Courses

ED REM 6497 Problems: 1-10 semester hours

Prerequisite: At least one previous ED REM course and consent of course supervisor. Individual study on topics pertaining to educational measurement, evaluation, statistics and research design.

ED REM 6707 Classroom Measurement and Evaluation: 3 semester hours

Prerequisites: Graduate admission or consent of instructor. An introductory graduate course to classroom testing and evaluation. Topic areas include comparison of criterion- and norm-referenced theory and technique; classical test theory, reliability, validity, and associated descriptive statistics; derived and transformed scores; preparation of instructional objectives for use in developing the classroom test, performance evaluations, and portfolio rubrics; use of evaluation to assess student achievement and instructional effectiveness.

ED REM 6710 Educational Research Methods and Design: 3 semester hours

Prerequisites: An introductory statistics course or an introductory research design course; or consent of instructor. Covers educational research methodology: comparison of various types of qualitative and quantitative educational research, threats to internal/external validity, sampling methods, data analyses, and components of research reports.

ED REM 6716 Academic Assessment and Intervention: 3 semester hours

Prerequisites: Graduate standing. Provides instruction in measurement concepts, interpretation of cognitive ability tests, and use of norm-referenced and curriculum-based assessment techniques in developing academic interventions. Special attention is given to data-based decision making and the links among instruction, assessment, and intervention.

ED REM 6718 Psychoeducational Assessment and Intervention: 3 semester hours

Prerequisites: Grade of B- or better in ED PSY 6530 or CNS ED 6050, or consent of instructor. Reviews measurement concepts and covers administration, scoring, interpretation, and reporting of individually administered tests of academic and cognitive abilities. Special attention is given to the link between assessment and intervention.

ED REM 6719 Advanced Psychoeducational Assessment and Intervention: 3 semester hours

Prerequisites: Grade of B- or better in ED REM 6718 or consent of instructor. Instruction is provided in advanced and specialized assessment, diagnostic, and intervention techniques for individuals with intellectual disabilities, emotional or behavior disorders, and other low incidence disabilities experienced by children and youth.

ED REM 6730 Educational Program Development and Evaluation: 3 semester hours

Prerequisites: ED REM 6710 or ED REM 6750; or consent of instructor. This course covers principles and procedures for developing programs based on needs assessment, logic models, and research design. It includes assessing the quality and effectiveness of planned interventions and system change in educational settings.

ED REM 6732 Advanced Educational Program Development and Evaluation: 3 semester hours

Prerequisites: ED REM 6730 or consent of instructor. This course extends the principles, attributes, and practice of program evaluation to contemporary problems and settings. It focuses on grant writing, practical application of evaluation procedures, and data analysis as well as on adherence to the Program Evaluation Standards endorsed by leading professional research and evaluation associations.

ED REM 6735 Statistical Analysis for Education Research: 3 semester hours

Prerequisites: Graduate standing. Provides students with a fundamental intermediate understanding of quantitative methods and their relationship to social science research in education. This course is designed to provide statistical background to students who will pursue advanced degrees in education. Students will conduct lab data analysis based on the topics covered in the class and learn how to generate specific research questions and conduct basic statistical analysis.

ED REM 6750 Advanced Research Design in Education: 3 semester hours

Prerequisites: ED REM 6735 or consent of instructor. Course is designed to provide students with a thorough background in the fundamental principles of research design in education, and the knowledge and skills necessary to design and carry out studies appropriate to a wide variety of research problems. It focuses on tailoring the research design and methodology to most effectively address the problem or issue of concern, including qualitative, quantitative, and mixed-method designs. This is an experiential course designed around active discussion by students each week, and requires each student to develop a detailed research proposal for conducting a study to examine an appropriate educational research problem.

ED REM 6990 Internship: 1-10 semester hours

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

ED REM 7771 Quantitative Research Methods I: 3 semester hours

Prerequisites: ED REM 6735 and ED REM 6750 or consent of instructor. A second course in advanced Educational research methods sequence, with focus on multiple regression analysis and its applications to educational and psychological research.

ED REM 7772 Quantitative Research Methods II: 3 semester hours

Prerequisites: ED REM 7771 or consent of instructor. An advanced educational research methods course: multivariate analysis of variance, canonical correlation, discriminant function analysis, factor analysis, cluster analysis, advanced topics in multiple linear regression; and associated research design issues.

ED REM 7781 Qualitative Methods in Educational Research I: 3 semester hours

Prerequisites: ED REM 6750 or consent of instructor. An introductory qualitative research methods course in education to develop skill in forming research questions, writing field notes, and collecting, organizing, and analyzing a variety of data. The design issues of triangulation subjectivity, and trustworthiness are explored. Ethics and ethical issues in qualitative research are presented.

ED REM 7782 Qualitative Methods in Educational Research II: 3 semester hours

Prerequisites: ED REM 7781 or consent of instructor. An advanced qualitative educational research methods course to address the issues of sampling strategies, observational and interview techniques, questionnaire construction, and data analysis. Requires access to a field setting to conduct a qualitative research study.

Higher Education

Courses

HIGHERED 5401 Current Issues in Higher Education: 3 semester hours

Prerequisites: Graduate standing. Familiarizes student with nature and characteristics of American higher education. Students learn about the structure of higher education, the roles played by the various constituencies, and current issues.

HIGHERED 5402 Student Affairs Administration: 3 semester hours

Prerequisite: Graduate standing. A survey course in student personnel administration with an emphasis on understanding the college student and on learning ways to meet both his/her academic and nonacademic needs.

HIGHERED 6404 Seminar: 1-10 semester hours

Prerequisite: Graduate standing.

HIGHERED 6405 Financial Issues in Higher Education: 3 semester hours

Prerequisite: Graduate standing. Provides an overview of the state/federal funding mechanisms for higher education in the U.S. Addresses practices in budgeting at various types of postsecondary institutions.

HIGHERED 6406 Governance of Higher Education: 3 semester hours

Prerequisites: Graduate standing. Concentrates on the study of the unique system of governance in higher education, including faculty, instructional, system, and state governing mechanisms.

HIGHERED 6408 Legal Issues in Student Affairs: 3 semester hours

Prerequisite: Graduate standing. Provides an exploration of the legal and philosophical principles that guide decision-making in higher education institutions and the courts. It also includes a detailed, in-depth analysis of legal cases that have an impact on students in private and public two- and four-year colleges and universities in the United States.

HIGHERED 6409 Critical Issues in Student Affairs: 3 semester hours

Prerequisites: Graduate standing. Explores the historical development and foundational theories of the student affairs profession. This course also explores the organization and management of programs and services, the formulation of policies that guide student personnel service programs, and the integration of program elements, research, current problems and trends.

HIGHERED 6410 Ethics in Higher Education Administration: 3 semester hours

Prerequisites: Graduate standing. Students will examine the historical philosophical foundations of ethics and their implications for faculty, staff and students in the academic workplace.

HIGHERED 6430 The Community College: 3 semester hours

Prerequisites: Graduate standing. The purpose of this course is to develop an understanding of the two-year college - its past, present and future. Examines history, operations, funding, internal constituents, curricular mission, societal role, and current issues.

HIGHERED 6431 Community College Leadership: 3 semester hours

Prerequisite: Graduate standing. Introduces students to leadership theory and practice and the literature of leadership development. Applies theory and practice to the unique role of the leader in community colleges, including the community college presidency. Particular emphasis is given to the diverse roles expected of the successful leader in today's community college.

HIGHERED 6440 Issues in Institutional Research I: 3 semester hours

Prerequisites: Graduate standing. Provides a history and overview of institutional research in postsecondary education. Other areas of interest include student issues, student outcomes, higher education funding, productivity funding, and legal issues.

HIGHERED 6473 Curriculum in Higher Education: 3 semester hours

Prerequisite: Graduate standing. The development, implementation, and assessment of curriculum in higher education as well as historical and philosophical perspectives; major figures and emerging trends are included.

HIGHERED 6474 Understanding the Psychosocial Development of Emerging Adults: 3 semester hours

Same as ED PSY 6474. Prerequisite: Graduate standing. This course provides a biopsychosocial perspective on the current psychological theories related to the development of the emerging adult student, beginning with late adolescence. An emphasis is placed on issues related to late adolescence and emerging adults, and more specifically, college student populations. This course also explores topics related to learning and memory that provide a theoretical foundation for understanding the behaviors of emerging adults, patterns of growth and development, and attitudinal changes.

HIGHERED 6475 College Access and Career Preparation for the Emerging Adult: 3 semester hours

Prerequisites: Graduate standing. This course provides an overview of practical and theoretical considerations related to college access and career preparation for youth and adolescents who are contemplating life plans following high school. Areas of exploration include college and career transition planning and advocacy for the emerging adult, college preparation and vocational programming options, and the impact of family and community support dynamics during this transition process.

HIGHERED 6476 Organization and Administration of Higher Education: 3 semester hours

Prerequisites: Graduate standing. This course includes the study of missions, governance, and organizational structures of American higher education institutions. Within this context, particular attention is given to administrative roles and responsibilities and issues of leadership.

HIGHERED 6477 History and Philosophy of American Higher Education: 3 semester hours

Prerequisite: Graduate standing. This course is a systematic study of the historical and philosophical contexts that have conditioned the evolution of American higher education. Particular attention is given to significant events, trends, and movements within American higher education.

HIGHERED 6478 Enrollment Management and Student Retention: 3 semester hours

Prerequisites: Graduate standing. This course explores theory and practice considerations for enrollment management and student retention practices in K-12 and postsecondary institutions in the U.S. Students engage in a focused discussion of contemporary topics related to enrollment management that have a profound influence on the profession, including access and equity; bias and discrimination; standardized tests and "non-cognitive" variables; race and ethnicity in selective admission; and financial aid.

HIGHERED 6497 Problems: 1-10 semester hours

Prerequisites: Graduate standing and consent of instructor.

HIGHERED 6900 Internship: 1-10 semester hours

Prerequisites: Graduate standing and consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

HIGHERED 7800 Higher Education Doctoral Seminar: 1-6 semester hours

Prerequisites: Doctoral standing or consent of instructor. Intensive directed study of selected issues related to the administration of higher education institutions.

Sport Management

Courses

SPMGT 1113 Introduction to Sport Management and Administration: 3 semester hours

This course emphasizes basic management principles as they relate to sports teams, facilities, businesses and enterprises. Students will explore techniques and approaches to allow them develop effective and comprehensive sports management plans. The course addresses issues in sports that relate to ethical requirements, gambling, performance enhancement substances and other ethical issues. It allows learners to study the complexities involved in the administration and leadership of sports programs including theories of management and administration, which will provide the students with effective leadership and supervision skills necessary in various sports programs and entities. This course will also address issues of sports governance, policy and leadership.

SPMGT 2200 Legal Issues in Sports: 3 semester hours

Prerequisites: SPMGT 1113 or equivalent. This course covers youth, amateur and professional sports law issues and Title IX. In addition, it explores legal issues in other related areas in various sports such as workplace safety, ADA compliance and other legal issues connected to the sport industry environment. It emphasizes understanding legal issues in the current sport industry and how to effectively analyze real world legal issues.

SPMGT 3100 Ethics in Sports: 3 semester hours

Prerequisites: SPMGT 1113 or equivalent. This course focuses on the exploration of contemporary values, issues, and controversies associated with sport and sport management. It discusses current issues, ethical dilemmas in the sport environment, organizational responsibility, and professional ethics. During this course, students become involved with discussions on sportsmanship, fan behavior, performance-enhancing drugs, cheating and deception, the role of violence in sports, gender equity in sport, deviant behavior in athletics, and issues related to youth sports participation.

SPMGT 3285 Sports Medicine: 3 semester hours

This course studies prevention and care of athletic/sport participation injuries. Emphasis is given to proper conditioning and training of the sport participant, safety education, care of injuries, preventative taping, and emergency responses, including CPR instruction/certification.

SPMGT 3380 Sports Nutrition: 3 semester hours

Prerequisites: Junior standing or consent of instructor. This course studies human nutrition and its relationship to healthy lifestyles and exercise performance. It includes the study of nutrients, food sources, healthy weight and body composition, energy intake and expenditure, fluid and electrolyte balance, and ergogenic aids.

SPMGT 3500 Sport Leadership: 3 semester hours

Prerequisites: Junior standing. This course equips junior-level students with the essential knowledge and skills required to excel in leadership roles within the dynamic and multifaceted sports industry. This elective course explores theories, principles, and best practices in sport leadership, providing students with a comprehensive understanding of effective leadership strategies specific to the sport context.

SPMGT 3731 Sports Media and Technology: 3 semester hours

This course examines and analyzes the current and emerging trends of media and technology in sports businesses. Students will identify ways in which various sports organizations are using social media to increase the size of their fan base and enhance their experience.

SPMGT 4113 Educational and Community Athletics: 3 semester hours

This course introduces students to the structure, membership, leadership and governance of educational and community athletic programs. Emphasis will be placed on the college athletics in NJCAA, NAIA and NCAA. In addition, the course explores high school, community and other recreational athletic activities.

SPMGT 4990 Sport Management Field Experience: 1-9 semester hours

Prerequisites: Junior standing, admission to the Sport Management Program, or consent of instructor. This course involves supervised field experience in an approved sports-related setting that provides opportunities for planning, research, evaluation, and other professional activities. This course may be repeated for up to 9 total hours of credit (42 hours in the field per 1 hour of credit).

SPMGT 4999 Sport Management Internship: 1-6 semester hours

Prerequisites: Senior standing and consent of instructor. The Sport Management Internship provides a capstone experience in Sport Management via placement with sports clubs, sports facilities, or business organizations associated with sports. Students will develop professional skills as they apply knowledge gained throughout the program. May be repeated for credit up to a total of 6 credits (degree requires 300 contact hours with 50 hours per credit).

Educator Preparation and Leadership

General Information

The Department of Educator Preparation & Leadership offers coursework leading to bachelor's degrees, master's degrees, graduate certificates, and doctoral degrees.

Through the full integration of content for general educators with special education, and second language learning, candidates gain knowledge and valued skills that make them highly qualified and marketable. Nationally recognized research faculty design and teach undergraduate and graduate courses that prepare educators in curriculum, instruction, assessment, and educational technology with a strong foundation in working with diverse and urban populations.

Mission

Our mission is to advance scholarship and promote teaching and learning as a lifelong process for all.

Career Outlook

Undergraduate and graduate degrees in elementary secondary and special education are most directly applicable to teaching at the level appropriate to the program emphasis. Demand for career-ready educators who have significant clinical experience working with Pk-12 students, and who demonstrate contemporary, best-practice knowledge, skills, and strategies continue to create school-based employment opportunities for UMSL graduates. As in the past, elementary education graduates are attractive candidates for employment in varied positions that require preparation and training in social and behavioral sciences. Positions that serve the general public, such as sales, service, public relations, and general business, are common examples. Future expansions of opportunities in schools are tied to population growth, increased

specialization of services, and reduction in ratios between professional staff and children served.

The employment outlook for special education teachers continues to be favorable, as they are in great demand among certain regions of the country. In addition to inclusion classroom teaching, graduates are typically employed as resource-room or self-contained classroom teachers, clinical diagnostic personnel, itinerant teachers, educational resource teachers, curriculum and/or behavior specialists, consultants, educational therapists, job coaches, supported employment and sheltered workshop evaluators, and in various supervisory and administrative positions among agencies and schools. In combination with related areas of expertise in systems supports, assessment, and educational psychology, for example, many occupations incorporate the skills, interventions knowledge, insights, and programmatic expertise learned in the UMSL Master's Degree of Special Education.

The employment outlook in the middle and high schools continues to be positive, especially in mathematics, sciences and modern languages. Recent placement years have yielded excellent employment opportunities to UMSL graduates. In addition to middle school, and high school teaching, more limited opportunities exist in athletic training, dance, research, sport management, and exercise leadership fields serving persons of all age categories.

For more information go to <https://coe.umsi.edu/w2/index.cfm>.

Undergraduate Degrees

Early Childhood Education BSEd (p. 519)

- Special Education Emphasis (p. 521)

Elementary Education BSEd

- Middle School Education Emphasis (p. 557)
- Special Education Emphasis (p. 562)
- Special Education and TESOL Emphasis (p. 559)
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Physical Education BSEd

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Through the integration of content in general, special, and second language learning, candidates may earn certifications and endorsements with valued skills that make them highly qualified and marketable. Nationally-recognized research faculty teach undergraduate courses that prepare future educators in instruction and assessment with a strong foundation in working with diverse, urban populations.

Educator candidates actively engage in unique practicum experiences in the Studio School Model for clinical practice. The College partners with numerous public, private, and charter schools. As a College, we take great pride in preparing "community educators" who are well-experienced to impact all students in a wide variety of settings, and with a much broader understanding of education's role in society. Our candidates make a collective impact as faculty members in the differentiated staffing model. Sought after by partner districts and agencies, many of our graduates are

hired directly into the studio schools or districts where they complete their clinical preparation.

Educator preparation is both engaging and innovative. Our high quality undergraduate educator preparation programs are designed around research-based scholarship and practical community-based contexts. Early course-based experiences provide candidates with practical understanding of how youth learn subject matter in a variety of informal settings. Every future educator is guided through approximately 100 clock hours of volunteer academic instruction and support for a local partnering community youth-serving agency. The community-based experiences broadens candidates' understanding of their own identity as educators as well as enhancing their ability to build relationships, extend their skills, and understand family/community dynamics and interactions.

For their final year-long practicum, teacher candidates are immersed in Studio Schools. These partnering K-12 schools participate in our innovative, collaborative approach to educator preparation. Drawing on their studies during carefully sequenced coursework, teacher candidates enter their final two-semester clinical experience as collaborative teams of 6-14 candidates and work in a Studio School. In Studio Schools, candidates work with experienced teachers to deepen learning and increase student achievement. Rather than being placed as individuals with one cooperating teacher, our candidates work with multiple teachers learning from each one. This process is supported and facilitated on-site by a specially trained UMSL clinical educator who leads bi-monthly seminars, conducts observations, and provides candidates with regular feedback to guide their growth.

Teacher candidates inquire deeply into how their students are learning, and use data to inform their instruction. All participate in appropriate school and district professional development and school-wide activities, thereby becoming professionals who are part of the fabric of a school, not just a temporary teacher candidate. We believe that these community and school-based experiences create educators who understand learning in a broader context. In short, graduating educators have experienced an innovative education which prepares them for their future career as educational leaders in our region and beyond.

The following Department of Educator Preparation & Leadership degrees have been accredited by the Missouri Department of Elementary and Secondary Education (DESE) and the Association for Advancing Quality in Educator Preparation (AAQEP):

Undergraduate degrees:

- Bachelor of Educational Studies (BES)
- Bachelor of Science in Education (B.S. Ed) in Early Childhood
- Bachelor of Science in Education (B.S. Ed) in Elementary Education
 - Special Education and TESOL emphasis
 - Special Education emphasis
 - TESOL emphasis
 - Middle School Certification for English
 - Middle School Certification for Mathematics
 - Middle School Certification for Science
 - Middle School Certification for Social Studies
- Bachelor of Science in Education (B.S. Ed) in Physical Education
- Bachelor of Science in Education (B.S. Ed) in Secondary Education
 - Biology concentration
 - Chemistry concentration
 - English concentration

- Mathematics concentration
- Modern Language, French K-12
- Modern Language, Spanish K-12
- Physics concentration
- Social Studies concentration

Certifications:

- Teacher Certification in Music
- Teacher Certification in Art

Graduate Studies

The Department of Educator Preparation & Leadership offers three Master's degrees, sixteen concentration areas, four Graduate Certificate programs, and joins with the College of Education Faculty to offer two Doctoral degrees.

Master of Education (M.Ed): A minimum of 30 credit hours is required.

Become a distinguished educator. Whether you are a PreK-12 classroom teacher, a school administrator, or an educator/trainer in a museum, business or youth serving organization, these concentration areas provide a broad spectrum of interests that gives a path to expertise.

The Masters of Education Degree programs and Graduate Certificate programs are designed for graduates to attain the following learning outcomes:

- Understand the major theories in the discipline of study.
- Attain a solid foundation in the overall field of education in general, including areas of social justice, educational leadership and advocacy, educational psychology and research.
- Attain a depth of knowledge in the primary discipline.
- Think critically.
- Develop skills as a reflective practitioner to be able to create and sustain change.
- Conduct teacher research.

The Master's Degree consists of:

- 6 credit hours of foundations courses that examine history, the impact of community on our youth, issues of social justice, teacher leadership and student advocacy;
- 18 hours that provide the core of expertise in the areas you choose and give you the depth and expertise in areas that match the needs of your students;
- and a 6 credit hour capstone where you become a researcher in your own organization or classroom to fully understand how to ask the right questions, collect meaningful data, and analyze and present it in a way that informs others.

A minimum of 30 credit hours is required.

The non-degree option is suited for those who have a Master's Degree or are not quite ready, and simply want to gain more in-depth knowledge about a particular area listed in the concentrations below.

Education

The M.Ed. program in Education has an Interdisciplinary Studies program option, an emphasis in Reading option, an emphasis in Teaching English

to Speakers of Other Languages (TESOL), and an Early Childhood education option (18 credit hours) as well as focused concentrations in a variety of interest areas. Additional hours may be necessary for reading specialist certification.

Special Education

The M.Ed. Program in Special Education includes a representation of the important core knowledge in Special Education. The primary goal is to empower professionals to be thoughtful teachers who use best practice when working with students with disabilities. Research and data-based decision making are emphasized throughout the program. Graduate students will translate research into practice in their courses, and learn to analyze multiple types of assessment data. The M.Ed. Program in Special Education consists of an initial required core of courses, an opportunity to develop an area of specialization, and a capstone or exit course.

Graduate Certificate Programs: A minimum of 18 credit hours is required.

Graduate Certificate programs are specialized programs of study that are not degree programs but are shown on the academic transcript so that readers are aware of the concentrated program of study. Graduate Certificates are unrelated to teaching certificates.

Doctoral Program

Doctor of Education (Ed.D) Program: BRIDGE THEORY AND PRACTICE WITH SCHOLARSHIP

The Doctor of Education in Educational Practice is a doctoral degree intended for practitioners. Areas of study available are the themes around which learning communities are formed. Members of the learning communities advance through the program as a cohort in three to three-and-one-half years. The degree program requires 80 credit hours, and the Master's degree is recognized and applied toward the 80 credit hour requirement. A Dissertation in Practice is the capstone. The program applies an *Inquiry as Practice* model of scholarship. Graduates gain the ability to use data to inform decision-making and enhance their practice by gathering, organizing, judging, aggregating, and analyzing situations, literature, and data. The Doctor of Education degree program places emphasis on preparing scholarly practitioners for their professional work rather than emphasizing research for the purposes of building theory and preparation for the professoriate in higher education.

The curriculum of the Doctor of Education degree is intended to prepare practicing professionals to transform both their practice and the field by working *in community*, just as practitioners collaborate with key stakeholders to address complex problems of practice. Students are admitted to the degree program and simultaneously to a learning community of practice formed around a theme such as Language, Literacy, and Culture, Curriculum and Instruction, STEM, Higher Education Student Services, Global Learning, Social Justice or Heritage Leadership. The learning community and a mentor team of faculty and practitioners work together throughout the program using the learning community seminar, which is required every semester, as a mechanism by which to cultivate community and build the unique skills needed for education practitioners. The skills to work collaboratively to develop, test, and advance innovative solutions to high-leverage problems of practice are fostered throughout the program.

In addition to the thematic learning community of practice format, the curriculum features Laboratories of Practice and a Dissertation in Practice as culminating activities. The Laboratories of Practice take the doctoral

studies away from the University campus and to a context where theory, inquiry, and practice can intersect and the implementation of practice can be measured. The Dissertation in Practice allows the learning community to address a high leverage problem of practice through collaborative and connected work beyond what a single individual could do alone. Individuals contribute work that feeds into group work. The Dissertation of Practice is characterized by generative impact.

The University of Missouri-St. Louis College of Education is a member of the Carnegie Project on the Education Doctorate, a national group of over 100 universities that are re-designing and re-orienting the Doctor of Education degree as a program that is distinct from Doctor of Philosophy in Education degree programs. Our program reflects our commitment to the work of the Carnegie Project and its working principles.

Doctor of Philosophy of Education (Ph.D.)

The Ph.D. degree in Education, offered in cooperation with the School of Education at the University of Missouri-Kansas City and the College of Education at the University of Missouri-Columbia, is designed for educators who desire directed research experience promoting scholarly inquiry in education.

The Ph.D. program is designed for graduates to attain the following learning outcomes:

- Understand the major theories in their primary and secondary disciplines.
- Attain a breadth of knowledge in education in general and a depth of knowledge in the primary discipline.
- Think critically.
- Locate literature in the primary and secondary disciplines.
- Understand research methods in education.
- Conduct research.
- Demonstrate leadership skills and attributes.

Categories of coursework and credits Required are: 1. Research Methods (15-18 hrs.); 2. Disciplinary Specialization (24-26 hrs., 16 in residence as Ph.D. student); 3. Foundations Courses (10-14 hrs.); 4. Proposal Writing (EDUC 7950; 1 hr.); 5. Comprehensive Examination; and 6. Dissertation Research (6 hrs.).

The minimum total credit hour requirement to complete the Ph.D. in Education degree is 90 credit hours of post-baccalaureate coursework. Up to 44 credit hours of graduate coursework, typically the Master's degree and post-Master's credit hours, can be applied to the foundations, research methods, and disciplinary specialization categories as appropriate.

The Master's degree work can usually be applied without regard to the age of the degree, but post-Master's coursework should be recent (4 to 6 years old). There is an 8-year time limit for completing the Ph.D. in Education.

The final program configuration, including how previous coursework is applied to the degree requirements, is determined at a meeting of the student, the student's advisor, and two additional faculty members in the area of study, where applicable. This meeting typically takes place 2 to 3 semesters after program entry.

Courses

Courses offered by the department can be found at the links below:

Early Childhood Education (ECH ED)

Educational Administration (ED ADM)

Educational Technology (ED TECH)

Elementary Education (ELE ED)

Health and Physical Education (HLTH PE)

Middle Education (MID ED)

Physical Education (PHY ED)

Secondary Education (SEC ED)

Special Education (SPEC ED)

Teacher Education (TCH ED)

Early Childhood Education

Courses

ECH ED 3302 Introduction to Inclusive Early Childhood Education: 3 semester hours

Prerequisites: Admission to the Teacher Education Program. This course serves as an introduction to the field of early childhood education including historical, social and psychological foundations; child development; and evidence-based-practices appropriate to address developmental needs of children from birth through age 8. Program administration, management, environmental arrangement, and consultation/collaboration are emphasized. The family-centered practice, diversity, early intervention, early childhood special education, ethical and legal issues are addressed to enhance students' knowledge of inclusive education. Additional clinical experience may be required.

ECH ED 3303 Curriculum and Practice Laboratory: Infant/Toddler: 1 semester hour

Prerequisites: Admission to the Teacher Education Program and ECH ED 3302. This course provides clinical experience in infant and toddler inclusive classrooms to allow for the implementation of individual-based curricula and guidance in techniques that support the development of all children. This course must be taken concurrently with ECH ED 3313.

ECH ED 3304 Curriculum and Practice Laboratory: Preschool: 1 semester hour

Prerequisites: Admission to the Teacher Education Program and ECH ED 3302. This course provides clinical experience in preschool inclusive classrooms to allow for the implementation of child-emergent, project-based curricula and guidance in techniques that support the development of all children. This course must be taken concurrently with ECH ED 3314.

ECH ED 3313 Curriculum and Practice: Infant/Toddler: 2 semester hours

Prerequisites: Admission to the Teacher Education Program and ECH ED 3302. This course addresses the design and implementation of integrated, inclusive curriculum for children from birth to 3 years of age. Must be taken concurrently with ECH ED 3303.

ECH ED 3314 Curriculum and Practice: Preschool Education: 2 semester hours

Prerequisites: Admission to the Teacher Education Program and ECH ED 3302. This course examines the design and implementation of integrated, diverse, and inclusive curricula for children age three to six years. Social studies, creativity, and technology are emphasized. This course must be taken concurrently with ECH ED 3304.

ECH ED 3332 Literacy, Learning, and Instruction For The Young Child: 3 semester hours

Prerequisites: Admission to Teacher Education Program. This course focuses on the language acquisition and literacy environments of young children from birth to age eight. It provides critical examination of early literacy learning available to children of diverse cultures and abilities. Strategies for family involvement and community resources in promoting language and literacy learning for young children are explored. Additional clinical experience may be required.

ECH ED 3350 Family and Professional Partnerships within School/Community: 3 semester hours

Prerequisites: Admission to Teacher Education Program. This course provides teacher candidates with the knowledge and skills needed to work successfully with diverse families of young children including those with disabilities. The focus is on using a family-systems perspective and family-centered approach to strengthen the home-to-school relationship. Building collaborative partnerships with families and community agencies is emphasized.

ECH ED 4317 Implementation, Evaluation, and Assessment in Early Childhood Education: 3 semester hours

Prerequisites: Admission to the Teacher Education Program and ECH ED 3302. This course examines techniques for observing children, as well as the use of formal and informal assessment instruments to collect data used to plan and implement individual programs and curriculum in inclusive early childhood settings. Additional clinical experience may be required.

ECH ED 4348 The Acquisition of Mathematical and Scientific Concepts: 3 semester hours

Prerequisites: Admission to Teacher Education Program; MATH 1025 or MATH 1150. This course explores mathematical theory and scientific inquiry necessary to design and implement early childhood mathematics and science instruction for children birth to age eight. Teacher candidates use theory and practice to design and implement early childhood mathematics and science instruction for children who are diverse with respect to culture, language, and ability. Additional clinical experience may be required.

ECH ED 4989 Practicum I: Early Childhood Education/Early Childhood Special Education Site Based Experience: 3 semester hours

Prerequisites: Accepted practicum application. This course is a two-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in early childhood classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum I includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum I.

ECH ED 4990 Practicum II: Early Childhood Education/Early Childhood Special Education Site Based Experience: 12 semester hours

Prerequisites: Successful completion of Practicum I. This course is a four-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in early childhood classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum II includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to pass DESE-mandated certification exams during Practicum II.

ECH ED 5989 Practicum I: Early Childhood/Early Childhood Special Education Site-Based Experience: 2 semester hours

Prerequisites: Director of Clinical Experience approval. This course is a 2-day per week intensive professional development experience working in P-12 settings with students with emphasis in inclusive early childhood classrooms. On-site activities include partnering with the classroom teacher in all areas of instruction, assessment, and classroom management. Some methods course assignments may be completed during the practicum day at school sites. Activities to acquire research skills are included.

ECH ED 5990 Practicum II: Early Childhood/Early Childhood Special Education Site-Based Experience: 8 semester hours

Prerequisites: Successful completion of Practicum I and Director of Clinical Experience approval. This course is a clinical teaching experience 4 days per week in inclusive early childhood settings. Teacher candidates spend time in schools engaged in various capacities to improve student learning within small group instruction, whole class teaching, lesson planning and special programs to demonstrate proficiency on all professional teacher standards. Teacher candidates collect data for a research project.

ECH ED 6321 Parent and Community Resources in Early Childhood Education: 3 semester hours

Prerequisite: Graduate standing. Competencies for working with parents and community agencies will be developed through a study of community and community resources. Procedures for parent participation and use of service agencies in the education of all young children, including those with special needs, will be examined.

ECH ED 6321T Parent and Community Resources for Early Childhood Teachers in Residence: 3 semester hours

Prerequisites: Graduate standing and admission to Teach Residency. This course helps teachers in residence develop competencies for working successfully with parents and community agencies. The course examines procedures for parent participation and use of service agencies in the education of all young children, including those with special needs.

ECH ED 6348 Understanding and Supporting Children's Math and Science Inquiry: 2-3 semester hours

Prerequisites: ED PSY 6215, ECH ED 6412. Advanced study of current cognitive theory to support the development of children's inquiry skills. Curriculum development and implications for practice in the areas of logical thinking, pre-number ideas, geometry, topology, arithmetical operations, problem solving, observation, inquiry and documentation are considered. National and state standards in math and science will provide a framework for teaching strategies.

ECH ED 6348T Understanding Children's Math and Science Inquiry for Early Childhood Teachers in Residence: 2 semester hours

Prerequisites: ECH ED 6412T. This course is an advanced study of current cognitive theory to support the development of children's inquiry skills for teachers in residence in early childhood programs. The course explores curriculum development and implications for practice in the areas of logical thinking, pre-number ideas, geometry, topology, arithmetical operations, problem solving, observation, inquiry and documentation. National and state standards in math and science provide a framework for teaching strategies.

ECH ED 6412 Foundations of Early Childhood Education: 3 semester hours

Prerequisites: A graduate course in child psychology or equivalent. This course explores the various types of early childhood programs and their related foundational philosophies. Topics include successful program implementation, strategies for effective parental involvement, and structuring productive social environments for young children.

ECH ED 6412B Foundations of Early Childhood Education: Practice and Application: 1 semester hour

Prerequisites: Admission to Teach For America or Alternative Certification Program and must be practicing teacher with Bachelor Degree. A study of the various types of early childhood programs and the philosophy upon which they are based. Students analyze appropriate practice and program implementation. Students conduct an action research project pertaining to a relevant early childhood issue.

ECH ED 6412T Foundations of Early Childhood Education for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency. This course for teachers in residence explores the various types of early childhood programs and their related foundational philosophies. Topics include successful program implementation, strategies for effective parental involvement, and structuring productive social environments for young children.

ECH ED 6413 Educational Role of Play: 3 semester hours

Prerequisites: Graduate standing. This course emphasizes play in early childhood classrooms as a constructive process with application to cognitive and social development. Candidates will explore and develop learning experiences that use play-based formats.

ECH ED 6413T Educational Role of Play for Early Childhood Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency. This course emphasizes play in early childhood classrooms as a constructive process with application to cognitive and social development. Teachers in residence explore and develop learning experiences that use play-based formats.

ECH ED 6415 Organization and Development of Early Childhood Programs: 3 semester hours

Prerequisites: ECH ED 6412 or equivalent. This course explores strategies for the effective organization and development of inclusive programs for children age birth through eight years. Research and theory in funding and budgeting, staffing and professional development, and selection, development, and assessment of program curriculum will be emphasized. Long-range planning for program stability and involvement in advocacy issues are discussed.

ECH ED 6415T Organization and Development of Early Childhood Programs for Teachers in Residence: 3 semester hours

Prerequisites: ECH ED 6412T. This course for teachers in residence explores strategies for the effective organization and development of inclusive programs for children birth through eight years. This course emphasizes research and theory in funding and budgeting; staffing and professional development; and selection, development, and assessment of program curriculum.

ECH ED 6490 Internship: 1-10 semester hours

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation and related professional activities.

ECH ED 6497 Problems: 1-10 semester hours

Prerequisite: Graduate standing. Individual study on topics pertaining to early childhood education.

ECH ED 6535 Assessment, Curriculum, and Research-Based Practice: Birth-Grade 3: 2-4 semester hours

Prerequisites: TCH ED 6030, ECH ED 6412. Advanced studies in curriculum design, assessment, and research-based practice for children from birth through eight years, with primary emphasis on birth through 5 years. Students will learn to develop curriculum based upon observation of children and their interests; child development theory and research and the diverse needs of children by considering culture, context, and family relationships. Must be taken concurrently with ECH ED 6536 if obtaining certification.

ECH ED 6535T Assessment, Curriculum, and Research-Based Practice for Early Childhood Teachers in Residence: 2 semester hours

Prerequisites: TCH ED 6030A and ECH ED 6412T. This course for teachers in residence is an advanced study in curriculum design, assessment, and research-based practice for children from birth through eight years, with primary emphasis on birth through 5 years. Teachers in residence learn to develop curriculum based upon observation of children and their interests; child development theory and research and the diverse needs of children by considering culture, context, and family relationships. This course is taken concurrently with ECH ED 6536T.

ECH ED 6536 Early Childhood Pre-Primary Practicum: 2 semester hours

Prerequisites: ED PSY 6215, TCH ED 5310T, ECH ED 6412. The focus of this practicum is observation of and participation in classrooms of children birth through five years. Concurrent registration in ECH ED 6535 required.

ECH ED 6536T Early Childhood Pre-Primary Practicum for Teachers in Residence: 2 semester hours

Prerequisites: TCH ED 6030A and ECH ED 6412T. This course for teachers in residence focuses on the observation of and participation in classrooms of children birth through five years. Concurrent registration in ECH ED 6535T required.

Educational Administration

Courses

ED ADM 5626 Theories of Educational Administration: 3 semester hours

Prerequisites: Admission to EdS program. This course addresses the impact of various theories of educational administration on district-level leadership. It emphasizes communication theory, motivation theory, leadership theory and organizational change theory.

ED ADM 5627 Advanced Education Supervision: 3 semester hours

Prerequisites: Admission to EdS program. The course focuses on supervision from the district perspective of school administration. It emphasizes effective supervision of school principals, school programs, and school curriculum. This is a seminar class with a focus on practical application of supervision practices. The overall outcome of this class is developing leaders who will lead high performing school districts.

ED ADM 6205 Legal Contexts of Education: 3 semester hours

Prerequisites: ED ADM 6201 (may be taken concurrently), or consent of instructor. This course is a critical examination of both (1) local, state, and federal laws and (2) Western notions of justice within which education policies are constituted and their concomitant practices implemented.

ED ADM 6301 Education Policy Analysis: 3 semester hours

Prerequisite: Graduate standing. This graduate level course provides an introduction to education policy issues. Additionally, the course provides an overview of the tools and skills necessary to conduct policy analysis and research. The focus of the course is on PK-Post Secondary education policy in the United States.

ED ADM 6305 School District Administration: 3 semester hours

Prerequisite: Enrollment in Advanced Certification Program and/ or consent of instructor. Course focuses on current research about school district administration; also deals with major central office issues including: board/superintendent relations, central office organization, the function and authority of assistant superintendents and program directors, and the administrative team approach to school district administration.

ED ADM 6306 Special Education Administration: 3 semester hours

Prerequisites: Completion of graduate degree in Special Education, Education Administration or consent of instructor. A study of organizational issues in special education and implications for practices and procedures. Specific attention will be given to special education delivery systems, compliance standards, funding sources, and regulatory standards.

ED ADM 6307 Integrated Curriculum for Special Education Administrators: 3 semester hours

Prerequisites: Graduate standing. Development of skills to understand, supervise and evaluate the integration and differentiation of curriculum. Intended for special education administrators.

ED ADM 6402 School Personnel Administration: 3 semester hours

Prerequisites: Advanced standing and/or consent of instructor. This course is a comprehensive, systematic study of problems in planning, recruitment, selection, induction, and retention relative to school personnel.

ED ADM 6403 Problems in School Public Relations: 3 semester hours

Prerequisites: Advanced standing and/or consent of instructor. This course is an examination of a range both traditional and critical perspectives relevant to home-school-community relations.

ED ADM 6424 Educational Leadership: Superintendent as Instructional Leader: 3 semester hours

Prerequisites: Admission to EdS program. This course reviews the theoretical and conceptual knowledge of advanced research-based instructional practices, instructional improvement strategies, curriculum leadership, student and adult learning, and evaluation. The course builds essential knowledge in related topics and develop the capacity to apply that knowledge effectively in the school setting.

ED ADM 6435 Superintendent: Legal Leadership and Management: 3 semester hours

Prerequisites: Admission to the EdS program. Superintendents must guide their school districts in adherence to statutory and case law, the lawful and wise use and allocation of district resources, management and evaluation of personnel, and equity issues. This course introduces to two areas of significant responsibility for superintendents: (1) education law and (2) state and federal regulations. Through readings, course assignments, and discussions, students will examine the legal system, school law, finance, personnel, and equity policies that govern public schools in the United States and the state of Missouri.

ED ADM 6445 Character Education and Development: 3 semester hours

Prerequisites: Graduate standing. This course is a critical survey of theories of character development and models for character education in childhood and adolescence. The course includes empirical and conceptual study of the nature of moral character, how it develops, and how it can be fostered in schools.

ED ADM 6450 Advanced Methods in Character Education: 3 semester hours

Prerequisites: Graduate standing. This course is an advanced exploration of methods for promoting character development in schools: class meetings, democratic processes, cross-age learning, and character curriculum development. Methods are critically examined for their empirical and theoretical justifications.

ED ADM 6497 Problems: 1-10 semester hours

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ED ADM 6501 Principles of Public School Finance in Missouri: 3 semester hours

Prerequisites: Advanced graduate standing and/or consent of instructor. Course is designed to analyze and study critical areas of public school finance at the local and state levels, highlighting the role of such factors as legislative procedures, principles of local and state support, budgeting and accounting procedures, assessment of property, etc.

ED ADM 6502 School Buildings and Sites: 3 semester hours

Prerequisites: Advanced graduate standing and/or consent of instructor. This course deals with methods and procedures for (1) projecting the future building and facility needs of a public school district, (2) supervising actual planning and construction of educational facilities, (3) optimizing the use of current facilities, and (4) maintenance of buildings, grounds, and equipment.

ED ADM 6701 Leadership for Equity: 3 semester hours

Prerequisites: Graduate standing. Exploration of the concepts of leadership. Instructional activities include creating a personal philosophy of leadership and education and examining leadership in different contexts such as learning organizations, volunteer groups, crisis-response, hierarchical vs. democratic as well as education organizations.

ED ADM 6702 Supervision in Education Organizations: 3 semester hours

Prerequisites: Graduate standing. This course explores the transition challenges in implementation of the Missouri Learning Standards. It emphasizes effective supervision of observed instruction in multiple subject areas along with actionable methods of improvement. Also explored are the techniques used to conduct difficult conversations regarding practice.

ED ADM 6704 Data-Driven Instruction and Team Leadership I: 3 semester hours

Prerequisites: B- or better in ED ADM 6701. Preparation to use data as an asset in building high performance in schools, as an analytic tool, and a means of continuous measurement. Significant emphasis upon team building techniques and the use of data. Taken concurrently with ED ADM 6705.

ED ADM 6705 School Culture I: 3 semester hours

Prerequisites: Graduate standing. This course is an exploration of candidates' personal philosophy of education and underlying belief structure. Topics include race and class issues, educational inequities, challenges to and strategies for building community support, and practice in engaging in "courageous" conversations.

ED ADM 6708 School Culture II: Equity and Cultural Competence: 2 semester hours

Prerequisite: B- or better in ED ADM 6701. Acquisition and application of strategies for effectively supporting student social and emotional learning, increasing student voice, and engaging families, as well as systems and structures for creating equitable opportunities for students.

ED ADM 6711 Data-Driven Instruction and Team Leadership II: 3 semester hours

Prerequisites: B- or better in ED ADM 6708. Study of a cycle of data collection strategies, analysis and interpretation, all leading to actionable steps supporting teachers in the use of data as a professional tool to improve learning. Uses data from the residency site.

ED ADM 6712 Management of Organizational Systems: 3 semester hours

Prerequisites: B- or better in ED ADM 6708. This course reviews the operational systems that provide for effective management of school operations. The course includes the study and analysis of safety, budgets, and staffing.

ED ADM 6713 Residency II: 2 semester hours

Prerequisites: B- or better in ED ADM 6710. Continuation of ED ADM 6710 Residency I. See ED ADM 6710 for the course description. ED ADM 6713 is taken in conjunction with ED ADM 6711 and ED ADM 6712.

ED ADM 6714 K-12 School Administration: 3 semester hours

Prerequisites: Admission to the MEd in education administration program or graduate standing. This course is a comprehensive, systematic study of the elementary, middle, and secondary school principalship. Emphasis is placed on relating theories of learning, teaching, and organization to effective administration of elementary and secondary schools.

ED ADM 6717 Instructional Coaching for K-12 Teacher Leaders: 3 semester hours

Prerequisites: Completion of at least three credit hours of the University of Missouri-St Louis Teacher Leader Certificate Program or consent of instructor. This course is a comprehensive and systematic study of K-12 instructional coaching. Candidates develop understanding of instructional coaching through writing, discussion, and group collaboration. Candidates learn facilitative, dialogical, and directive coaching approaches. Candidates implement the three coaching methods through a collaborative coaching relationship with a K-12 classroom teachers that includes goal setting, modeling, and observation in order to positively impact student achievement.

ED ADM 6900 Internship: 1-10 semester hours

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

ED ADM 6901 K-12 School Principal Clinical Experience: 3 semester hours

Prerequisites: Consent of the instructor. This course is a closely supervised experience in a clinical setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the candidate. The clinical experience will include planning, research, evaluation, reflection, and related professional activities. It will include the required number of hours in both the candidate's major area (at least 250 hours) and minor area (at least 50 hours) for a total of 300 clinical experience hours. Major and minor areas refer to elementary or secondary level. The candidate will be required to take this course twice (two consecutive semesters) for a total of 6 hours, which encompasses 300 hours of clinical experience in both the major and minor areas.

ED ADM 6902 School Principal Clinical Experience: Supplemental: 1-3 semester hours

Prerequisites: Consent of instructor. This supplemental clinical experience course for school principals is a closely supervised experience in a clinical setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the candidate. The clinical experience will include planning, research, evaluation, reflection, and related professional activities and will include the number of clinical hours required for certification.

ED ADM 6903 Superintendent Clinical Experience: 3 semester hours

Prerequisites: Consent of the instructor. This clinical experience course for superintendents is a closely supervised experience in a clinical setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the candidate. The clinical experience includes planning, research, evaluation, reflection, and related professional activities and includes the number of clinical hours required for certification.

ED ADM 6904 Special Education Director Field Experience: 3 semester hours

Prerequisites: Completion of 15 credit hours in either the MEd or EdS in Education Administration programs or consent of the instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

ED ADM 6905 Private School Leadership Field Experience: 3 semester hours

Prerequisites: Completion of 15 credit hours in either the MEd or EdS in Education Administration programs or consent of the instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities. This section is recommended for individuals who do not plan to seek certification as a public school principal.

Educational Technology

Courses

ED TECH 2230 Information Literacy: 3 semester hours

Students will analyze and evaluate multiple sources of information using modern technology to research, retrieve, synthesize, construct and present information for academic disciplines. The course will assist students in the development of educational technology skills that allow for specialization in their chosen major.

ED TECH 3135 Technology for Educators: 1 semester hour

This course will instruct teacher candidates in the use of digital tools in education. Candidates will develop strategies for incorporating current technology developments and social media in educational practice.

ED TECH 3420 Computer Programming and Pedagogy: 1-3 semester hours

This course examines the emerging field of computational thinking and learning theories relevant to teaching computer programming to students from kindergarten to university. Students will teach one another and learn to critique themselves and peers on pedagogical effectiveness. Students will learn a new programming language while learning how to teach others using that same language. Educational uses of student computer programming will be examined.

ED TECH 4302 Educational Technology Instruction in Educational Agencies: 3 semester hours

The course focuses on how computers and the internet have changed teaching and learning; how educators can facilitate inquiry-based learning, and on the design and implementation of technology-rich activities and projects. Practices to be explored include making presentations; searching for information and educational resources; organizing, writing, and displaying information and data. Students may not receive credit for both ED TECH 4302 and ED TECH 5301.

ED TECH 4436 Computer-Mediated Teaching and Learning in Education: 3 semester hours

Explores the theory, research, and practice of using computer-mediated communication and computer-supported collaborative learning in education. Education could be formal or informal, in an institutional setting or not. Students will get experience with several different technologies during the semester.

ED TECH 4558 Computer Ethics for Educators: 3 semester hours

Prerequisites: Junior standing or consent of instructor. Examination of ethical issues concerning the use of computers generally, their use in education, and the engineering of particular computer technologies. Aims at developing awareness of these issues and skills for ethical decision-making regarding them through careful, analytical methods. Typical issues include privacy, intellectual property, computer fraud, the possibility of artificial agents, and others. Available for graduate credit.

ED TECH 5301 Introduction to Computers and the Internet in Education: 3 semester hours

The course focuses on how computers and the internet have changed teaching and learning; how teachers can facilitate learning in inquiry-based, technology-rich classrooms; and on the design and implementation of technology-rich activities and projects. Introduces students to the networked computer as an instructional tool. Course participants will be introduced to how teachers and their students can use computer tools in appropriate ways for different content areas and educational levels. Practices to be explored include making presentations; searching for information and educational resources; organizing writing, and displaying information and data.

ED TECH 5340 Selection and Utilization of Educational Multimedia: 3 semester hours

Prerequisites: ED TECH 5301 or consent of instructor. Prepares students for selecting and utilizing multimedia technologies for learning. Students will conduct projects involving educational multimedia programs available on computers or over telecommunications networks. The projects will incorporate graphics, sound, and video. The goal of working on these projects is to prepare students to facilitate others' use of multimedia in classrooms and other educational contexts.

ED TECH 5420 Advanced Computer Programming and Pedagogy: 1-3 semester hours

Prerequisites: Graduate standing. This course examines the emerging field of computational thinking and learning theories relevant to teaching computer programming to students from kindergarten to university. Students will teach one another and learn to critique themselves and peers on pedagogical effectiveness. Students will learn a new programming language while learning how to teach others using that same language. Educational uses of student computer programming will be examined.

ED TECH 6135 Technology for Preparing Inquiry-Based Teaching: 1 semester hour

Prerequisites: Graduate standing. This course instructs teacher candidates in the use of digital tools in their teaching practice. Candidates develop strategies for incorporating current technology developments and social media in educational practice. Technology for educators challenges the candidates to think about the underlying principles, terms, and concepts of educational technology. Students are introduced to the different methods teachers can use to integrate technology into classroom instruction for varying grade levels and content areas. Activities undertaken in this course include learning about educational technology tools and applying some of them to create the academic instructional materials through interactive collaboration.

ED TECH 6416 Teaching and Learning with Technology: Graphical Representational Tools: 3 semester hours

Prerequisites: ED TECH 5340 or consent of instructor. Examines how graphical representation tools can be used to enhance teaching and learning. Students will learn about techniques for visualizing and organizing information and data in science, math, the social sciences, and humanities, and will become familiar with research and practice pertaining to their use in a variety of learning activities and projects.

ED TECH 6434 Technology and Privilege: 3 semester hours

Prerequisites: Graduate standing. Covers issues relating to the digital divide in schools and the society. The focus will be on technology in education with an emphasis on the ways that policies and practices perpetuate the divide. To examine this phenomenon, Critical Race Theory (CRT) will be one lens to examine the inequality.

ED TECH 6435 Instructional Technology and Education Reform: 3 semester hours

Prerequisites: ED TECH 5340 or consent of instructor. Students will learn how to foster changes in uses of technology for learning in schools, based on a historical understanding of previous technology reforms, and a critical assessment of recent reforms. Questions addressed included: What did stakeholders predict and hope for with earlier educational technologies, early uses of the computer and networking, and present technological innovations? What actually happened? Why? How can teachers and other educators help foster and spread effective use of technology for learning?.

ED TECH 6436 Computer-Mediated Communication in Education: 3 semester hours

Prerequisites: ED TECH 5340 or consent of instructor. Explores the theory, research, and practice of using computermediated communication and computer-supported collaborative learning in education. Learning environments including elementary, secondary, higher, and adult education will be considered.

ED TECH 6437 Distance Learning via Networks and Telecommunications: 3 semester hours

Prerequisites: Graduate standing. The course is an investigation in the ways that learning and teaching across the barriers of time and distance are similar to and different from face to face learning and teaching. Students will study the influence of interactive media: videoconferencing, asynchronous discussions and other commonly used methods.

ED TECH 6452 Educational Multimedia Design: 3 semester hours

Prerequisite: ED TECH 5340 or consent of instructor. Examines principles and techniques for the design of visually and functionally effective multimedia educational resources. Emphasis will be placed on techniques for the computer-based production of materials incorporating text, graphics, and video. Rapid prototyping and evaluation techniques will be incorporated.

ED TECH 6490 Internship: 1-10 semester hours

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

ED TECH 6497 Problems: 1-10 semester hours

Prerequisite: ED TECH 5340 or consent of instructor. Individual study on topics pertaining to educational technology.

ED TECH 7070 Higher Education and Technology: Theory and Practice: 3 semester hours

Prerequisites: Doctoral standing or consent of instructor. Students explore recent research of classical learning theories and pedagogy in order to incorporate advanced technology. Students apply both theory and practice to develop and present lesson modules that explore research in this area, and illustrate the use of technology in teaching. Detailed constructive criticism is used with the presentations.

Elementary Education

Courses

ELE ED 3338 Teaching Elementary Literacy in Inclusive Settings: Literacy Assessment and Learning: 3 semester hours

Prerequisites: Completion of Level I requirements. This course explores literacy achievement and assessment to guide developmentally appropriate instruction, including consideration of elementary students' cultural and linguistic backgrounds as well as special education services received. Assessment practices explored include running records, informal reading inventories, orthographic inventories, and analytic writing assessment. Teacher candidates will utilize assessment findings, children's literature, and global technologies to create purposeful, targeted literacy instruction for students.

ELE ED 3339 Teaching Elementary Literacy in Inclusive Settings: Literacy Instruction and Learning: 4 semester hours

Prerequisites: Completion of Level II requirements and ELE ED 3338. This course continues to explore developmentally appropriate literacy instruction for elementary students through deep exploration of methods of teaching reading and writing, including reading and writing workshops, guided reading, and word work / phonics. Particular attention will be paid to how these instructional methods might be adapted based upon students' cultural and linguistic backgrounds as well as special education services received. Teacher candidates will utilize a variety of assessments, children's literature, and global technologies to create a series of purposeful, targeted literacy lessons that reflect students evolving abilities over time.

ELE ED 4246 Teaching Elementary Mathematics in Inclusive Settings I: 3 semester hours

Prerequisites: Completion of mathematics requirements in General Education. This course explores pedagogical techniques and best practices for the creation and delivery of elementary mathematics curriculum to all students, including consideration of elementary students' cultural and linguistic backgrounds as well as special education services received. The mathematical content includes number and operations in base ten, fractions, decimals, percents, and proportional reasoning. Additional field experience may be required.

ELE ED 4253 Teaching Elementary Social Studies in Inclusive Settings: 3 semester hours

Prerequisites: Admission to Teacher Education Program and completion of social science requirements in general education. This course explores the teaching of current social studies curricular content in elementary settings. Topics include US history, geography, civics and government, economics, culture, and technology, and the appropriate teaching methods and development of related instructional materials. Particular attention will be paid to how these topics and strategies might be adapted based upon students' cultural and linguistic backgrounds as well as special education services received. Ten (10) clinical hours required to complete course assignments.

ELE ED 4341 Teaching Science in Inclusive Elementary Schools: 3 semester hours

Prerequisite: Admission into Teacher Education Program required. An analysis of teaching science to K-6 students with emphasis on current science education trends, science curricular materials, and strategies of instruction.

ELE ED 4342 Teaching Elementary Mathematics in Inclusive Settings II: 3 semester hours

Prerequisite: ELE ED 4246. This course explores pedagogical techniques and best practices for the creation and delivery of elementary mathematics curriculum to all students, including consideration of elementary students' cultural and linguistic backgrounds as well as special education services received. The mathematical content of this course includes geometry, measurement, probability, statistics, and data analysis. Additional field experience may be required.

ELE ED 4989 Practicum I: Elementary/Special Education Site-Based Experience: 3 semester hours

Prerequisites: Accepted Practicum I application. This course is a two-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in elementary classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum I includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum I.

ELE ED 4990 Practicum II: Elementary/Special Education Site Based Experience: 12 semester hours

Prerequisites: Successful completion of Practicum I. This course is a four-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in elementary classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum II includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum II.

ELE ED 4992 Practicum I: Elementary/Special Education/TESOL Site-Based Experience: 3 semester hours

Prerequisites: Accepted Practicum I application. This course is a two-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in elementary classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Particular emphasis will be given to differentiated instruction and impacting student achievement for diverse populations. Practicum I includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum I.

ELE ED 4993 Practicum II: Elementary/Special Education/TESOL Site-Based Experience: 12 semester hours

Prerequisites: Successful completion of Practicum I requirements. This course is a four-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in elementary classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Particular emphasis will be given to differentiated instruction and impacting student achievement for diverse populations. Practicum II includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum II.

ELE ED 4994 Practicum I: Elementary/TESOL Site-Based Experience: 3 semester hours

Prerequisites: Accepted Practicum application. This course is a two-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in elementary classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Particular emphasis will be given to differentiated instruction and impacting student achievement for diverse populations. Practicum I includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum I.

ELE ED 4995 Practicum II: Elementary/TESOL Site-Based Experience: 12 semester hours

Prerequisites: Successful completion of Practicum I requirements. This course is a four-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in elementary classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Particular emphasis will be given to differentiated instruction and impacting student achievement for diverse populations. Practicum II includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum II.

ELE ED 5989 Practicum I: Elementary/Special Education Site-Based Experience: 2-3 semester hours

Prerequisites: Director of Clinical Experience approval. This course is a 2 day per week intensive professional development experience working in K-12 settings with students with emphasis in inclusive elementary classrooms. On-site activities include partnering with the classroom teacher in all areas of instruction, assessment, and classroom management. Some methods course assignments may be completed during the practicum day at school sites. Activities to acquire research skills are included.

ELE ED 5990 Practicum II: Elementary/Special Education Site-Based Experience: 8 semester hours

Prerequisites: Successful completion of Practicum I and Director of Clinical Experience approval. This course is a clinical teaching experience 4 days per week in inclusive elementary settings. Teacher candidates spend time in schools engaged in various capacities to improve student learning within small group instruction, whole class teaching, lesson planning and special programs to demonstrate proficiency on all professional teacher standards. Teacher candidates collect data for a research project.

ELE ED 5992 Practicum I: Elementary/Special Education/TESOL Site-Based Experience: 2-3 semester hours

Prerequisites: Director of Clinical Experience approval. This course is a 2 day per week intensive professional development experience working in K-12 settings with students with emphasis in inclusive elementary classrooms. On-site activities include partnering with the classroom teacher in all areas of instruction, assessment, and classroom management. Particular emphasis is given to differentiated instruction and impacting student achievement for diverse populations. Some methods course assignments may be completed during the practicum day at school sites. Activities to acquire research skills are included.

ELE ED 5993 Practicum II: Elementary/Special Education/TESOL Site-Based Experience: 8 semester hours

Prerequisites: Grade of B- or higher in Practicum I and admission to the Teacher Education Program. This course is a clinical teaching experience 4 days per week in inclusive elementary settings. Teacher candidates spend time in schools engaged in various capacities to improve student learning within small group instruction, whole class teaching, lesson planning and special programs to demonstrate proficiency on all professional teacher standards. Particular emphasis is given to differentiated instruction and impacting student achievement for diverse populations. Teacher candidates collect data for a research project.

ELE ED 5994 Practicum I: Elementary/TESOL Site Based Experience: 2-3 semester hours

Prerequisites: Director of Clinical Experience approval. This course is a 2 day per week intensive professional development experience working in K-12 settings with students with emphasis in elementary classrooms. On-site activities include partnering with the classroom teacher in all areas of instruction, assessment, and classroom management. Particular emphasis is given to differentiated instruction and impacting student achievement for diverse populations. Some methods course assignments may be completed during the practicum day at school sites. Activities to acquire research skills are included.

ELE ED 5995 Practicum II: Elementary/TESOL Site-Based Experience: 8 semester hours

Prerequisites: Successful completion of Practicum I and Director of Clinical Experience approval. This course is a clinical teaching experience 4 days per week in elementary settings. Teacher candidates spend time in schools engaged in various capacities to improve student learning within small group instruction, whole class teaching, lesson planning and special programs to demonstrate proficiency on all professional teacher standards. Particular emphasis is given to differentiated instruction and impacting student achievement for diverse populations. Teacher candidates collect data for a research project.

ELE ED 6246 Math Content Pedagogy, Inquiry-Based Instruction, and Assessment: 3 semester hours

Prerequisites: Graduate standing, and a passing score on the designated Missouri Content Examination or an approved program of study. This course provides the teacher candidate with math content and math pedagogical techniques to lead them to prepare and deliver best practices of teaching that are aligned with the elementary math learning standards and research-based practices. The students are encouraged to adopt interdisciplinary resources including multicultural children's literature and coping strategies for diverse students in the classroom settings. The students will develop lessons that entail using inquiry-based instructional materials, and reflective practice with assessment data.

ELE ED 6246T Math Content Pedagogy, Inquiry-Based Instruction, and Assessment for Teachers in Residence: 3 semester hours

Prerequisites: Graduate standing, and a passing score on the designated Missouri Content Examination or an approved program of study. This course provides the teacher in residence with math content and pedagogical techniques to prepare and deliver high quality math instruction and assessment aligned with learning standards and research-based practices.

ELE ED 6253 Teaching Social Studies through Reading, Writing, and English Language Learning: 3 semester hours

Prerequisites: Graduate standing, and a passing score on the designated Missouri Content Examination or an approved program of study. Examines the teaching of social studies through reading elementary children's literature about U.S. history and examines writing instruction as a complex and dynamic process. The course integrates a standards-based, backward-planning approach; authentic literacy instruction through the lens of social studies; attention to the linguistic and cultural demands of social studies; and differentiation in instruction so that each student has access to meaningful and challenging learning opportunities using Sheltered Instruction Observation Protocol (SIOP). It focuses on essential attributes of effective literacy and content teachers, including the ability to draw upon students' cultural and linguistic backgrounds, help students make connections between new information and previous knowledge and skills that are research-based, and support students to transfer new information to real-life contexts and environments using critical thinking skills.

ELE ED 6253A Teaching Social Studies through Reading, Writing, and English Language Learning: A: 1 semester hour

Prerequisites: Admission to Teach For America or Alternative Certification Program; must be practicing teacher with Bachelor Degree. Examines the teaching of social studies through reading elementary children's literature about U.S. history and examines writing instruction as a complex and dynamic process. The course integrates a standards-based, backward-planning approach; authentic literacy instruction through the lens of social studies; attention to the linguistic and cultural demands of social studies; and differentiation in instruction so that each student has access to meaningful and challenging learning opportunities. There is an emphasis on essential attributes of effective literacy and content teachers, including the ability to draw upon students' cultural and linguistic backgrounds, the ability to help students make connections between new information and previous knowledge, and support students to transfer new information to real-life contexts and environments using critical thinking skills.

ELE ED 6253B Teaching Social Studies through Reading Writing and English Language Learning: B: 1 semester hour

Prerequisites: Admission to Teach For America or Alternative Certification Program; must be practicing teacher with Bachelor Degree. Examines the teaching of social studies through reading elementary children's literature about U.S. history and examines writing instruction as a complex and dynamic process. The course integrates a standards-based, backward-planning approach; authentic literacy instruction through the lens of social studies; attention to the linguistic and cultural demands of social studies; and differentiation in instruction so that each student has access to meaningful and challenging learning opportunities. There is an emphasis on essential attributes of effective literacy and content teachers, including the ability to draw upon students' cultural and linguistic backgrounds, the ability to help students make connections between new information and previous knowledge, and support students to transfer new information to real-life contexts and environments using critical thinking skills.

ELE ED 6253C Teaching Social Studies Through Reading, Writing, and English Language Learning: C: 1 semester hour

Prerequisites: B- or better in ELE ED 6253B. This course examines the teaching of social studies through reading elementary children's literature about U.S. history and examines writing instruction as a complex and dynamic process. The course integrates a standards-based, backward-planning approach; authentic literacy instruction through the lens of social studies; attention to the linguistic and cultural demands of social studies; and differentiation in instruction so that each student has access to meaningful and challenging learning opportunities. There is an emphasis on essential attributes of effective literacy and content teachers, including the ability to draw upon students' cultural and linguistic backgrounds, help students make connections between new information and previous knowledge, and to support students to transfer new information to real-life contexts and environments using critical thinking skills. Must be practicing teacher with a bachelor's degree.

ELE ED 6337 Teaching and Learning Literacy in the Elementary Classrooms: Teaching Reading and Writing: 3-4 semester hours

Prerequisites: Admission to Teacher Education Program (TEP): Teach in 12. This course emphasizes literacy development, literacy instruction, and children's literature in the process of teaching reading and writing within diverse contexts and with linguistically and culturally diverse students. Candidates survey literacy development as a social practice, learn to effectively use children's literature to focus on methods of teaching reading and writing, and explore evidence-based practices related to phonemic awareness, phonics, fluency, vocabulary, comprehension, and written composition.

ELE ED 6337T Teaching Literacy: Reading and Writing for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency. This course for teachers in residence emphasizes literacy development, literacy instruction, and children's literature in the process of teaching reading and writing within diverse contexts and with linguistically and culturally diverse students. Teachers in residence survey literacy development as a social practice, learn to effectively use children's literature to focus on methods of teaching reading and writing, and explore evidence-based practices related to phonemic awareness, phonics, fluency, vocabulary, comprehension, and written composition.

ELE ED 6338 Literacy Assessment for Guided Instruction: 3-4 semester hours

Prerequisites: ELE ED 6337. This course addresses the effective use and evaluation of assessment instruments to prevent student literacy difficulties and promote accelerated learning. Candidates learn to administer and interpret formative assessments to design classroom literacy engagements using evidence-based instructional strategies and materials. Candidates continue to develop their knowledge base of literacy development, research, and practice through critical reading and writing, while also implementing literacy instruction that is responsive and integrates global technologies. This course includes a field component.

ELE ED 6338T Literacy Assessment for Guided Instruction for Teachers in Residence: 4 semester hours

Prerequisites: ELE ED 6337T. This course for teachers in residence addresses the effective use and evaluation of assessment instruments to prevent student literacy difficulties and promote accelerated learning. Teachers in residence learn to administer and interpret formative assessments to design classroom literacy engagements using evidence-based instructional strategies and materials.

ELE ED 6342 Addressing the Mathematical Needs of Students: 3 semester hours

Prerequisites: Graduate standing and ELE ED 6246. Educators will learn instructional strategies for analyzing and addressing needs of students who have difficulties understanding and becoming proficient in mathematics. Conceptual development and procedural fluency are approached in a diagnostic and prescriptive context. The course will cover research based approaches to help develop assessments and strategies for addressing needs of students who have difficulties understanding and becoming proficient in mathematics.

ELE ED 6342A Addressing the Mathematical Needs of Students: A: 1 semester hour

Prerequisites: Graduate standing. Educators will learn instructional strategies for analyzing and addressing needs of students having difficulties understanding and becoming proficient in mathematics. This course will provide an overview of the current landscape of issues in mathematics education around the topic of learners who struggle, as well as introduce research-based approaches to help develop assessments for addressing needs of students having difficulties understanding and becoming proficient in mathematics.

ELE ED 6342B Addressing the Mathematical Needs of Students: B: 1 semester hour

Prerequisites: Graduate standing. Educators will learn instructional strategies for analyzing and addressing needs of students having difficulties understanding and becoming proficient in mathematics. This course will help students develop strategies for identifying and addressing student error patterns as well as introduce research based strategies to address the needs of students having difficulties understanding and becoming proficient in mathematics.

ELE ED 6387 Literacy Acquisition and Learning for Diverse Students: 3 semester hours

Prerequisites: Graduate standing. This course extends candidate understanding of students' literacy acquisition, development, and learning across the K-12 learning continuum. Emphasis is on development of a teaching philosophy and skills which include maintaining effective literacy learning environments in diverse classrooms, fostering culturally and linguistically responsive classroom communities, understanding social and environmental issues that affect the literacy learning of diverse learners, connecting with students' family and community language and literacy practices, using effective methods and materials to develop engaged and literate students, and fostering students' engagement in literacy activities.

ELE ED 6411 Curriculum Leadership Elementary Programs: 3 semester hours

Prerequisite: TCH ED 6030. Learn strategies for development and implementation of up-to-date curriculum. Using current research of innovative programs and new approaches, students will develop skills in analyzing and evaluating content area curriculum according to Common Core and national content standards in order to lead curriculum development in an educational setting.

ELE ED 6428 Elementary School Curriculum Reform in the Life Sciences: 1-4 semester hours

Prerequisite: Graduate standing. Field-based experiences in improving the district-level elementary school science program, with special attention to the life sciences. Emphasis is given to planning and implementing standards-based inquiry on selected science topics that include connections to other curricular areas. This course is organized into 4 non-overlapping modules. Credit hours are determined based on number of modules completed. The course may be repeated for maximum of 4 credit hours.

ELE ED 6431 STEM Instruction in Elementary Education: 3 semester hours

Prerequisites: TCH ED 6010, TCH ED 6020; or consent of instructor. This course will integrate related Science, Technology, Engineering and Math (STEM) disciplines through examination, analysis and application of the national science standards (NGSS) and scholarly readings. In the course, students will develop STEM curriculum and instruction that facilitate the learners' construction of scientific understandings.

ELE ED 6448 Diagnosis and Remediation of Disabilities in Learning Mathematics: 3 semester hours

Prerequisites: Graduate standing. This course explores the materials and techniques used in diagnosis and correction of mathematical disabilities in K-12 educational settings.

ELE ED 6482 Problems and Research in Teaching Elementary School: 3 semester hours

Prerequisites: Graduate standing. This is the capstone course for the Masters of Education in Reading and is taken in the last 9 hours of the master's program. The three foci for this course are (1) systematic study of research as it focuses on the problems of teaching literacy in K-12 classrooms, (2) innovations in the field, and (3) action research. Candidates design and complete an action research project related to literacy.

ELE ED 6490 Internship: 1-10 semester hours

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

ELE ED 6493 Reading Specialist Practicum I: 3 semester hours

Prerequisites: ELE ED 6686. This course is an application of literacy theory and research in a supervised setting. The emphasis is on assessing and analyzing the literacy strengths, needs, and interests of a range of readers with the goal of improving their literacy abilities and attitudes. The focus is on establishing reading support for K-12 students with the assistance of formal and informal assessments, reading professionals, educators, and students' families.

ELE ED 6494 Reading Specialist Practicum II: 3 semester hours

Prerequisites: ELE ED 6493. This course is an application of evidence-based literacy instruction in a supervised setting. The emphasis is on using appropriate print and digital materials and providing effective instructional techniques to address K-12 students' assessed literacy strengths, needs, and interests with the goal of improving their literacy abilities and attitudes. Family and community knowledge and practices will be integrated into literacy sessions in ways that enhance literacy learning. The focus is on the roles of the literacy specialist and leader in a range of settings, including online.

ELE ED 6497 Problems: 1-10 semester hours

Selected problems to meet the needs of individual students.

ELE ED 6684 Instructional Strategies for Teaching Reading: 3 semester hours

Prerequisites: Graduate standing. This course extends candidate knowledge of effective instructional designs and strategies for teaching literacy. Emphasis is on development of a teaching philosophy which acknowledges students gain considerable knowledge about reading and writing from their families and communities. Emphasis is placed on integrating research-based components of reading, including: phonemic awareness, phonological awareness, comprehension, fluency, and decoding within culturally- and linguistically-responsive instructional designs. Focus is on effective instructional design and strategies to promote students' writing and reading success within face-to-face and online classrooms.

ELE ED 6686 Analysis and Correction of Reading Disabilities: 3 semester hours

Prerequisites: Graduate standing. This course develops students' understanding of the roles and responsibilities of the teacher of reading, reading specialist, and literacy coach. Emphasis is on the nature of specific reading difficulties, distinguishing reading difficulty/disability from language and literacy diversity and variation, becoming familiar with a range of tools for assessing reading skills and strategies, and developing a critical orientation for evaluating the purpose and utility of various literacy assessment tools. Candidates will use informal and formal literacy assessments to guide instructional planning and case study writing.

Health and Physical Education

Courses

HLTH PE 3275 Psychological Aspects of Physical Education: 3 semester hours

Prerequisite: PSYCH 1003 or ED PSY 2212. A study of the psychological processes underlying the learning and performance of motor skills and participation in physical activity. Covers how humans learn skilled actions, how principles of motor performance and learning can be applied to teaching, and how teachers can create positive motivational climates.

HLTH PE 3277 Foundations of Health and Physical Education Programs: 3 semester hours

Prerequisites: Junior standing. A study of the historical, philosophical, and cultural influences in education and issues related to health and physical education programs.

HLTH PE 3280 Human Anatomy and Physiology: 4 semester hours

Prerequisite: BIOL 1012 and BIOL 1013 or consent of instructor, junior standing. Study of the basic aspects of human anatomy and physiology and their relationship to concepts in sport and physical activity. Two hours laboratory per week.

HLTH PE 3284 Physiology of Human Exercise: 3 semester hours

Prerequisite: HLTH PE 3280. Study of the physiological effects of human exercise, training, and sport activities upon the human body; emphasis also given to factors of work, fatigue, nutrition, gender, and environment.

HLTH PE 3285 Safety and Emergency Care for Health and Physical Education: 3 semester hours

Prerequisites: HLTH PE 3280 or equivalent. A study of safety issues relating to health and physical education, including prevention and treatment of physical activity-related injuries. Emphasis will be given to emergency responses, including CPR certification.

HLTH PE 3380 Introduction to Nutrition for Health and Performance: 3 semester hours

Prerequisites: Junior standing or consent of instructor. Study of human nutrition and its relationship to healthy lifestyles and exercise performance. Includes study of nutrients, food sources, healthy weight and body composition, energy intake and expenditure, fluid and electrolyte balance, and ergogenic aids.

HLTH PE 3432 Teaching Health and Physical Education in Elementary Schools: 3 semester hours

Prerequisites: Sophomore standing. This course covers health and physical education programs in elementary schools. Emphasis is given to the teacher's roles and responsibilities as they relate to the content and services found in the coordinated school health program.

HLTH PE 3434 Teaching of Health and Wellness: 4 semester hours

Prerequisites: HLTH PE 3280 or the equivalent, or consent of the instructor. Study of concepts and issues related to health and active lifestyle behavior development, with emphasis given to the design and preparation of appropriate instructional experiences and techniques.

HLTH PE 4989 Practicum I: Site-Based Experience in Physical Education: 3 semester hours

Prerequisites: Accepted Practicum I application. This course is a two-day per week intensive, collaborative professional experience in diverse school settings with students, emphasizing improving K-12 student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Course includes mandatory on-site and on-campus seminars, which could be scheduled outside of normal class time. Applicable methods course assignments will be completed in Practicum I. Students are required to take the appropriate DESE-mandated content exam during Practicum I.

HLTH PE 4990 Practicum II: 16-Week Site-Based Experience in Health and Physical Education: 12 semester hours

Prerequisites: Successful completion of Practicum I requirements. This course is a four-day per week intensive, collaborative professional experience in diverse school settings with students, emphasizing improving K-12 student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Course includes mandatory on-site and on-campus seminars, which could be scheduled outside of normal class time. Practicum II includes the completion of required State certification assessments.

HLTH PE 5989 Practicum I: Site-Based Experience in Health and Physical Education: 2 semester hours

Prerequisites: Director of Clinical Experience approval. This course is a 1-2 day per week intensive professional development experience working in K-12 settings with emphasis in health and physical education classrooms. On-site activities include partnering with the classroom teacher in all areas of instruction, assessment, and classroom management. Some methods course assignments may be completed during the practicum day at school sites. Activities to acquire research skills are included.

HLTH PE 5991 Practicum II: Site-Based Experience in Health and Physical Education, 16-Week Placement: 8 semester hours

Prerequisites: Successful completion of Practicum I and Director of Clinical Experience approval. This course is a clinical teaching experience 4-days per week in health and physical education classrooms. Teacher candidates spend time in schools engaged in various capacities to improve student learning within small group instruction, whole class teaching, lesson planning and special programs to demonstrate proficiency on all professional teacher standards. Teacher candidates collect data for a research project. Practicum II includes the completion of required State certification assessments.

HLTH PE 5992 Practicum II: Site-Based Experience in Health and Physical Education, 4 Week Placement: 2 semester hours

Prerequisites: Successful completion of Practicum I and Director of Clinical Experience approval. This course is a clinical teaching experience 4-5 days per week in health and physical education classrooms. Teacher candidates spend time in schools engaged in various capacities to improve student learning within small group instruction, whole class teaching, lesson planning and special programs to demonstrate proficiency on all professional teacher standards. Teacher candidates collect data for a research project. This course must be taken concurrently with HLTH PE 5991.

Middle Education

Courses

MID ED 4246 Teaching Mathematics in the Middle School: 3 semester hours

Prerequisites: Completion of Level I and II requirements and mathematics area of concentration. A study of the middle school math curriculum with state standards and appropriate instructional strategies, materials, and assessments.

MID ED 4246T Teaching Mathematics in the Middle School for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course for teachers in residence is a study of the middle school math curriculum aligned to learning standards and the implementation of appropriate instructional strategies, materials, and assessments.

MID ED 4253 Teaching Social Studies in the Middle School: 3 semester hours

Prerequisites: Completion of Level I and II requirements. Study of middle school social studies emphasizing current social studies curricular content, methods of teaching, and instructional materials. If taken concurrently with internship, field hours will be combined within the internship experience. If this course is taken separately, middle school based field experiences are required in addition to scheduled course time.

MID ED 4315 The Middle Level School: 3 semester hours

Prerequisites: Completion of Level I requirements and admission to teacher education program. An in-depth study of the philosophical and historical basis of the goals and organization of middle level schools, including a review of research as the basis for current trends and practices.

MID ED 4315T The Middle Level School for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course for teachers in residence emphasizes the philosophical and historical foundations of middle level schools, including a review of research as the basis for current trends and practices.

MID ED 4350 Teaching Science in the Middle School: 3 semester hours

Prerequisites: Completion of Level I and II requirements or equivalent preparation. Students will analyze both methodology and content, apply appropriate teaching and learning strategies, and become acquainted with technological advances in teaching science. Students will use informal and formal assessment as well as design and implement original science activities and instruction for all areas of science. If taken concurrently with internship, field hours will be combined within the internship experience. If this course is taken separately, then middle school based field experiences are required in addition to scheduled course time.

MID ED 4350T Teaching Science in the Middle School for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. In this course, middle school teachers in residence analyze both methodology and content, apply appropriate teaching and learning strategies, and become acquainted with technological advances in teaching science. Teachers in residence design and implement instructional materials and varied assessment tools for all areas of science.

MID ED 4989 Practicum I: Middle Level Education Site-Based Experience: 3 semester hours

Prerequisites: Accepted practicum application. This course is a two-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in middle school classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum I includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum I.

MID ED 4990 Practicum II: Middle Level Education Site-Based Experience: 12 semester hours

Prerequisites: Successful completion of Practicum I requirements. This course is a four-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in middle school classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum II includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum II.

MID ED 5989 Practicum I: Middle Education Site-Based Experience: 2 semester hours

Prerequisites: Graduate standing. This is an intensive professional development experience working in K-12 settings with middle-grade students. Activities on site cover all areas of instruction, assessment, and classroom management. Particular emphasis will be given to impacting students' achievement for diverse populations and differentiated instruction. Students must be practicing teachers holding a bachelor's degree.

Physical Education

Courses

PHY ED 1124 Principles and Practice in 1st Aid and Cardiopulmonary Resuscitation: 1 semester hour

The course provides theory and supervised practice in first aid and cardiopulmonary resuscitation leading to American Red Cross certification in those areas.

PHY ED 2134 Personal Physical Fitness: 3 semester hours

Prerequisite: Consent of instructor. A study of the relationship between vigorous physical activity and individual well-being. Emphasis will be placed on an individualized analysis of health fitness, resulting in a prescribed program to develop optimal levels of physical fitness, including aerobic fitness, strength, muscular endurance, flexibility, body composition, and lifetime sports considerations.

PHY ED 2136 Facilities Management: 3 semester hours

This course will introduce the process of designing and maintaining facilities typically found in recreational environments. Emphasis will be placed on management theories, risk management, facility maintenance, operation and administration of various recreation facilities.

PHY ED 3204 Special Topics in Physical Education: 1-3 semester hours

Prerequisite: Consent of instructor. Independent study through readings, reports, field study or research.

PHY ED 3261 Physical Activity for Diverse Learners: 3 semester hours

Prerequisites: SPEC ED 3318. A study of the special physical activity and exercise needs, interests, and challenges of diverse learners in modifying physical education, with considerable emphasis on the development of methods and competencies.

PHY ED 3267 Performance Analysis in Physical Education: 3 semester hours

Prerequisite: College level math. A study of quantitative and qualitative approaches, processes and instruments used in assessing student progress in physical education activities. Emphasis will be given to the application of statistical methods to the results of evaluations of human motor performance and the interpretation of those results as well as to the construction and administration of measurement instruments.

PHY ED 3282 Physical Growth and Motor Development: 3 semester hours

Prerequisite: PSYCH 2270 and PHY ED 3465. An examination of the physical growth and aging, and motor development of the human being over the life span. Emphasis on evaluative tools, techniques and studies of research findings. Laboratory field experience for observing individuals. Attention is directed toward acquisition of basic skills, perceptual-motor development, fitness development, and age-related changes in information processing. A Required course for Physical Education majors; an elective course for early childhood, special, and Elementary Education majors.

PHY ED 3283 Kinesiology: 3 semester hours

Prerequisite: HLTH PE 3280 and math proficiency. Study of the biomechanics of human motion with particular application to performance in sport activities.

PHY ED 3287 Seminar in Exercise Science: 1-3 semester hours

Prerequisites: HLTH PE 3284 or consent of instructor. Study of current topics in the research and practice of exercise science, especially those required for certifications in the field. An emphasis will be placed on application of research to professional situations. Some field experience may be required. May be repeated as long as the topic is different for a maximum of 6 credit hours.

PHY ED 3330 Designing Physical Activity Programs: 3 semester hours

Prerequisite: HLTH PE 3284 or consent of instructor. Designing physical activity regimes for individualized and group programming based upon physical fitness assessment. Health, nutrition, age, physical fitness, and testing aspects are considered in developing specialized exercise programming based upon current research and best practices.

PHY ED 3422 Teaching of Skills: Grades Pk-4: 4 semester hours

Prerequisites: Completion of 15 hours of level II requirements. Study of developmental movement activities and appropriate learning experiences found in PK-4 grade level programs, with emphasis on developmental sequencing and the design of appropriate learning activities, materials, and effective pedagogical skills.

PHY ED 3423 Teaching of Skills: Grades 5-9: 3 semester hours

Prerequisites: Completion of 15 hours of Level II courses. Study of sports and physical activities commonly found in the curriculum for grades 5-9, with emphasis on critical cues analysis, developmental sequencing, and the design of appropriate learning activities, materials, and pedagogical skills.

PHY ED 3424 Teaching of Skills: Grades 9-12: 3 semester hours

Prerequisites: Completion of 15 hours of Level II requirements. Study of sport and physical activities predominately found in physical education programs at these grade levels, with emphasis given to critical cue analysis, developmental sequencing, and the design of appropriate learning activities, materials, and pedagogical skills.

PHY ED 3425 Teaching Skills: Movement, Dance, and Rhythms: 3 semester hours

Prerequisites: Completion of 15 credit hours of Level II requirements. Study of movement analysis and techniques of teaching fundamental movement skills, rhythmic activities, creative movement, and dance forms commonly taught in school settings. Emphasis will be given to developmental sequencing and the design of appropriate learning activities, materials, and pedagogical skills.

PHY ED 3468 Curriculum and Methods of Teaching Physical Education: 3 semester hours

This course Studies the scope and sequence of the school program in physical education with emphasis on planning processes, content selection, management procedures, instructional strategies, and program assessment.

PHY ED 3931 Adult Exercise Leadership: 3 semester hours

Prerequisites: HLTH PE 3284 or equivalent. Study of the roles, functions, and skills necessary for those entering careers that promote fitness and regular exercise in adults.

PHY ED 5380 Nutrition for Human Performance: 3 semester hours

A study of human nutrition and its relationship to human performance. Consideration is given to nutrients - function, food source, health concerns, and implications to energy intake and expenditure; special considerations - body composition, including weight gain and loss, ergogenic aids, competitive athletes, older adults, children and teens, pregnant women, disease risk, fluid and electrolyte balance, and specific sport activities.

PHY ED 6462 The Physical Education Curriculum: 3 semester hours

Prerequisite: Consent of instructor. A study of current practices, problems, trends and research involved in the analysis and development of the physical education curriculum.

PHY ED 6464 Analysis of Teaching in Physical Education: 3 semester hours

Prerequisites: Graduate standing and consent of instructor. A study of trends and research relating to teaching methodology, supervision of instruction, and classroom management in physical education. Emphasis will be placed on the application of research in best instructional practices and teacher effectiveness in physical education.

PHY ED 6478 Problems and Research in Physical Education: 3 semester hours

A study of potential research problems and research processes in specific physical education subdisciplines. A research project will be completed in the student's physical education subdiscipline interest area.

PHY ED 6485 Theory of Exercise and Cardiovascular Disease Risk Factor Management: 3 semester hours

Prerequisites: Completion of PHY ED 6484 or equivalent. A study of the effects of exercise on the basic epidemiology, physiology, and management of unavoidable and avoidable cardiovascular risk factors. Special attention will be given to the examination of the effect of exercise in the management of cardiovascular disease risk.

PHY ED 6497 Problems: 1-10 semester hours

Selected problems to meet the needs of individual students.

PHY ED 7492 Directed Readings in Curriculum and Instruction: 1-6 semester hours

Prerequisites: Graduate Standing, one graduate course in Curriculum and Instruction, and consent of instructor. Independent study into the current research, literature, and issues in the areas of physical education curriculum and instruction.

PHY ED 7494 Directed Readings in Motor Behavior: 1-6 semester hours

Prerequisites: Graduate standing, one graduate course in motor behavior, and permission of the instructor. Independent study into the current research, literature, and issues in the area of motor behavior.

Secondary Education

Courses

SEC ED 2010 Introduction to Inquiry Approaches to STEM Education (STEP I): 1 semester hour

Same as CHEM 2010, PHYSICS 2010, MATH 2010, and BIOL 2010. Prerequisites: Concurrent enrollment BIOL 1821, BIOL 1831, CHEM 1111, CHEM 1121, PHYSICS 2111, PHYSICS 2112, MATH 1800, or MATH 1900 or have a declared STEM major. Students who want to explore teaching careers become familiar with lesson plan development by writing, teaching and observing lessons in a local school class. Students build and practice inquiry-based lesson design skills and become familiar with and practice classroom management in the school setting. As a result of the STEP I experiences students should be able to decide whether to continue to explore teaching as a career and ultimately finishing the remainder of the WE TEACH MO curriculum leading to teacher certification. The classroom observations and teaching represent a major field component and requires at least one two hour block of free time during the school day once a week.

SEC ED 2011 Designing Inquiry-Based STEM Experiences (STEP II): 1 semester hour

Same as CHEM 2011, PHYSICS 2011, MATH 2011, and BIOL 2011. Prerequisites: BIOL 2010, CHEM 2010, PHYSICS 2010, MATH 2010, or SEC ED 2010. Students explore teaching careers, become familiar with STEM school setting through observing and discussing the school environment and by developing and teaching inquiry-based lessons.

SEC ED 4011 The Curriculum and Methods of Teaching History and Social Studies: 3 semester hours

Prerequisites: Admission to the Teacher Education Program and completion of Level II requirements. A study of the scope and sequence of history and social studies courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. May not count toward history hours required for history major. Must be completed prior to student teaching. This course must be completed in residence. Not available for graduate credit. Concurrent enrollment in SEC ED 4989 is required.

SEC ED 4011T The Curriculum and Methods of Teaching History and Social Studies for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course for teachers in residence studies the scope and sequence of history and social studies courses in the secondary school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation.

SEC ED 4013 United States History for the Secondary Classroom: 3 semester hours

Prerequisites: Admission to the Teacher Education Program. TCH ED 3310 or consent of the instructor. This course is required for Social Studies certification. Adapts the themes and subject matter of American history to the secondary classroom and trains teachers in techniques particularly designed to maximize the use of primary sources, foster critical inquiry, and encourage knowledge of subject matter. Particular emphasis will be placed on defining the broad and connecting themes of American history, on expanding bibliography, and on choosing methods of inquiry for use in an interactive classroom. Cannot be counted towards the minimum 39-hour history major requirement, but can be counted towards the 45 hour maximum and for Social Studies certification. Not available for graduate credit.

SEC ED 4090 American Government for the Secondary Classroom: 3 semester hours

Same as POL SCI 4090. Prerequisites: POL SCI 4090/ SEC ED 4090 must be taken concurrently with SEC ED 4011 except with special consent of the School Studies Coordinator. Adapts the themes and subject matter of American Government to the secondary classroom and trains teachers in techniques particularly designed to maximize the use of primary sources, foster critical inquiry, and encourage knowledge of subject matter. Particular emphasis will be placed on defining the broad and connecting methods of inquiry for use in an interactive classroom. Can be counted towards the Political Science major requirement, but not the American Politics subgroup. Counts towards Social Studies certification. Not available for graduate credit.

SEC ED 4240 Curriculum and Methods of Teaching Physical Sciences: 3 semester hours

Prerequisites: TCH ED 3310 or TCH ED 5310 and a near major in the subject area. A study of the scope and sequence of the physical science courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of science. Concurrent enrollment in SEC ED 4989 is required. This course must be completed in residence.

SEC ED 4589 Curriculum and Methods of Teaching Foreign Languages: 3 semester hours

Same as FGN LANG 4589. This course is a study of the scope and sequence of the foreign language courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. The course emphasizes second language acquisition and socio-cultural theories of learning which undergird the approach, examination and analysis of foreign language teaching practices. Attention is also directed toward learning the techniques and research of the scholar in the field of foreign language. To be taken concurrently with Practicum I, SEC ED 4989.

SEC ED 4589T Curriculum and Methods of Teaching Foreign Languages for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course for teachers in residence is a study of the scope and sequence of the foreign language courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. The course emphasizes second language acquisition and sociocultural theories of learning.

SEC ED 4646 The Curriculum and Methods of Teaching Math: 3 semester hours

Prerequisites: Admission to the Teacher Education Program and completion of Level II requirements. Must be taken concurrently with SEC ED 4989. A study of the scope and sequence of the mathematics courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of mathematics. To be taken prior to student teaching. This course must be completed in residence. Not available for graduate credit.

SEC ED 4646T The Curriculum and Methods of Teaching Math for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course for teachers in residence studies the scope and sequence of the mathematics courses in the secondary school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation.

SEC ED 4880 Writing for Teachers: 3 semester hours

Prerequisite: ENGL 3090 or junior level English. Writing for Teachers is an English-education course that supports writing across the curriculum for both pre-service English and content area teachers. Teacher candidates learn writing theories and literacy strategies to help their future students construct meaning from their discipline. The course works best for those who are completing level II or beginning level III education courses. The course counts toward the Certificate in Writing.

SEC ED 4885 The Curriculum and Methods of Teaching English: 3 semester hours

Prerequisites: Completion of Level II requirements and a near major in English. A study of the scope and sequence of the English courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. The course prepares students for reflective teaching by relating course readings to field experiences and theory to practice. To be taken prior to student teaching and concurrently with Practicum I, SEC ED 4989.

SEC ED 4985 Curriculum and Methods of Teaching Life Sciences: 3 semester hours

Prerequisites: TCH ED 3310 (undergraduate students) or TCH ED 5310 (graduate students). This course studies the scope and sequence of the life science courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. The analysis of teaching and learning in secondary school classrooms will be integrated into classroom activities and discussions. Concurrent enrollment in SEC ED 4989 is required. Admission to the Teacher Education Program is required.

SEC ED 4985T Curriculum and Methods of Teaching Life Sciences for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course for teachers in residence studies the scope and sequence of the life science courses in the secondary school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. The analysis of teaching and learning in secondary school classrooms is integrated into classroom activities and discussions.

SEC ED 4989 Practicum I: Site-Based Experience: 3 semester hours

Prerequisites: Successful practicum application. This course is a two-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in high school classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum I includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum I.

SEC ED 4990 Practicum II: Site-Based Experience: 12 semester hours

Prerequisites: Successful completion of Practicum I. This course is a four-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in high school classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum II includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum II.

SEC ED 4992 Practicum I: Site-Based Experience in Music: 3 semester hours

Prerequisites: Accepted practicum application. This course is a one-day per week (or equivalent) intensive, collaborative professional experience in a K-12 music classroom setting. This course emphasizes improving student learning and musicianship, data-driven instruction, classroom management, and reflection. Practicum I includes regular, mandatory Music Department seminar attendance outside of normal class time on campus. Students are required to take the appropriate DESE-mandated content exam during Practicum I.

SEC ED 4993 Practicum II: 12-Week Site-Based Experience in Music: 9 semester hours

Prerequisites: Successful completion of Practicum I and approval of the Coordinator of Music Education. This course is a five-day per week intensive, collaborative professional experience in diverse K-12 settings with students, emphasizing improving student learning and musicianship, data-driven instruction, classroom management, and reflection. This course includes weekly, mandatory Music Department seminar attendance outside of normal class time on campus. This course must be taken concurrently with SEC ED 4994.

SEC ED 4994 Practicum II: 4-Week Site-Based Experience in Music: 3 semester hours

Prerequisites: Successful completion of Practicum I and approval of the Coordinator of Music Education. This course is a five-day per week intensive, collaborative professional experience in diverse K-12 settings with students, emphasizing improving student learning and musicianship, data-driven instruction, classroom management, and reflection. This course includes weekly, mandatory Music Department seminar attendance outside of normal class time on campus. This course must be taken concurrently with SEC ED 4993.

SEC ED 4995 Practicum I: Site-Based Experience in Art: 3 semester hours

Prerequisites: Accepted Practicum application. This course is a two-day per week intensive, collaborative professional experience in a K-12 art classroom setting. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum I includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum I.

SEC ED 4996 Practicum II: 16-Week Site-Based Experience in Art: 12 semester hours

Prerequisites: Successful completion of Practicum I requirements. This course is a four-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in art classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum II includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Practicum II includes the completion of required State certification assessments.

SEC ED 4997 Practicum II: 4-Week Site-Based Experience in Art: 3 semester hours

Prerequisites: Successful completion of Practicum I requirements. This course is a four-day-per-week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in art classrooms. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum II includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Students are required to take the appropriate DESE-mandated content exam during Practicum II. This course must be taken concurrently with SEC ED 4996.

SEC ED 5000 Teacher Practicum Research: 1 semester hour

Prerequisites: Admission into Student Teaching. Students conduct research on their own teaching in order to modify their instruction, curriculum and assessment practices. Concurrent enrollment in SEC ED 4990 is required.

SEC ED 5989 Practicum I: Site-Based Experience: 2-3 semester hours

Prerequisites: Director of Clinical Experience approval. This course is a 1-2 day per week intensive professional development experience working in K-12 settings with emphasis in high school classrooms. On-site activities include partnering with the classroom teacher in all areas of instruction, assessment, and classroom management. Some methods course assignments may be completed during the practicum day at school sites. Activities to acquire research skills are included.

SEC ED 5990 Practicum II: Site-Based Experience: 8 semester hours

Prerequisites: Successful completion of Practicum I and Director of Clinical Experience approval. This course is a clinical teaching experience 4 days per week in a high school setting. Teacher candidates spend time in schools engaged in various capacities to improve student learning within small group instruction, whole class teaching, lesson planning and special programs to demonstrate proficiency on all professional teacher standards. Teacher candidates collect data for a research project.

SEC ED 5992 Practicum I: Graduate Site-Based Experience in Music: 2 semester hours

Prerequisite: Coordinator of Music Education approval. This course provides clinical experience in the elementary general music classroom setting. Students gain first-hand experience in preparing and teaching lessons, classroom management, and receiving mentoring from the clinical teachers.

SEC ED 5993 Practicum II: Graduate Site-Based Experience in Music, 12 Week Placement: 6 semester hours

Prerequisite: Coordinator of Music Education approval. This course provides a twelve-week intensive clinical teaching experience in music. The clinical experience takes place 5 days per week for a minimum of 12 weeks at one location, under university supervision. This course includes a mandatory weekly Music Department seminar and must be taken concurrently with SEC ED 5994.

SEC ED 5994 Practicum II: Graduate Site-Based Experience in Music, 4 Week Placement: 2 semester hours

Prerequisite: Coordinator of Music Education approval. This course provides a four-week intensive clinical teaching experience in music. The clinical experience takes place 5 days per week for a minimum of 4 weeks at one location, under university supervision. This course includes a mandatory weekly Music Department seminar and must be taken concurrently with SEC ED 5993.

SEC ED 5995 Practicum I: Site-Based Experience in Art: 2 semester hours

Prerequisites: Coordinator of Art Education approval. This course is a 1-2 day per week intensive professional development experience working in K-12 settings with emphasis in art classrooms. On-site activities include partnering with the classroom teacher in all areas of instruction, assessment, and classroom management. Some methods course assignments may be completed during the practicum day at school sites. Activities to acquire research skills are included. This course must be taken concurrently with ART ED 5273.

SEC ED 5996 Practicum II: Site-Based Experience in Art: 8 semester hours

Prerequisites: Successful completion of Practicum I and Coordinator of Art Education approval. This course is a clinical teaching experience 4 days per week in art classrooms. Teacher candidates spend time in schools engaged in various capacities to improve student learning within small group instruction, whole class teaching, lesson planning and special programs to demonstrate proficiency on all professional teacher standards. Teacher candidates collect data for a research project.

SEC ED 6415 Curriculum Leadership in Education: 3 semester hours

Prerequisites: TCH ED 6030 or consent of instructor. Strategies for developing and implementing up-to-date curriculum. Using current research of innovative programs and new approaches, students will develop skills in analyzing and evaluating content area curriculum according to Common Core and national content standards in order to lead curriculum development in an educational setting.

SEC ED 6416 Curriculum Design for Educational Programs: 3 semester hours

Prerequisites: TCH ED 6030, SEC ED 6415 or consent of instructor. Principles of curriculum design and development for a formal or informal educational setting. Students may choose to develop an integrated or differentiated curriculum using the Common Core or national content standards. Compare and contrast curriculum design approaches while connecting curriculum and instruction practices to learner performance.

SEC ED 6420 Improving Teaching and Learning: 3 semester hours

Prerequisites: TCH ED 6030, or consent of instructor. Students will learn to improve their teaching effectiveness through the use of various models of instruction that are based on current learning theories and research in teaching methodology to improve the achievement of diverse learners. Focus on inquiry models that prepare educators for effectively teaching the Common Core standards. Prior instructional experience is recommended.

SEC ED 6431 STEM Instruction in Secondary Education: 3 semester hours

Prerequisites: TCH ED 6010 and TCH ED 6020; or consent of instructor. This course will integrate related Science, Technology, Engineering and Math (STEM) disciplines through examination, analysis and application of the national science standards (NGSS) for secondary education and scholarly readings. In the course, students will develop STEM curriculum and instruction teaching units that facilitate the learners' construction of scientific understandings.

SEC ED 6497 Problems: 1-10 semester hours

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Special Education

Courses

SPEC ED 3318 Inclusive Classrooms: 3 semester hours

Prerequisites: Admission to the Teacher Education Program. This course provides an introduction to the terminology, identification, and issues commonly encountered when addressing the needs of diverse students with disabilities in inclusive classrooms. Emphasis will be placed on inclusion, diversity issues, federal and state legislative mandates, parental involvement, and individualized education programs. Applicable strategies for the successful inclusion of all students that enhance collaboration among relevant stakeholders will be provided.

SPEC ED 3349 Instructional Practices in Inclusive Education: 3 semester hours

Prerequisites: SPEC ED 3318 and admission to the Teacher Education Program. This course builds on foundational skills for developing an inclusive program that meets the needs of students with disabilities. The course will emphasize research-based instructional, behavioral, and individualized education program (IEP) writing strategies used to assist students with disabilities. Students take this during the same semester as their Practicum 1 course.

SPEC ED 4315 Language and Communication of Children with Disabilities: 3 semester hours

Prerequisites: SPEC ED 3318 and admission to the Teacher Education Program. This course focuses on language acquisition of children with disabilities and techniques/strategies to be employed by general and special education teachers. Emphasis on meaningful culturally responsive strategies to support children's language and communication development. Discuss use of assistive technology and alternative and augmentative communication. Clinical hours required to complete course assignments.

SPEC ED 4323 Classroom Management and Positive Behavioral Supports in Inclusive Educational Settings: 3 semester hours

Prerequisites: Admission to Teacher Education Program or consent of instructor. This course establishes healthy and culturally appropriate teacher-student relationships that build successful classroom community and enhance student learning. Teacher candidates develop a culturally appropriate classroom management plan that includes rules, procedures, and expected behaviors and uses problem-solving strategies to resolve behavior problems. In addition, teacher candidates will develop skills to assess, design and implement extensive, individualized, positive behavioral supports. Emphasis is on the candidates developing the social competence of PreK-12 students within diverse inclusive classrooms and engaging families in supportive interactions.

SPEC ED 4342 Transition Issues and Planning: 3 semester hours

Prerequisites: SPEC ED 3318 and admission to the Teacher Education Program; or consent of the instructor. This course provides evidence-based strategies that can be used across the lifespan to prepare people with disabilities for employment, higher education, and community inclusion. Strategies will be applicable to school and community environments and a wide range of stakeholders including educators, human service professionals, families, and advocates. Topics include transition planning, self-determination, person-centered planning, skills assessments, self-advocacy, and family and community collaboration.

SPEC ED 4989 Practicum I: Special Education Site-Based Experience: 3 semester hours

Prerequisites: Accepted Practicum application. This course is a two-day per week intensive, collaborative professional experience in inclusive K-12 settings with emphasis in special education. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum I includes mandatory on-site and on-campus seminars which could be scheduled outside of normal class time. Candidates are required to take the appropriate DESE-mandated content exam during Practicum I.

SPEC ED 4990 Practicum II: Special Education Site-Based Experience: 12 semester hours

Prerequisites: Successful completion of Practicum I. This course is a four-day per week intensive, collaborative professional experience in inclusive K-12 settings with an emphasis in special education. This course emphasizes improving student learning outcomes, data-driven instruction, classroom management, and video use and analysis. Practicum II includes mandatory on-site and on-campus seminars, which could be scheduled outside of normal class time. Candidates are required to take the appropriate DESE-mandated content exam during Practicum II.

SPEC ED 5303 Instructional Practices: 3 semester hours

Prerequisites: Graduate standing. This course provides an in-depth examination of methods and techniques for use in the education of students receiving special education services in inclusive settings. The purpose of this course is to develop foundational skills for setting up an inclusive program that meets the needs of students with disabilities in general education settings. The course emphasizes many of the behind-the-scenes practices, strategies and activities that must be included on a regular basis to make inclusive education effective and efficient.

SPEC ED 5989 Practicum I: Special Education Site-Based Experience: 2 semester hours

Prerequisites: Approval of program coordinator. This course is an intensive professional development experience in P-12 settings with emphasis in special education. On-site activities include skill development in all areas of instruction, assessment, and classroom management. Candidates must hold a bachelor's degree and be admitted to Teach for America or Teach Residency.

SPEC ED 6315 Speech and Language Interventions for Children with Disabilities: 3 semester hours

Prerequisites: Graduate standing. This course focuses on language acquisition, speech and language disabilities, and evidence-based practices that can be employed by classroom teachers in inclusive classrooms. Emphasis is on identifying culturally responsive and research-based strategies to support language and communication development as well as the use of assistive technology and alternative and augmentative communication.

SPEC ED 6315B Understanding/Implementing Speech & Language Interventions for Special Needs B: 1 semester hour

Prerequisites: Admission to Teach For America or Alternative Certification program. Must be practicing teacher with Bachelor Degree. Study of speech and language development for students with exceptional needs and the techniques employed by classroom teachers to support their learning.

SPEC ED 6325 Positive Behavior Interventions for Individual, Classroom, and School-wide Systems: 3 semester hours

Prerequisites: Graduate standing. This course provides an overview of evidence-based practice for individual, classroom and school-wide positive behavior interventions. It presents strategies to enrich the school environment and facilitate student learning. The focus is on function-based assessment and interventions and the implementation of positive-behavior support practices to decrease challenging behaviors and increase appropriate behaviors in students of various ages and grade levels.

SPEC ED 6325T Positive Behavior Interventions for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course provides teachers in residence with an overview of evidence-based practice for individual, classroom and school-wide positive behavior interventions. It presents strategies to enrich the school environment and facilitate student learning. The focus is on function-based assessment and interventions and the implementation of positive-behavior support practices to decrease challenging behaviors and increase appropriate behaviors in students of various ages and grade levels.

SPEC ED 6342 Advanced Transition Issues and Planning: 3 semester hours

Prerequisites: Graduate standing. This course helps educators who work closely with adolescents and young adults with disabilities learn about planning for the transition from school to adult life for students with disabilities. Transition outcomes may include employment, residential options, and postsecondary education. Advanced topics include self-determination, self-advocacy, career education and planning, interagency collaboration, vocational and residential issues and resources, postsecondary education options, and family support and collaboration.

SPEC ED 6342T Advanced Transition Issues and Planning for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course helps teachers in residence who work closely with adolescents and young adults with disabilities learn about planning for the transition from school to adult life. Transition outcomes may include employment, residential options, and postsecondary education.

SPEC ED 6343 Advocacy and Leadership in Transition: 3 semester hours

Prerequisites: Graduate standing and SPEC ED 6342. This course focuses on developing students' ability to use transition research to develop, lead, and advocate for transition issues and programming in their school and district. Emphasis is placed on developing students' ability to advocate for transition services and to lead teams of transition stakeholders. Topics include transition legislation and policy, model transition programs, interagency collaboration, advocacy in transition, leadership in transition, transition curricula, and promoting inclusive practices.

SPEC ED 6344 Research in Transition: Practices for Postschool Success: 3 semester hours

Prerequisites: Graduate standing and SPEC ED 6342. This course focuses on developing students' ability to use transition research to promote positive post-school outcomes for transition aged students with disabilities. Emphasis is placed on identifying, evaluating, and implementing evidence-based transition instruction and activities for students with disabilities. Topics include transition assessment, evidence-based transition instruction, early and advanced work-based learning experiences, self-determination, and models of post-secondary education.

SPEC ED 6345 Characteristics and Education of Students with High-Incidence Disabilities: 3 semester hours

Prerequisites: TCH ED 3313 or an equivalent course in psychology of the exceptional child. Advanced study of characteristics of students with high-incidence and cross categorical disabilities and other pertinent issues including inclusion, assessment, and evaluation practices.

SPEC ED 6346 Reading Instruction and Intervention in Special Education: 3 semester hours

Prerequisites: Graduate standing. This course examines current research and issues specific to educating students with disabilities in the area of reading. Topics will include historical and contemporary perspectives on reading instruction and assessment, and implementation of evidence-based practice to improve phonological awareness, decoding, word recognition, fluency, comprehension, and vocabulary. Written language will also be addressed as it pertains to reading instruction. (No credit earned if credit previously earned from SPEC ED 3346).

SPEC ED 6346T Reading Instruction and Intervention in Special Education for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course examines current research and issues specific to educating students with disabilities in the area of reading for teachers in residence. Topics include historical and contemporary perspectives on reading instruction and assessment, and implementation of evidence-based practice to improve phonological awareness, decoding, word recognition, fluency, comprehension and vocabulary.

SPEC ED 6372 Screening and Diagnosis of Developmental Delays: Birth to 5 Years: 3 semester hours

Prerequisite: Graduate standing. This course addresses the content, techniques, and special problems related to the assessment of children at risk for developmental delays in the birth to five year age range. Students gain experience in construction, administration and interpretation of assessment tools used with young children.

SPEC ED 6410 Collaboration for Families and Schools in Inclusive Communities: 3 semester hours

Prerequisites: Graduate standing. This course focuses on the role of the practitioner as a collaborative partner with families and professionals in the school system, service system, and community. Candidates learn how collaborative partnerships contribute to improved student outcomes and enhance the role of practitioners as a resource for instruction, inclusion, and futures planning. The course also reviews (a) the roles of practitioners and other stakeholders in the collaboration process, (b) the knowledge and skills needed to effectively collaborate with families and professionals, and (c) the interpersonal skills necessary for successful collaboration.

SPEC ED 6412 Foundations of Inclusive Education: 3 semester hours

Prerequisites: Graduate standing. This course is designed for general educators, special educators, counselors, supervisors, and administrators, this course examines characteristics of students with disabilities and introduces instructional strategies to support inclusion and student success. It reviews the legal foundations and requirements of special education and the collaborative role of general and special educators in the implementation of individualized education programs (IEPs).

SPEC ED 6412A Psychology of Exceptional Children: Legislation: 1 semester hour

Prerequisites: Must hold a completed Bachelor Degree. Students will learn the laws governing Special Education including use of the Individual Education Plan (IEP).

SPEC ED 6412B Psychology of Exceptional Children: Inclusive Classrooms: 1 semester hour

Prerequisites: SPEC ED 6412A. This class is an introductory overview of inclusive education, the characteristics of special populations in diverse classrooms, and issues related to compliance with state and federal law in serving students with varying needs. Applicable strategies for the successful inclusion of all students that enhance collaboration among relevant stakeholders will be provided.

SPEC ED 6413 Organizational Foundations and Practices for Inclusive Education: 3 semester hours

Prerequisites: Graduate standing. This course offers an in-depth understanding of issues that frame access and equity for students with disabilities in inclusive educational settings by critically examining the structural and systemic framework that regulates the education of students with disabilities. This course explores current pedagogical practices and frameworks within the field of special education that focus on building skills as an inclusive educator.

SPEC ED 6415 Disability Law and Policy: 3 semester hours

Prerequisites: Graduate standing. This course focuses on the requirements, history, and evolution of laws impacting special education services; current legal requirements in providing a free appropriate public education (FAPE) to students with disabilities; and how to conduct legal research using a variety of sources.

SPEC ED 6415T Disability Law and Policy for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency. This course for teachers in residence focuses on the requirements, history, and evolution of laws impacting special education services; current legal requirements in providing a free appropriate public education (FAPE) to students with disabilities; and how to conduct legal research using a variety of sources.

SPEC ED 6430 Characteristics and Education of Individuals with Low-Incidence Disabilities: 3 semester hours

Prerequisites: TCH ED 3313 or equivalent course in psychology of the exceptional child; graduate standing. An advanced study of the theoretical and methodological problems related to autism and developmental (low-incidence) disabilities. Particular emphasis on the application of current research findings to issues confronting individuals with autism and developmental disabilities, and family-and community-systems dynamics. Required course for concentration area: Autism and Development Disabilities.

SPEC ED 6437 Applied Behavior Analysis: Functional Assessment and Interventions: 3 semester hours

Prerequisites: SPEC ED 6620 with a grade of B or better (or as a co-requisite) or consent of instructor. Study of the evidence-based, best practice principles and interventions of applied behavior analysis strategies. Exploration of approaches that prove effective when designing and implementing functional behavior assessments, positive behavior support techniques, and behavior intervention plans.

SPEC ED 6440 Research in Inclusive Education: Disability, School, & Culture: 3 semester hours

Prerequisites: Graduate standing. This course examines foundational issues in social and educational policy for students with disabilities, specifically as it relates to inclusion, as well as explores research on the historical, philosophical, sociological, and economic dimensions of inclusion in school and community settings for individuals with disabilities and their families. Candidates learn about the relationship between theory and practice and develop self-analytic, reflective, and problem-solving skills in pedagogical contexts.

SPEC ED 6443 Characteristics and Education of Students with Learning Disabilities: 3 semester hours

Prerequisites: TCH ED 3313 or an equivalent course in psychology of exceptional children; graduate standing. Advanced study of the theoretical and methodological problems related to learning disabilities. Particular emphasis on the application of current research findings to the problems confronting learners with learning disabilities.

SPEC ED 6462 Introduction to Early Childhood Special Education: 3 semester hours

Prerequisites: SPEC ED 3313 or equivalent. Study of issues and concepts central to special education of young children with disabilities, and at-risk for disabilities, and their families. Focus on program models, screening and assessment procedures, and curriculum concepts. An ecological perspective is emphasized.

SPEC ED 6463 Curriculum, Methods, and Materials for Early Childhood Special Ed: 3 semester hours

Prerequisites: SPEC ED 6462. In-depth study of integrated assessment-based curriculum development for learners in early childhood special education. Emphasis on individualized educational planning and implementation for learners and their families.

SPEC ED 6497 Problems: 1-10 semester hours

Prerequisites: TCH ED 3313 or equivalent and consent of instructor. Investigation of a selected problem related to the education of learners with disabilities. To be conducted under the direction of a graduate faculty member.

SPEC ED 6610 Foundations of Autism Spectrum Disorder: Research to Practice: 3 semester hours

Prerequisites: SPEC ED 6437 with a grade of B or higher and a teaching certificate or consent of instructor. The course focuses on characteristics of children and youth with autism spectrum disorders (ASD); trends and issues connected with ASD; and effective practices and strategies for structuring, managing, and promoting functional/behavioral skills development and interaction among children and youth with ASD.

SPEC ED 6620 Assessment and Interventions for Children and Youth with Autism Spectrum Disorder: 3 semester hours

Prerequisites: SPEC ED 6610 with a grade of B or higher and teaching certificate, or consent of instructor. The course reviews functions of behavior as a foundation for understanding and completing functional behavior assessments; entails interpreting and graphing collected data; and incorporates intervention practice and applied curriculum modifications.

SPEC ED 6641 Basic Principles and Concepts of Behavior Analysis: 3 semester hours

Prerequisites: Graduate standing. This course provides an overview of the basic principles and concepts of behavior analysis and an introduction to the functional approach of human behavior in the context of applied behavior analysis.

SPEC ED 6642 Behavior Assessment: 3 semester hours

Prerequisites: SPEC ED 6641 with minimum grade of B or consent of instructor. This course provides instruction on the diverse methods of behavior assessment employed in behavior analytical applications, the considerations when selecting and prioritizing behavior goals for intervention, and the expectations when writing behavior intervention plans.

SPEC ED 6643 Research Methods in Applied Behavior Analysis: 3 semester hours

Prerequisites: SPEC ED 6641 with minimum grade of B or consent of instructor. This course provides instruction on research-based, single-case design in applied behavior analysis, measurement procedures in behavior analytical practice and research, and evaluation of research designs.

SPEC ED 6644 Behavior Interventions in Applied Behavior Analysis: 3 semester hours

Prerequisites: SPEC ED 6641 and SPEC ED 6642 with minimum grade of B or consent of instructor. This course provides instructions related to behavior-change procedures for the acquisition of basic to complex skills and reduction of maladaptive behavior, as well as the methods for identifying evidence-based behavior interventions.

SPEC ED 6645 Ethics and Professionalism in Applied Behavior Analysis: 3 semester hours

Prerequisites: SPEC ED 6641 with minimum grade of B or consent of instructor. This course prepares students for the ethical and professional practice of applied behavior analysis. Students learn the foundations of professional and ethical behavior needed to ensure a high quality of practice in behavior analysis.

SPEC ED 6646 Verbal Behavior Concepts and Applications: 3 semester hours

Prerequisites: SPEC ED 6644 with minimum grade of B or consent of instructor. This course provides a detailed look at Skinner's analysis of verbal behavior and the behavior analytic and functional approach of language. This course focuses on the behavior analytic view of speaking and listening responses and the development of complex language.

SPEC ED 6647 Advanced Concepts and Principles in Behavior Analysis: 3 semester hours

Prerequisites: SPEC ED 6641 with minimum grade of B or consent of instructor. This course provides a detailed look at the theories, philosophy, and principles of applied behavior analysis. The course focuses on the philosophical basis of applied behavior analysis and introduces advanced concepts and special topics in behavior analysis.

SPEC ED 6648 Behavior-Based Consultation and Supervision: 3 semester hours

Prerequisites: SPEC ED 6644 with minimum grade of B or consent of instructor. This course provides instruction on evidence-based, best practice interventions in professionalism, staff training, monitoring, supervision, and the behavior analytical approach to staff management.

SPEC ED 6651 Practicum I in Applied Behavior Analysis: 2 semester hours

Prerequisites: SPEC ED 6641 and SPEC ED 6642 with minimum grade of B in both courses, or consent of instructor. This course provides students with opportunities to use principles and standards of behavior analysis in applied settings. Students develop skills in the areas of behavior observation and measurement in clinical settings.

SPEC ED 6652 Practicum II in Applied Behavior Analysis: 2 semester hours

Prerequisites: SPEC ED 6643 and SPEC ED 6651 with minimum grade of B in both courses. This course provides students with opportunities to use principles and standards of behavior analysis in applied settings. Students develop skills in the areas of behavior measurement and research in clinical settings.

SPEC ED 6653 Practicum III in Applied Behavior Analysis: 2 semester hours

Prerequisites: SPEC ED 6644 and SPEC ED 6652 with minimum grade of B in both courses. This course provides students with opportunities to use principles and standards of behavior analysis in applied settings. Students develop skills in the areas of behavior intervention to decrease maladaptive behavior and increase functional skills.

SPEC ED 6654 Practicum IV in Applied Behavior Analysis: 2-3 semester hours

Prerequisites: SPEC ED 6646 and SPEC ED 6653 with minimum grade of B in both courses. This course provides students with opportunities to use principles and standards of behavior analysis in applied settings. Students develop skills in the areas of behavior interventions to increase functional and communication skills.

SPEC ED 6655 Practicum V in Applied Behavior Analysis: 2 semester hours

Prerequisites: SPEC ED 6648 and SPEC ED 6654 with minimum grade of B in both courses. This course provides students with opportunities to use principles and standards of behavior analysis in applied settings. Students develop skills in the areas of staff performance assessment and training.

SPEC ED 6661 Thesis in Applied Behavior Analysis: 1-7 semester hours

Prerequisites: SPEC ED 6643 and SPEC ED 6644 with minimum grade of B in both courses. This course provides students with opportunities to integrate knowledge through developing, completing, and publicly presenting a thesis in ABA research. Students develop a proposal to replicate studies already published in the literature or to conduct a new research project. This course may be repeated for a maximum of seven credit hours.

SPEC ED 6662 Capstone II in Applied Behavior Analysis: 3 semester hours

Prerequisites: SPEC ED 6661 with minimum grade of B. This course provides students with opportunities to integrate knowledge through developing, completing, and publicly presenting an action research project. Students implement a proposed research project and present on the process and results of the project.

Teacher Education

Courses

TCH ED 1000 Building Community, Culture, and Learning in Education: 1 semester hour

This course provides an introduction to college life, scholarly endeavors and opportunities for growth available during undergraduate study. It is designed to nurture future educators, support them to be successful in the college environment, and initiate relationships which will continue through their academic and professional careers.

TCH ED 1001 Early Clinical Experience: Community Agency: 1 semester hour

Prerequisites: Current and clear background check and current and clear TB screening. This course provides education candidates active and purposeful early clinical experiences with regional community agencies that support youth and/or families. Candidates are required to participate at agencies to meet organization goals and course objectives. Professionalism and effective communication are emphasized as candidates learn to build relationships and support learners' intellectual and social development. A minimum of 20 hours of clinical experience are required. This course must be taken concurrently with TCH ED 2000.

TCH ED 2000 Becoming a Professional Educator: 1 semester hour

This course serves to ground candidates in the education profession, including its diverse career options and programs offered in the College of Education. Candidates explore personal and societal factors that may influence their professional identities, as well as the diverse environments in which educators can serve. This class must be taken concurrently with TCH ED 1001.

TCH ED 2001 Early Clinical Experience: Schools: 1 semester hour

Prerequisites: Current and clear background check and current and clear TB screening required. This course introduces candidates to strategies for supporting the intellectual and social-emotional needs of P-12 students. Candidates observe and analyze a variety of classroom environments (a minimum of 20 hours of clinical experience in addition to class meetings) and participate in structured video analysis (10 hours). Development of professional dispositions is emphasized. This course must be taken concurrently with TCH ED 2209. Completion of this course fulfills early clinical experience requirements for teacher certification.

TCH ED 2209 Foundations of Teaching in American Schools: 2 semester hours

This course examines historical contexts and current trends that impact P-12 schools. Topics include equitable learning and teaching practices, legal and ethical responsibilities, professional collaboration and communication, and other selected concepts underlying American educational systems. This course must be taken concurrently with TCH ED 2001.

TCH ED 3001 Mid-Level Clinical Experience: Diverse Learners: 1 semester hour

Prerequisites: Current and clear background check, current and clear TB screening, and admission into the Teacher Education Program. This course involves education candidates in active and purposeful mid-level clinical experiences with regional community agencies that include and support individuals with disabilities and their families. Candidates are required to participate at agencies to meet organization goals and course objectives. This course requires the study of research and analysis of cultural competency in instruction, curriculum and achievement. Completion of this course partially fulfills mid-level clinical requirement for teacher certification. In addition to class meetings, 20 hours of clinical experience is required.

TCH ED 3210 General Linguistics in Teaching English to Speakers of Other Languages: 3 semester hours

Prerequisites: Completion of Level I requirements. An introduction to the historical, legal and pedagogical frameworks relating to Teaching English to Speakers of Other Languages (TESOL), and bilingualism. Students explore principles of language systems including English and the function of language in social and academic settings.

TCH ED 3211 Basic Principles of Second and Foreign Language Acquisition: 3 semester hours

Prerequisites: TCH ED 3210. Covers the principles of language acquisition and the factors which influence learning. Students investigate first and second language acquisition processes including socio-cultural and cognitive factors in relation to second language acquisition (SLA). The course analyzes phonology, morphology, syntax, semantics, and discourse, within a communicative framework, which directly relates to instructional strategies.

TCH ED 3212 Sociolinguistics and Communication in the Classroom: 3 semester hours

Prerequisites: Admission to Teacher Education Program. Students explore the impact of culture and society on English learners' academic language acquisition. Topics covered in this course include verbal and non-verbal communication, learning styles, and second language acquisition strategies. The course introduces concepts relating to the acculturation process, cross-cultural and intra- and inter-cultural communication and its impact on accommodating the coping strategies for the English learners academic achievement. Students develop strategies to enhance home, school and community relations and impact of culture on perceptions, communication, behaviors, and most importantly, academic learning.

TCH ED 3213 Performance-based Assessment for TESOL: 3 semester hours

Prerequisite: TCH ED 3210. By exploring the role of assessment in culturally and linguistically diverse classrooms, this course provides an overview of identifying and placing students at the district and school level. Formal and informal models of assessment are examined as students reflect on the administration and interpretation of equitable measurement strategies and how assessment can reinforce instruction.

TCH ED 3214 Material Development and Methods for TESOL: 3 semester hours

Prerequisites: TCH ED 3211, TCH ED 3212, TCH ED 3213, TCH ED 3224, and TCH ED 4391. This course integrates knowledge of second language acquisition research in instructional methodologies. Students incorporate theories of linguistics, assessment models, and instructional technology into their material development to meet the needs of diverse English language learners.

TCH ED 3224 Curriculum Development for Content Teaching of English Language Learners: 3 semester hours

Prerequisites: TCH ED 3210 required; TCH ED 3211, TCH ED 3212, and TCH ED 3213 recommended. This course explores teachers' first, second, and/or dual language acquisition as well as language structures, learning styles, and the effects of cross-culture competencies on English learners' (ELs') content areas (English Language Arts, Science, Mathematics, Social Studies, etc.). Linguistically and culturally responsive teaching (LCRT) strategies will be covered. Standards-based integrated curriculum and instructional materials with assessment strategies will be developed and analyzed along with World-Class Instructional Design and Assessment (WIDA) descriptors based on ELs' language proficiency levels to ensure success.

TCH ED 3310 Instructional Design and Technology Integration: 3 semester hours

This course explores essential elements of effective instructional design and technology integration. Areas of emphasis include learning standards, formative and summative assessment, data-driven instructional practices, planning for diverse learning needs, and student engagement.

TCH ED 3312 Psychology of Learning, Instruction, and Assessment: 3 semester hours

Prerequisites: ED PSY 2212 or consent of instructor. This course applies educational psychology theories and research to learning, instruction, and assessment. Candidates will learn about the importance of motivation, memory and cognition, and critical thinking skills in the instructional process and how to develop and monitor effective assessments to improve student learning.

TCH ED 3565 Fine Arts Integration for the Elementary Classroom: 2 semester hours

This course explores how elementary schools support the creative growth of children to promote optimal learning environments. This course emphasizes the teacher's role in integrating visual arts, media arts, dance, theater, and music into the elementary curriculum.

TCH ED 3566 Teaching Health and Physical Education Skills and Concepts in the Elementary Classroom: 2 semester hours

This course explores the importance of health and physical education skills and concepts in the elementary classroom. This course emphasizes the teacher's roles and responsibilities as they relate to the content and services found in the coordinated school health program.

TCH ED 4391 Literacy for Adolescent Learners in Content Areas: 3 semester hours

Prerequisites: Admission to the Teacher Education Program. This course examines the teaching of multiple literacies including reading, writing, speaking, and critical thinking in the content areas. It explores implications of diverse cultures and languages and their relationship to reading.

TCH ED 5000 Advanced Early Clinical Experience: 1 semester hour

Prerequisites: Graduate Standing and current and clear background and TB screening required. This course requires clinical experiences for those wishing to explore teaching as a career. Includes regularly scheduled on-site teaching as outlined by instructor. Required for secondary candidates seeking accelerated entry into teacher certification program and must be taken prior to Practicum 1. Completion of this course partially fulfills early clinical requirement for teacher certification.

TCH ED 5001 Advanced Mid-Level Clinical Experience: Diverse Learners: 1 semester hour

Prerequisites: Admission into the Teacher Education Program and graduate standing. This course involves education candidates in active and purposeful advanced mid-level clinical experiences with regional community agencies that include and support individuals with disabilities and their families. Candidates are required to participate at agencies to meet organization goals and course objectives. This course requires the study of research and analysis of cultural competency in instruction, curriculum and student learning outcomes. Completion of this course partially fulfills mid-level clinical requirement for teacher certification. Current and clear background and TB screening required. In addition to class meetings, 20 hours of clinical experience is required.

TCH ED 5310 Instructional Design and Technology Integration for Educators: 2-3 semester hours

Prerequisites: Graduate standing. This course supports teacher candidates in the learning and application of essential elements of effective instructional design and technology integration. Areas of emphasis include learning standards, formative and summative assessment, data-driven instructional practices, planning for diverse learning needs, and student engagement.

TCH ED 5310B Instructional Design: High-Yield Instructional Strategies: 1 semester hour

Prerequisites: Graduate standing. Educators will develop skills in planning teaching units, instructing lessons, selecting content and using various teaching methods appropriate for use in classrooms. Students will learn to use high yield instructional strategies appropriately matched to learning goals.

TCH ED 5310C Instructional Design: Instructional Models: 1 semester hour

Prerequisites: Graduate standing. Educators will develop skills in planning teaching units, instructing lessons, selecting content, and using various teaching methods appropriate for use in classrooms. Students will learn various models for teaching and apply each model selectively based on instructional goals and learner characteristics.

TCH ED 5310T Instructional Design and Technology Integration for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency. This course supports teachers in residence in the learning and application of essential elements of effective instructional design and technology integration. Areas of emphasis include learning standards, formative and summative assessment, data-driven instructional practices, planning for diverse learning needs, and student engagement.

TCH ED 5311 Foundations of Education: 3 semester hours

Prerequisite: Graduate standing. Students will learn the history of public education, the role of the teacher as a change agent, the influence of technology, and the impact of diversity of American classrooms. Ten clock hours of field work required.

TCH ED 5312 Teaching Reading in the Content Areas: 3 semester hours

Prerequisites: Graduate standing. Explores differentiated instruction as an approach to meeting the diverse literacy needs of all students in the classroom-including identifying students with reading difficulties and supporting their literacy in the content areas. This differentiated instruction approach will be used to enhance literacy developments of adolescent learners in functional literacy, content literacy, technological literacy and creative/innovative literacy.

TCH ED 5312T Teaching Reading in the Content Areas for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency. This course for teachers in residence explores differentiated instruction as an approach to meeting the diverse literacy needs of all students in the classroom-including identifying students with reading difficulties and supporting their literacy in the content areas. This differentiated instruction approach will be used to enhance literacy developments of adolescent learners in functional literacy, content literacy, technological literacy and creative/innovative literacy.

TCH ED 5500 Methods for Teaching Personal Finance: 3 semester hours

This course demonstrates methods for teaching personal finance in a high school classroom. Educators will learn about the use of simulations, cooperative learning, direct instruction, and inquiry for teaching personal finance literacy. They will identify and evaluate resources appropriate for high school personal finance instruction, and create a syllabus and pacing guide for a semester-long high school personal finance course.

TCH ED 5800 Building Excellence in STEM Talent Professional Seminar: 1 semester hour

Prerequisites: Special consent required. A weekly professional seminar for the purpose of exploring how STEM content and pedagogical knowledge can embody the principles of instructional creativity. The seminar will use best practices engineering to produce a series of STEM lessons that use knowledge of subject concepts and project-based instruction relevant to students in local high-need schools. These lesson prototypes will be developed through the process of a cross-disciplinary InnoLab and improved upon during the internships in the schools. The seminar will take place in the ED Collabiat and be attended by a series of academic, community, and corporate resources. Repeatable up to 4 credit hours.

TCH ED 5850 Topics in the Teaching of Writing: 1-3 semester hours

Prerequisites: Consent of instructor. This course is one of the special topics in the practice of and pedagogy of writing designed for in-service teachers. Topics may include writing at specific grade levels, writing/reading workshops, writing in urban settings, writing across the curriculum, action research, new technology, and classroom and district-level assessment. Course may be repeated for credit if topics differ. This course can be applied to the Graduate Certificate in the Teaching of Writing.

TCH ED 5880 Writing in the Content Areas: 3 semester hours

Same as ENGL 5880. Prerequisites: Graduate standing. This course emphasizes the importance of integrating writing instruction in classrooms across subject areas. Theories of writing and writing instruction will be explored, and students will discuss how to put the theories into practice in their classrooms. Students will learn to explore their own writing process while learning strategies that will help them to teach writing rather than just assign writing. The course examines the tools pre-service and in-service teachers will need to work with diverse learning communities, to utilize best practice in the teaching of writing, and to use writing as a tool for student learning in any content area. Students in this class will be held to professional writing and speaking standards. The course counts toward the Certificate in Writing.

TCH ED 5880T Writing in the Content Area for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course for teachers in residence emphasizes the importance of integrating writing instruction in classrooms across subject areas. Theories of writing and writing instruction will be explored; the course also examines the tools teachers in residence will need to work with diverse learning communities, to utilize best practice in the teaching of writing, and to use writing as a tool for student learning in any content area.

TCH ED 6000T Practicum for Teachers in Residence: 1-2 semester hours

Prerequisites: Admission to Teach Residency program. This course is a full-time clinical teaching experience in a classroom aligned to the emphasis area of teacher certification. Teachers in residence engage in various capacities to improve student learning within small group instruction, whole class teaching, lesson planning, and special programs to demonstrate proficiency on all professional teacher standards.

TCH ED 6010 Examining History, Community and Social Justice in Education: 3 semester hours

Prerequisites: Admission to the Graduate School. This course addresses issues of equity and social justice from the perspective of personal and educational history. Participants will develop a cultural understanding of their own previous educational, community and family experiences, and apply that understanding in their current work as educators. They will also develop an understanding of the historical foundations of education and of the role of the educator as a catalyst for change, and of the critical components needed to create positive relationships with learners, coworkers and community members. Curriculum, instruction, and learning will be examined from the perspectives of race, ethnicity, class, gender, ability, sexual orientation, and religion. Finally, participants will examine global perspectives on, and challenges in, social justice education.

TCH ED 6010A Examining History, Community and Social Justice in Education: Culture and Context: 1 semester hour

Prerequisite: Graduate standing. Addresses the issues of equity and social justice from the context of personal and educational history. Students will develop a cultural understanding of their own previous school, community and family experiences and generalize those findings to their current work as educators.

TCH ED 6010B Examining History, Community and Social Justice in Education: Historical Foundations: 1 semester hour

Prerequisite: Graduate standing. Addresses the issues of equity and social justice from the context of personal and educational history. Students will develop an understanding of the historical foundations of United States education and the role of the teacher as a catalyst for change.

TCH ED 6010C Examining History, Community and Social Justice in Education: Socio-Cultural Framework: 1 semester hour

Prerequisites: Graduate standing. Addresses the issues of equity and social justice from the context of personal and educational history. Students will examine curriculum, instruction, and learning through a variety of lenses including race, class, gender, ability, sexual orientation and religion to become culturally responsive teachers.

TCH ED 6020 Teacher Action, Advocacy and Leadership: 3 semester hours

This course is centered on teacher action, advocacy, and leadership. Candidates develop the leadership skills necessary to sustain an inclusive, just, and caring school, organization, and/or community. The class emphasizes collaboration among educators, students, families, and communities. Course experiences promote the ability of educators to effectively lead, advocate, and take action collaboratively.

TCH ED 6030 Instruction, Learning, and Assessment: 3 semester hours

Prerequisites: Graduate standing. This course applies cognitive psychology theories to learning, instruction, and assessment. Candidates use behavioral and achievement assessment data (formative, diagnostic, and summative) to assess a learner's progress and to plan ongoing instruction. Candidates also learn about the design and use of differentiated high-quality assessments to monitor learner performance, assess the development of learners' global competence, and guide decision making.

TCH ED 6030B Instruction, Learning and Assessment: B: 1 semester hour

Prerequisites: TCH ED 6030A or consent of instructor. This course builds on applying cognitive psychology theories to learning, instruction, and assessment. Candidates use behavioral and achievement assessment data (formative, diagnostic, and summative) to assess learner progress and plan ongoing instruction. Candidates learn about the design and use of differentiated high-quality personal communication and disposition assessments to monitor learner performance, assess the development of learners' global competence, and guide decision making.

TCH ED 6030C Instruction, Learning and Assessment: C: 1 semester hour

Prerequisites: TCH ED 6030B or consent of instructor. This course builds on applying cognitive psychology theories to learning, instruction, and assessment. Candidates use behavioral and achievement assessment data (formative, diagnostic, and summative) to assess learner progress and plan ongoing instruction. Candidates critique the design and use of differentiated high-quality assessments to monitor learner performance, assess the development of learners' global competence, and guide decision making.

TCH ED 6115 Historical Thinking in Research and Practice: 3 semester hours

Same as HIST 6115. Prerequisites: Graduate standing or consent of instructor. In this hands-on course, students examine current research and effective teaching strategies that facilitate historical thinking while also broadening content knowledge. Students further design, implement, and assess educational materials and practices that foster historical thinking, reading, and writing.

TCH ED 6210 Foundations of Teaching English to Speakers of Other Languages: 3 semester hours

Prerequisites: Graduate standing. This course is an introduction to the historical, legal and pedagogical frameworks relating to Teaching English to speakers of Other Languages (TESOL) and bilingualism. Students explore current issues, trends and influential factors in second language acquisition (SLA) instructional and assessment models.

TCH ED 6210T Foundations of Teaching English to Speakers of Other Languages for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course for teachers in residence is an introduction to the historical, legal and pedagogical frameworks relating to Teaching English to speakers of Other Languages (TESOL) and bilingualism. Teachers in residence explore current issues, trends and influential factors in second language acquisition (SLA) instructional and assessment models.

TCH ED 6220 Principles of Second/Foreign Language Acquisition: 3 semester hours

Prerequisite: TCH ED 6210. This course is a research-based study of language acquisition and the factors which influence learning. Students investigate first and second language acquisition processes including socio-cultural and cognitive factors, as well as linguistic research about second language acquisition (SLA). The course analyzes phonology, morphology, syntax, semantics and discourse, within a communicative framework, which directly relates to instructional strategies.

TCH ED 6220T Principles of Second/Foreign Language Acquisition for Teachers in Residence: 3 semester hours

Prerequisites: TCH ED 6210T. This course for teachers in residence is a research-based study of language acquisition and the factors which influence learning. Teachers in residence investigate first and second language acquisition processes including socio-cultural and cognitive factors, as well as linguistic research about second language acquisition (SLA). The course analyzes phonology, morphology, syntax, semantics and discourse, within a communicative framework, which directly relates to instructional strategies.

TCH ED 6224 Integrated Curriculum Development for Content Teaching of English Language Learners: 3 semester hours

Prerequisites: TCH ED 6210 required; TCH ED 6220, TCH ED 6230, and TCH ED 6240 recommended. Explores research-based first, second, and/or dual language acquisition as well as language structures, learning styles, and the effects of cross-culture competencies on English Learners' (ELs') content areas. Linguistically and culturally responsive teaching strategies will be covered. Standards-based integrated curriculum and instructional materials with assessment strategies will be developed and analyzed along with World-Class Instructional Design and Assessment (WIDA) descriptors based on ELs' language proficiency levels to ensure success.

TCH ED 6224T Integrated Curriculum for Teaching of English Language Learners for Teachers in Residence: 3 semester hours

Prerequisites: TCH ED 6210T, TCH ED 6220T. This course for teachers in residence explores research-based first, second, and/or dual language acquisition as well as language structures, learning styles, and the effects of cross-culture competencies on English Learners' (ELs') content areas. Linguistically and culturally responsive teaching strategies will be covered. Teachers in residence will develop and analyze standards-based integrated curriculum and instructional materials with assessment strategies while utilizing World-Class Instructional Design and Assessment (WIDA) descriptors.

TCH ED 6230 Cross-Cultural Communication in the Classroom: 3 semester hours

Prerequisite: TCH ED 6210. Students explore the impact of culture and society on verbal and non-verbal communication, learning styles, and second language acquisition. The course introduces concepts relating to the acculturation process, cross-cultural and intra-cultural communication. Within this theoretical context, students recognize their own socio-cultural identity and its impact on teaching models. Students develop strategies to enhance home, school and community relations.

TCH ED 6230T Cross-Cultural Communication in the Classroom for Teachers in Residence: 3 semester hours

Prerequisites: TCH ED 6210T. This course allows teachers in residence to explore the impact of culture and society on verbal and non-verbal communication, learning styles, and second language acquisition. The course introduces concepts relating to the acculturation process, and cross-cultural and intra-cultural communication. Within this theoretical context, teachers recognize their own socio-cultural identity and its impact on teaching models. Teachers in residence develop strategies to enhance home, school, and community relations.

TCH ED 6240 Assessment for Teaching English to Speakers of Other Languages: 3 semester hours

Prerequisites: TCH ED 6210 and TCH ED 6220 are recommended. By exploring the role of assessment in culturally and linguistically diverse classrooms, this course provides an overview of identifying and placing students at the district and school level. Formal and informal models of assessment are examined as students reflect on the administration and interpretation of equitable measurement strategies and how assessment can inform instruction.

TCH ED 6240T Assessment for Teaching English to Speakers of Other Languages for Teachers in Residence: 3 semester hours

Prerequisites: TCH ED 6210T and TCH ED 6220T. This course provides teachers in residence with an overview of the role of assessment in identifying and placing students at the district and school level. Formal and informal models of assessment are examined as teachers in residence reflect on the administration and interpretation of equitable measurement strategies and how assessment can inform instruction.

TCH ED 6241 Science Content, Inquiry-Based Instruction, and Assessment: STEM-Integrated Pedagogy: 2-3 semester hours

Prerequisites: Graduate standing. This course provides teacher candidates with research-based theories and practices focused upon the teaching and learning of science. Candidates acquire skills to plan and implement lessons that facilitate each learner's ability to conceptualize science concepts. The course integrates related disciplines, such as technology, engineering and mathematics, in order to provide educators with a context for understanding the content of science, how science knowledge is acquired and understood, and how the sciences are connected across disciplines. Course experiences and scholarly reading help candidates become effective teachers through the development of positive attitudes toward learning science, technology, engineering and mathematics; acquiring scientific information; and facilitating learners' construction of scientific understandings.

TCH ED 6241T STEM-Integrated Pedagogy for Teachers in Residence: 2 semester hours

Prerequisites: Admission to Teach in Residency program. This course provides teachers in residence with the skills to plan and implement lessons that facilitate each learner's ability to conceptualize science concepts. The course integrates related disciplines, such as technology, engineering and mathematics, in order to provide educators with a context for understanding the content of science, how science knowledge is acquired and understood, and how the sciences are connected across disciplines.

TCH ED 6250 Methods and Materials for Teaching English to Speakers of Other Languages: 3 semester hours

Prerequisites: TCH ED 6220, TCH ED 6224, TCH ED 6230, and TCH ED 6240 or consent from instructor. This course requires students to integrate knowledge of second language acquisition research in instructional methodologies, linguistics, assessment models, and awareness of socio-cultural dynamics. Students use this knowledge to design and critique a unit plan, including instructional materials and technology support.

TCH ED 6250T Methods and Materials for Teaching English to Speakers of Other Languages for Teachers in Residence: 3 semester hours

Prerequisites: TCH ED 6220T, TCH ED 6224T, TCH ED 6230T and TCH ED 6240T. This course requires teachers in residence to integrate knowledge of second language acquisition research in instructional methodologies, linguistics, assessment models, and awareness of socio-cultural dynamics. Teachers in residence apply this knowledge to design and critique instructional materials and technology support.

TCH ED 6260 Practicum in Teaching English to Speakers of Other Languages: 3 semester hours

Prerequisites: TCH ED 6250 (may be taken concurrently). This course teaches students to observe and reflect on classroom practices related to teaching English to speakers of other languages. Students complete a student's needs analysis and placement test, and implement a unit plan in the classroom with reflection. This is a supervised field experience.

TCH ED 6260T Practicum in Teaching English to Speakers of Other Languages for Teachers in Residence: 3 semester hours

Prerequisites: TCH ED 6250T (may be taken concurrently). This course guides teachers in residence to observe and reflect on classroom practices related to teaching English to speakers of other languages. Teachers in residence complete a student's needs analysis and placement test, and implement a unit plan in the classroom with reflection.

TCH ED 6271 Teaching and Learning of Number and Operations from an Advanced Perspective: 3 semester hours

This course will promote understanding of learning and teaching pre-number concepts, counting and cardinality, numbers and operations in base ten. Emphasis will be given to how children think about and learn these concepts and how they fit into the elementary school curriculum. Concurrent enrollment in TCH ED 6281 is required.

TCH ED 6272 Teaching and Learning Rational Numbers from an Advanced Perspective: 3 semester hours

The course is designed to develop an understanding of the learning and teaching of rational numbers and the ratio and proportional relationships. Emphasis will be given to how students think about and learn these concepts and how they fit into the elementary school curriculum. Concurrent enrollment in TCH ED 6282 is required.

TCH ED 6273 Geometry and Measurement for Elementary Mathematics Specialists: 3 semester hours

This course is designed to develop an understanding of the teaching and learning of geometry and measurement. Emphasis will be given to how children think about and learn these concepts and how they fit into an elementary mathematics curriculum. Concurrent enrollment in TCH ED 6283 is required.

TCH ED 6274 Algebraic Reasoning for Elementary Mathematics Specialists: 3 semester hours

Course focuses on the content and complexities of teaching and assessing algebraic reasoning in grades 1-6. Includes examinations of representation and analysis of mathematical situations and structures. Attention is given to patterns, functions, and the transition from arithmetic to algebra. Concurrent enrollment in TCH ED 6284 is required.

TCH ED 6276 Data and Probability for Elementary Mathematics Specialists: 3 semester hours

The course is designed to develop understanding of probabilistic and statistical reasoning and the collection, exploration, and analysis of data. Emphasis will be given to how children think and learn about these concepts and how they fit into the elementary school curriculum. Concurrent enrollment in TCH ED 6277 is required.

TCH ED 6277 Foundations of Mathematics Leadership for Elementary Mathematics Specialists: 2 semester hours

This course provides opportunities for participants to develop knowledge and understanding of leadership principles and roles of mathematics education leaders. Focus on leadership styles; roles, and responsibilities of elementary mathematics specialists; major historical events, documents, and policies that have influenced mathematics education; and research related to effective teaching and learning of mathematics. Concurrent enrollment in TCH ED 6276 is required.

TCH ED 6278 Mathematical Leadership for Elementary Schools Advanced: 3 semester hours

Prerequisites: Successful completion of Elementary Mathematics Specialist certification coursework or consent of instructor. This advanced leadership course focuses on research and practice related to teamwork, interaction, communication, conflict resolution, and leadership in elementary schools. Candidates will examine effective strategies for influencing and facilitating school/district improvement.

TCH ED 6281 Internship - Number and Operations in Elementary Schools: 1-2 semester hours

This course is a supervised mathematics teaching internship with online seminars. The candidate acquires experience working with a range of students and adult learners (parents and teachers) on number and operations concepts. Concurrent enrollment in TCH ED 6271 is required.

TCH ED 6282 Internship - Rational Numbers in Elementary Schools: 1-2 semester hours

This course is a supervised mathematics teaching internship with online seminars. Candidate acquires experience working with students and adult learners (teachers and parents) on rational number and proportional thinking concepts. Concurrent enrollment in TCH ED 6272 is required.

TCH ED 6283 Internship-Geometry/Measurement in Elementary Schools: 1-2 semester hours

This course is a supervised mathematics teaching internship with online seminars. The candidate acquires experience working with students and adult learners (teachers and parents) on geometry and measurement concepts appropriate for K-5 students. Concurrent enrollment in TCH ED 6273 is required.

TCH ED 6284 Internship-Algebraic Reasoning in Elementary Schools: 1-2 semester hours

Prerequisite: Must be concurrently enrolled in TCH ED 6274. This course is a supervised mathematics teaching internship with online seminars. The candidate acquires experience working with a range of students and adult learners (teachers and parents) on concepts related to algebraic reasoning appropriate for K-5 students.

TCH ED 6411 Curriculum Leadership in Education: 3 semester hours

Prerequisites: Graduate standing. In this course, candidates learn strategies for development and implementation of current curriculum. Using evidence-based theories and current research of innovative programs, candidates develop skills in analyzing and evaluating content area curriculum according to state and national content standards in order to lead curriculum development in an educational setting.

TCH ED 6422 Curriculum Design of K-12 Programs: 3 semester hours

Prerequisites: TCH ED 6411. In this course, candidates learn principles of curriculum design and development for both formal and informal educational settings. Candidates will compare and contrast curriculum design approaches while connecting curriculum practices to learner performance. Candidates will select a grade level and subject area and then design an integrated and differentiated curriculum using the Missouri and national content standards.

TCH ED 6423 Learning Through Inquiry: 3 semester hours

Prerequisites: Graduate standing. In this course, candidates will improve their teaching effectiveness through the use of various models of instruction that are based on current learning theories and research in teaching methodology to improve the achievement of diverse learners. This course focuses on inquiry models for effectively teaching the state standards as well as college, career, citizenship, and global readiness. Prior instructional experience is recommended. It is recommended that this course be taken concurrently with ED PSY 6030.

TCH ED 6423T Learning Through Inquiry for Teachers in Residence: 3 semester hours

Prerequisites: Admission to Teach Residency program. This course allows teachers in residence to improve their teaching effectiveness through the use of various models of instruction that are based on current learning theories and research in teaching methodology to improve the achievement of diverse learners. This course focuses on inquiry models for effectively teaching the state standards as well as college, career, citizenship, and global readiness.

TCH ED 6445 Integration of Geospatial Resources into K-12 STEM Teaching: 3 semester hours

Prerequisites: Consent of instructor. This course provides teachers and instructional designers with the knowledge and skills to integrate Geographic Information System (GIS) mapping resources into existing instructional plans for the purpose of enhancing instruction and increasing student awareness of GIS. The course demonstrates the power of maps to teach concepts across the curriculum, prepares teachers to manipulate data to customize maps to instruction, and helps teachers instruct students on creating maps from data.

TCH ED 6565 Enriching Learning through Multicultural Arts, Music, Physical Education and Health: 1-2 semester hours

Prerequisite: Graduate standing. This course surveys the association between academic achievement and student participation in art, music, health, and physical education. Review research pertaining to the relationship between participation in the arts and physical education and language development, memory, creativity and learning in other subject areas.

TCH ED 6565T Multicultural Arts, Music, Physical Education and Health Enrichment for Teachers in Residence: 1 semester hour

Prerequisites: Admission to Teach Residency program. This course for teachers in residence explores the association between academic achievement and student participation in art, music, health, and physical education. Emphasis is placed on how teachers support the creative, physical, social, and emotional health and growth of children to promote optimal learning environments.

TCH ED 6566 Teaching Health and Physical Education Skills and Concepts for the Elementary Teacher: 2 semester hours

Prerequisites: Graduate standing. This course is an advanced study of health and physical education skills and concepts in elementary schools. This course emphasizes the teacher's roles and responsibilities as they relate to the content and services found in the coordinated school health program.

TCH ED 6880 Leadership in the Teaching of Writing: 1-6 semester hours

Same as ENGL 6880. Prerequisites: Graduate standing. This course is an intensive study of the writing process and the writing curriculum, designed for in-service teachers and writers interested in writing pedagogy. Readings of current theory and research are explored in relation to participants' experiences as writers and as teachers. May be repeated for credit, but no more than 6 hours may be applied toward the M.Ed. This course counts toward the Graduate Certificate in the Teaching of Writing.

TCH ED 6890 Seminar in Professional Writing for Teachers: 3 semester hours

Same as ENGL 6890. Prerequisites: TCH ED 6880 and consent of instructor. Capstone seminar for the Graduate Certificate in the Teaching of Writing. Participants will pursue the dual role of writer/ writing teacher by designing individual projects with one of these emphases: (1) research writing based on a classroom inquiry into the teaching of writing; (2) expository and creative writing based on an inquiry into the teacher's own evolution as a writer.

TCH ED 6909 Teacher Action Research I: 3 semester hours

Prerequisites: Graduate standing and a minimum of 21 hours of MEd coursework completed. This course provides the foundation for teacher action research and the capstone project required in TCH ED 6910. It requires identifying a problem of practice and designing a solution within an educational context. Candidates are expected to design an action research project by preparing a literature review to understand evidence-based practices, implement interventions as needed, and collect data used for assessment of the interventions in the capstone course.

TCH ED 6910 Teacher Action Research Capstone: 3 semester hours

Prerequisites: TCH ED 6909 and a minimum of 23 hours of completed MEd coursework. This course serves as the master's degree capstone by assessing the interventions identified in the action research project from TCH ED 6909. It requires candidates to analyze data, integrate results, and share findings with relevant stakeholders.

TCH ED 7100 Research in Literacy Studies: 3 semester hours

Prerequisites: Admission to the doctoral program. Participants will critically examine foundational, theoretical and historical work in the intersection of language, literacy and culture. An analysis of seminal research will explore related traditions and contemporary theories in literacy (K-12).

College of Nursing

General Information

The College of Nursing offers academic nursing programs at the undergraduate and graduate levels. Knowledge and skills needed to complete the professional licensure examination to become a registered nurse are available through the traditional baccalaureate option. An accelerated option for students with degrees in other fields is available. Nurses who have obtained their basic nursing education through an associate degree or a diploma nursing program may fulfill the requirements for the BSN completion option without repetition of previous nursing education classes through the RN to BSN option. The Doctor of Philosophy in Nursing (Ph.D.) program prepares nurse scientists. Admission to the Ph.D. program is available at the post BSN and MSN levels. The Doctor of Nursing Practice (DNP) program prepares students for the highest level of advanced clinical nursing practice. Admission to the DNP program is available at the post BSN and MSN levels. Nurses who already have a graduate degree in nursing are eligible to take coursework to achieve a Post-Praduate Certificate (PGC) in an area of Advanced Nursing Practice.

**Completion of the BSN nursing program does not guarantee eligibility to take the licensure examination, per section 335.066 RSMo of the Missouri Nursing Practice Act.*

Accreditation

The UMSL College of Nursing is proud to be fully accredited/approved by the following bodies:

- The Bachelor of Science in Nursing (BSN) and Doctor of Nursing Practice (DNP) at the University of Missouri-St. Louis are accredited by the Commission on Collegiate Nursing Education (CCNE), 665 K Street NW, SUITE 750, Washington, DC 20001, (202) 887-6791
- The pre-licensure program is fully approved by the Missouri State Board of Nursing (MOSBON) which ensures that graduates of the pre-licensure track of the BSN program are eligible to apply to take the registered nurse licensure examination (NCLEX-RN). Completion of the BSN nursing program does not guarantee eligibility to take the licensure examination, per section 335.066 RSMo of the Missouri Nursing Practice Act.
- The Doctor of Philosophy in Nursing (Ph.D.) at UMSL follows the national standards of the American Association of the Colleges of Nursing for Ph.D. programs.

International Students

Students with international status are required to take the English for Academic Purposes (EAP) assessment at the University. Based upon the assessment, students may be required to complete recommended EAP courses prior to enrolling in nursing courses.

All students with international coursework (whether they are classified as an international student or as a citizen or permanent resident of the United States) must submit official transcripts from the international school(s), as well as official course descriptions (in English) for every course taken at a foreign institution.

Professional Organizations

Sigma Theta Tau International Honor Society for Nursing

The Nu Chi Chapter of Sigma Theta Tau was officially established in April 1984. Membership is offered by invitation to those students graduating in the upper third of their class and to those recognized as outstanding community nursing leaders. Professional presentations are held twice each year and feature leaders in the nursing profession.

Student Nurses' Association

The College of Nursing is a constituent of the National Student Nurses' Association (SNA). The purpose of this organization is to provide nursing students in the basic baccalaureate program the opportunity to connect with the nursing profession prior to licensure. SNA provides students with volunteer, donation, and networking opportunities to increase their involvement in the nursing community. The organization is open to all nursing majors.

Minority Student Nurses' Association

The Minority Student Nurses' Association (MSNA) was developed to function as an academic support and networking group. The focus of MSNA is to provide service, knowledge, and sense of awareness through community and university service, and to create a bond between minority nursing students. MSNA is all about support, academics, and community outreach. Membership is open to all students from the CON regardless of race, culture, religion, or ethnic background.

Degrees

Bachelor of Science in Nursing (BSN)

- Traditional Curriculum (p. 656)
- Accelerated Curriculum (p. 658)
- RN to BSN Curriculum (p. 659)

Doctor of Nursing Practice (DNP)

- Acute Care Pediatric Nurse Practitioner Emphasis (p. 660)
- Adult-Gerontology Nurse Practitioner Emphasis (p. 662)
- Family Nurse Practitioner Emphasis (p. 663)
- Primary Care Pediatric Nurse Practitioner Emphasis (p. 667)
- Psychiatric Mental Health Nurse Practitioner Emphasis (p. 669)
- Women's Health Nurse Practitioner Emphasis (p. 670)
- MSN to DNP Curriculum (p. 667)

Doctor of Philosophy in Nursing

- Curriculum (p. 672)

Graduate Certificates

- Post-Graduate Acute Care Pediatric Nurse Practitioner (p. 394)
- Post-Graduate Adult-Gerontology Nurse Practitioner (p. 394)
- Post-Graduate Family Nurse Practitioner
- Post-Graduate Primary Care Pediatric Nurse Practitioner (p. 700)
- Post-Graduate Psychiatric-Mental Health Nurse Practitioner
- Post-Graduate Women's Health Nurse Practitioner (p. 764)

Undergraduate Studies

The College of Nursing provides coursework leading to the Bachelor of Science in Nursing (BSN). The undergraduate program offers two means for achieving the bachelor's degree in nursing: studies that are preparatory for completion of the professional nurse licensure examination (pre-licensure program) and advanced placement for the professional registered nurse without repetition of fundamental nursing and clinical courses (RN to BSN program). An accelerated pre-licensure option is available for qualified individuals who hold earned bachelor's degrees or higher in non-nursing fields.

Students must meet university and College of Nursing requirements. Baccalaureate students meeting admission criteria may participate in the Pierre Laclède Honors College. **Students who have been dismissed from another nursing program are not eligible for admission to the pre-licensure BSN program.**

Faculty maintain the right to make appropriate curriculum changes to comply with standards for accreditation and approval as stipulated by the Commission on Collegiate Nursing Education and the Missouri State Board of Nursing's minimum standards. For that reason, students receive exceptional advising support from college advisors.

Degree Requirements for BSN

The Bachelor of Science in Nursing degree requires comprehensive course work in general education and nursing. Basic undergraduate nursing course work includes didactic, on-campus laboratory and clinical activities. Clinical experiences require weekday, evening, and/or weekend commitments.

- Full-time study in the traditional BSN pre-licensure option can be completed in four academic years (2.0 years of nursing course work following the completion of 2.0 years of general education coursework). This program is 95% in-person and 5% asynchronous online.
- The accelerated BSN pre-licensure option requires full-time study and can be completed in 12 months (following the completion of general education courses). This program is offered 70% in-person and 30% asynchronous online.
- The RN to BSN program is offered 100% asynchronous online. Clinical activities in the RN to BSN program are community-based and may be completed in the student's home community.

Courses that require clinical hours will require a student to pass a criminal background check and drug screening prior to entry into the program. Additional requirements and/or disclosures may become necessary throughout the courses of the program. Specific current immunizations, certifications, and examinations will also be required prior to the academic year. Students who fail to upload all health documents into an approved health compliance tracker listed in the student handbook by the determined designated date will not be allowed to attend the clinical portion of their course. It is the responsibility of the student to obtain the information necessary for them to become knowledgeable about these requirements and plan their plan of study accordingly.

Advanced Nursing Education

The College of Nursing provides coursework leading to the Doctor of Nursing Practice (DNP) or Doctor of Philosophy in Nursing (Ph.D.). The DNP program prepares graduates for the highest level of clinical practice, including clinical and translational analysis for improved practice outcomes. Post-Graduate Certificate Programs (PGC) are offered to

allow students to take the examinations for advanced practice nursing certification in any of our population of foci areas. The Ph.D. program prepares nurses to pursue theoretical inquiry and conduct original research for the purpose of extending knowledge in the field.

Students must meet university and College of Nursing requirements.

Faculty maintain the right to make appropriate curriculum changes to comply with standards for accreditation and approval as stipulated by the Commission on Collegiate Nursing Education. For that reason, students receive exceptional advising support from the graduate academic advisors.

The UMSL College of Nursing is proud to be fully accredited/approved by the following bodies:

- The Bachelor of Science in Nursing (BSN), Doctor of Nursing Practice (DNP), and Post-Graduate Certificate (PGC) programs at University of Missouri St. Louis are accredited by the Commission on Collegiate Nursing Education (CCNE).
- The Doctor of Philosophy in Nursing (PhD) at the University of Missouri-St. Louis follows the national standards of the American Association of the Colleges of Nursing for PhD programs. All programs are accredited by the Higher Learning Commission (HLC), an accreditation agency recognized by the U.S. Department of Education.
- *The University of Missouri- St. Louis* is accredited by the Higher Learning Commission, an accreditation agency recognized by the U.S. Department of Education.

Courses that require clinical hours will require a student to pass a criminal background check and drug screening prior to entry into the program. Additional requirements and/or disclosures may become necessary throughout the courses of the program. Specific current immunizations, certifications, and examinations will also be required prior to or within the first semester of the program and prior to any semester requiring a residency experience. Students who fail to upload all health documents into an approved health compliance tracker listed in the student handbook by the determined designated date will not be allowed to attend the practicum portion of their course. It is the responsibility of the student to obtain the information necessary for them to become knowledgeable about these requirements and plan their plan of study accordingly.

DNP

The DNP program is an online program with required on-campus immersive learning experiences that focus on the preparation of leaders in clinical nursing who can improve quality of care for individuals and populations through advanced practice and through improving systems of care. The curriculum is based on national standards for DNP education.

Courses are designed to support nursing science, clinical research, leadership and a specialty area. Concepts woven throughout the courses include methodologies for translating research into practice, using culturally competent leadership techniques with diverse and underserved populations, advanced nursing science and clinical scholarship, clinical prevention, advanced nursing practice and clinical decision making, understanding organizational systems and change, and policy development. The DNP program is available for nurses who have completed an accredited MSN or BSN academic degree.

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity,

intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that measure their potential in nursing practice, education, research, and scholarship. We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Post-Graduate Certificate

Students with nursing graduate degrees who wish to become eligible for a nurse practitioner certification may complete one of the post-graduate certificates (PGC). The length of the program and the specific plan of study for each student will vary. The average part-time student can complete the certificate in one to two years.

PGC population of foci available for study include:

- Adult-Geriatric Nurse Practitioner - Primary Care
- Family Nurse Practitioner - Primary Care
- Pediatric Nurse Practitioner - Acute Care
- Pediatric Nurse Practitioner - Primary Care
- Psychiatric-Mental Health Nurse Practitioner - Primary Care
- Women's Health Nurse Practitioner - Primary Care

Ph.D

The Doctor of Philosophy in Nursing (Ph.D.) (p. 672) program at the University of Missouri–St. Louis (UMSL) affords students with academic, clinical, and research resources of the University of Missouri system. Upon completion of all degree requirements, the Ph.D. degree is awarded by the UMSL Graduate School. The Ph.D. degree is an online program with synchronous and asynchronous classes.

Licensure and Certification

As of July 1, 2024 it has been determined that the following programs meet educational requirements in for Registered Nurse licensure in Illinois, Missouri, West Virginia, and Wisconsin.

- Bachelors of Science in Nursing -Traditional track
- Bachelors of Science in Nursing- Accelerated track

As of July 1, 2024 it has been determined that the following programs meet educational requirements in for Advanced Practice Registered Nurse licensure in Illinois and Missouri.

- Doctor of Nursing Practice
 - Acute Care Pediatric Nurse Practitioner Emphasis
 - Adult-Gerontology Nurse Practitioner Emphasis
 - Family Nurse Practitioner Emphasis
 - Primary Care Pediatric Nurse Practitioner Emphasis
 - Psychiatric Mental Health Nurse Practitioner Emphasis
 - Women's Health Nurse Practitioner Emphasis
- Post-Graduate Certificate
 - Adult-Geriatric Nurse Practitioner- Primary Care
 - Family Nurse Practitioner-Primary Care
 - Pediatric Nurse Practitioner-Acute Care
 - Pediatric Nurse Practitioner-Primary Care
 - Psychiatric-Mental Health Nurse Practitioner-Primary Care
 - Women's Health Nurse Practitioner Primary Care

We have not determined if the above programs meet the educational requirements for licensure in the remaining U.S states and U.S. Territories. For the most up to date information about Licensure and Certification requirements, please visit <https://teaching.missouri.edu/student/state-authorization/umsl/licensure>.

Under federal regulations, we may not enroll into licensure or certification program students located in a state or territory in which our program does not meet the educational requirements to be eligible for licensure or which the University has not made a determination. However, if you plan to seek licensure and employment in any of the following states or territories listed below, you may enroll in the program after signing an attestation indicating your plans to become licensed and employed in a state that meets requirements.

If you plan to seek licensure in one of the states listed above, please contact Office of Student Services at nursing@umsl.edu for more information.

Courses

NURSE 1000 Cultural Diversity in Healthcare: 3 semester hours

This course introduces cultural congruence across the lifespan. Transcultural nursing concepts will be examined, as well as theories & practices in relationship to human caring. Application and analysis of health care practices within selected cultural contexts are explored.

NURSE 1050 Communication for the Healthcare Professional: 3 semester hours

This course focuses on the development of communication skills utilized in professional nursing. The individual's relationship with self, individuals, communities, and populations are discussed. Communication and collaboration concepts in nursing are introduced to develop effective human caring relationships with diverse populations.

NURSE 2000 Nutrition in Health: 3 semester hours

This course examines nutritional needs across the illness and wellness continuum with emphasis on nutritional principles related to health promotion and protection. Content includes assimilation, digestion and absorption of nutrients, and cultural and economic influences on dietary practices across the lifespan.

NURSE 2050 Pathophysiology: 3 semester hours

Prerequisites: BIOL 1141 and BIOL 1162. This course focuses on the normal processes and mechanisms operating within the human body. Explores the nature of disease, its causes and the bodily changes that accompany. The course includes general principles of disease, diseases specific to internal organs, and the clinical implications.

NURSE 3000 Health Promotion and Disease Prevention Concepts Across the Lifespan: 2 semester hours

Prerequisites: Admission to nursing clinical major. This course focuses on the role of the nurse in promoting health and reducing risk behaviors of individuals and families across the lifespan. Concepts of nutrition, physical activity, coping and stress management skills, social determinants of health, and health disparities will be examined with an emphasis on the impact of genetics, values, lifestyles and cultural influences. Patient education for health promotion, risk reduction, and disease prevention across the lifespan will be explored.

NURSE 3005 Introduction to Professional Nursing: 3 semester hours

Prerequisites: Admission to the Accelerated BSN program. This course introduces students to the role of the professional nurse. Health promotion and disease prevention across the life span are examined. Ethics, legal standards, and healthcare policy concepts are also explored.

NURSE 3015 Professional Nursing Concepts and Practice: 6 semester hours

Prerequisites: Admission to the Accelerated BSN program. Introduction to the structure of the discipline of nursing, selected theoretical and conceptual models, and their application to nursing process, clinical reasoning, and education as a foundation for socialization into professional nursing practice. Includes didactic, laboratory, and clinical components.

NURSE 3020 Fundamental Concepts of Professional Nursing Practice: 6 semester hours

Prerequisites: Admission to nursing clinical major. Introduces evidence-based nursing concepts and skills that create the framework for professional nursing practice. Emphasis is placed on fundamental practice concepts including nursing process, clinical decision making, basic physiological and psychosocial health care needs, holistic and culturally congruent care, and the delivery of safe, high quality nursing care across the health-wellness continuum. Students learn and practice skills in a lab setting with the application of acquired skills in a clinical and/or community setting.

NURSE 3025 Community-Based Clinical Education I: 1 semester hour

Prerequisites: Admission to nursing clinical major. This introductory seminar course provides the students with a basic understanding of how to apply community engagement principles in community-based health settings. Students in this course will be expected to successfully complete 5 hours of an in-person service experience, guided through the creation and delivery of a health promotion presentation for older adults, as well as participate in self-reflective exercises, and debriefing discussions.

NURSE 3030 Health Assessment Concepts: 4 semester hours

Prerequisites: Admission to nursing clinical major. This course integrates concepts related to theoretical knowledge and interpersonal skills in the assessment of clients, focusing on differentiating normal from abnormal findings. It emphasizes the use of problem solving, critical thinking, and cultural competency in identifying and documenting multidimensional health variations across the lifespan. The course includes a classroom component and laboratory experiences, including practice of psychomotor skills.

NURSE 3035 Health Assessment and Promotion: 3 semester hours

Prerequisites: Admission to the Accelerated BSN Program. Health promotion, client education, and physical assessment skills across the lifespan are developed using the nursing process framework. Didactic and laboratory components are included.

NURSE 3040 Concepts of Evidence-Based Practice: 3 semester hours

Prerequisites: Admission to nursing clinical major. This course focuses on utilizing evidence-based practice to promote health and wellness, illness, and prevent injury among individuals, families, communities, and populations. Emphasis is placed on education, collaboration, utilizing evidence in practice for quality improvement, and resource utilization. This course builds on content presented in previous coursework and increases the complexity of students' mastery of focus concepts.

NURSE 3050 Concepts of Pharmacology: 3 semester hours

Prerequisites: Admission to nursing clinical major. Building upon knowledge of illness and wellness concepts developed in previous coursework, students will learn to apply this knowledge to the pharmacotherapeutic component of caring for patients across the lifespan.

NURSE 3055 Foundations of Nursing Pharmacotherapeutic Concepts: 3 semester hours

Prerequisites: NURSE 3005, NURSE 3015, and NURSE 3035. This course covers concepts and principles of pharmacology across the lifespan with an emphasis on pharmacotherapeutics and an evidence-based, comprehensive approach to the clinical application of drug therapy. Cultural considerations, individual needs, and patient education related to pharmacology are examined.

NURSE 3060 Behavioral Health Concepts: 4 semester hours

Prerequisites: NURSE 3000, NURSE 3020, and NURSE 3030. This course focuses on mental health and illness across the lifespan for individuals experiencing emotional distress, crisis, and severe, persistent mental illness. Students will increase basic skills in interpersonal communication, decision-making, and professional behavior as they utilize theory concepts and research from nursing, psychology, pharmacology, and other disciplines in the provision of care to individuals, families, groups, and vulnerable populations. The course includes basic theory and clinical experiences in hospital and community settings. Students will complete 45 clinical hours.

NURSE 3065 Professional Nursing Adult and Elder Care I: 5 semester hours

Prerequisites: NURSE 3005, NURSE 3015, and NURSE 3035. This course covers nursing care of adult and elder patients including healthy aging and maintenance of functional capacity. Its content addresses common physiologic and social changes, challenges, and adaptations affecting adult and elder populations. Strategies for health promotion and disease management are addressed in the care of adult and elder patients experiencing fluid and electrolyte imbalances, cardiovascular, integumentary, immunologic, pulmonary, and hematologic alterations. Pathophysiologic processes of organ systems are explored. Didactic and clinical components are included. Students will complete 90 clinical hours.

NURSE 3070 Concepts of Caring for Adults I: 5 semester hours

Prerequisites: NURSE 3000, NURSE 3020, and NURSE 3030. This course focuses on the nursing care of the adult patient experiencing selected pathophysiological processes affecting body regulatory mechanisms. These mechanisms are related to multiple concepts across the illness and wellness continuum. Emphasis is placed on health restoration, maintenance and support of chronic illness as well as the continued development of critical thinking processes, and evidence-based nursing practice. This course includes lecture and active learning within the classroom, as well as a clinical component. Students will complete 90 clinical hours.

NURSE 3075 Professional Nursing Mental Health: 5 semester hours

Prerequisites: NURSE 3055 and NURSE 3065. This course covers theoretical knowledge and skill to promote the mental health of patients across the lifespan. Common and complex mental health disorders affecting individuals, families, and communities are examined. Students will learn and apply therapeutic communication techniques with patients experiencing mental health disorders. Ethical, moral, and legal issues in mental health nursing practice are addressed. Didactic and clinical components are included.

NURSE 3080 Academic Lab for Nursing: 0 semester hours

Prerequisites: Concurrent enrollment in any of the following courses: NURSE 3020, NURSE 3030, NURSE 3060, NURSE 4020, NURSE 4050, NURSE 4060, or NURSE 4065. This course includes a variety of student success strategies, initiatives, and services to enhance the nursing student experience and foster academic achievement.

NURSE 3090 Community-Based Clinical Education II: 1 semester hour

Prerequisites: NURSE 3025. This seminar course is designed for second-semester clinical nursing students to build on their previous community service-learning experiences. Theories will be introduced from nursing, public, and community health. Students will be expected to successfully complete 20 hours of in-person service experience with a community organization. Based on agency placement, students will be expected to develop health education and health promotion materials in the form of written and oral presentations throughout the experience. Students will also be expected to complete self-reflective exercises as well as online discussions to debrief and synthesize learning.

NURSE 3206 Adult Health Nursing II: 5 semester hours

Prerequisites: All 3100 level nursing courses, NURSE 3205, and PSYCH 2268. This course focuses on the nursing care of the adult experiencing selected pathophysiological processes affecting body regulatory mechanisms. These mechanisms are related to endocrine, sensory-perceptual, gynecological, and genitourinary functions. Emphasis is placed on health restoration, maintenance and support as well as the continued development of the nurse-client relationship, critical thinking processes, and research-based nursing practice. This course includes classroom and clinical activities in a variety of settings.

NURSE 3350 Nursing of Adults II: 5 semester hours

Prerequisites: NURSE 3120, NURSE 3121. This course focuses on the nursing care of the adult experiencing complex pathophysiologic processes affecting body regulatory mechanisms. These mechanisms are related to endocrine, neurological, musculoskeletal, gastrointestinal, sensory-perceptual, male reproductive and genitourinary problems. This course also incorporates relevant concepts of pathophysiology and pharmacology related to these conditions. Emphasis is placed on health promotion and restoration, maintenance and support, as well as the continued development of the nurse-client relationship, critical thinking and evidence-based nursing practice across the adult life span. NURSE 3350 and NURSE 3351 are co-requisites to be taken together in an 8-week period.

NURSE 3351 Clinical Nursing of Adults II: 3 semester hours

Prerequisites: Co-requisite with NURSE 3350. This course focuses on the nursing care of adults in the lab, clinical agency and simulation environments. Utilizing an integrated approach, complex psychomotor skills and assessment techniques for adult clients are mastered in patients with musculoskeletal problems, endocrine alterations, renal/genitourinary problems, sensory-perceptual problems, and liver problems. Clinical reasoning is developed and applied in order to provide safe and effective nursing care to adult clients with complex problems across the health/illness continuum. NURSE 3350 and NURSE 3351 are co-requisites to be taken together in an 8-week period.

NURSE 3360 Maternal-Child Nursing: 5 semester hours

Prerequisites: PSYCH 2268, NURSE 3120, NURSE 3121. This course focuses on women's reproductive health, childbearing and child-rearing families, as well as the health and illness of children from conception through adolescence. There is an emphasis on family dynamics, growth and development, and communication with children and their families. Health care policy and systems are incorporated as they relate to diverse populations. NURSE 3360 and NURSE 3361 are co-requisites to be taken together in an 8-week period.

NURSE 3361 Clinical Maternal-Child Nursing: 3 semester hours

Prerequisites: Co-requisite with NURSE 3360. Health promotion, protection, restoration, and maintenance for the mother-child and family care are addressed in experiences that include nursing skills lab, hospital agency and a variety of community settings. NURSE 3360 and NURSE 3361 are co-requisites to be taken together in an 8-week period.

NURSE 3807 Research and Evidence-Based Nursing Practice: 3 semester hours

Prerequisites: NURSE 3799 (or equivalent) and NURSE 3817. This course prepares nurses to provide evidence-based care to patients among the rapid advances in the science and technology of healthcare. This course provides a basic understanding of how evidence is developed, including the research process, clinical judgment, interprofessional perspectives, and patient preference as applied to nursing practice. Students will learn a systematic method to evaluate and apply research findings and other evidence in designing and implementing nursing care that is multidimensional, high quality, and cost-effective.

NURSE 3817 Introduction to Health and Nursing Informatics: 3 semester hours

This online laboratory course establishes competency in fundamental information management and computer technology skills. It enables students to use existing information systems and available information to manage nursing practice. Students critically evaluate technology, information, and its sources; use decision support systems designed for clinical decision making; and focus on the representation of nursing data, information, and knowledge.

NURSE 3873 Guided Study in Nursing: 1-3 semester hours

This course is an in-depth independent study of selected topics in nursing under the guidance of a specific instructor. No more than six hours may be taken under this option.

NURSE 3900 Role of the Baccalaureate-Prepared Nurse: 3 semester hours

Prerequisite: Admission to the College of Nursing's RN to BSN Program. This course provides an overview of the expanded expectations of the baccalaureate-prepared nurse in today's changing healthcare climate. The role of the baccalaureate prepared nurse in influencing healthcare delivery, healthcare systems, and health outcomes of individuals, families, and communities will be explored.

NURSE 3910 Nursing Theory for Population Health: 3 semester hours

Prerequisites: Admission to the College of Nursing's RN to BSN Program. This course provides the opportunity to examine evidence-based practice nursing interventions, select theories, models, assessment strategies, and tools that can be used to promote health for populations. The roles and responsibilities of the professional nurse in population-based health systems will be explored.

NURSE 3920 Health Assessment for the Professional Nurse: 3 semester hours

Prerequisite: Admission to the College of Nursing's RN to BSN Program. This course will incorporate a holistic, multidimensional approach that culminates in the ability to perform a comprehensive health assessment. The course will emphasize the use of clinical reasoning to determine areas in which health promotion activities should be implemented. The impact of social determinants of health, genomics, lifestyle, environmental factors, literacy, and culture will be explored.

NURSE 3930 Nursing Research and Evidence-Based Practice for the Professional Nurse: 3 semester hours

Prerequisite: Admission to the College of Nursing's RN to BSN Program. This course prepares nurses to provide evidence-based nursing care to patients among the rapid advances in the science and technology of healthcare. This course provides a basic understanding of how evidence is developed, including the research process, clinical judgment, interprofessional perspectives, and patient preference as applied to nursing practice. Students will learn a systematic method to evaluate and apply research findings and other evidence in designing and implementing nursing care that is multidimensional, high quality, and cost-effective.

NURSE 3940 Leadership and Management for Professional Nursing: 3 semester hours

Prerequisites: Admission to the College of Nursing's RN to BSN Program. This course prepares the nurse to coordinate and manage client care in diverse health care settings. The use of information systems and data to guide management decisions will be emphasized. Leadership and management concepts, issues, and functions as applied to the role of the professional nurse in delivering culturally competent, safe, and quality care will be examined.

NURSE 4010 Concepts of Caring for Adults II: 5 semester hours

Prerequisites: NURSE 3050, NURSE 3060, and NURSE 3070. This course focuses on the application of nursing care of the adult patient experiencing selected pathophysiological processes affecting body regulatory mechanisms across the illness and wellness continuum. Emphasis is placed on health restoration, maintenance and support of acute illness as well as the continued development of the nurse-client relationship, critical thinking processes, research-based nursing practice and use of technology. A focus on care collaboration, communication, quality of care, health care ethics and legal implications is provided. This course includes lecture and active learning, in addition to a clinical portion. Completion of 90 clinical hours.

NURSE 4015 Professional Nursing Adult and Elder Care II: 5 semester hours

Prerequisites: NURSE 3055 and NURSE 3065. This course covers nursing care of adult and elder patients including healthy aging and maintenance of functional capacity. Content addresses common physiologic, psychological, and social changes, challenges, and adaptations affecting adult and elder populations. Strategies for health promotion and disease management are addressed in the care of adult and elder patients experiencing genitourinary, gastrointestinal, neurological, endocrine, musculoskeletal, health restoration, and/or sensory-perceptual alterations. Pathophysiologic processes of organ systems are explored. Didactic and clinical components are included.

NURSE 4020 Concepts of Caring for Women and the Childbearing Family: 4 semester hours

Prerequisites: NURSE 3050, NURSE 3060, and NURSE 3070. This course applies health and illness continuum concepts related to the care of the woman, gravid mother, newborn, and growing family. This course builds on knowledge developed in previous coursework. Concurrent enrollment in NURSE 4030 is required. Students will complete 45 clinical hours.

NURSE 4030 Concepts of Caring for Children and Families: 4 semester hours

Prerequisites: NURSE 3050, NURSE 3060, and NURSE 3070. This course focuses on the pediatric health and illness continuum with an emphasis on family dynamics, growth and development, and communication with children and their families. Nursing concepts include safety, community, cultural congruence, education, collaboration, environmental health, and ethics. Concurrent enrollment in NURSE 4020 is required. Students will complete 45 clinical hours.

NURSE 4035 Nursing Care of Children: Infancy to Adolescence: 4 semester hours

Prerequisites: NURSE 3075 and NURSE 4015. This course covers pediatric health promotion and disease management with an emphasis on integration of the concepts of communication and growth and development to provide primary, secondary, and tertiary levels of prevention for children and their families. Nursing care of pediatric patients experiencing acute and chronic illness are examined. Didactic and clinical components are included.

NURSE 4040 Community-Based Clinical Education III: 1 semester hour

Prerequisites: NURSE 3090. This seminar course is designed for the third-semester clinical student to synthesize and apply concepts of community-based clinical education utilizing a project focus process, building on knowledge gained from Level I and Level II. Students will begin to synthesize their agency placement and the role that it plays in health promotion, the levels of disease prevention, environmental health, professional nursing roles, and interprofessional collaboration in various community settings. Emphasis is on health promotion, risk reduction, and disease management across the lifespan. Students will be expected to successfully complete an additional 20 hours of service experience with the same community organization, self-reflective exercises as well as online discussions to debrief and synthesize learning.

NURSE 4045 Nursing Care of the Childbearing Patient-Family System: 4 semester hours

Prerequisites: NURSE 3075 and NURSE 4015. This course covers theoretical basis and clinical skills necessary to provide quality care to patient/family systems during the childbearing/child-rearing stages of life with an emphasis on family and system theories. Didactic and clinical components are included.

NURSE 4050 Concepts of Community Focused Care: 5 semester hours

Prerequisites: NURSE 4010, NURSE 4020, and NURSE 4030. This course includes a variety of experiences to prepare the student to assess the health care needs in diverse community settings and develop interventions to meet those needs. Student will complete 90 clinical hours. Concurrent enrollment in NURSE 4060 and NURSE 4065 is required.

NURSE 4060 Synthesis of Concepts in Professional Nursing: 4 semester hours

Prerequisites: NURSE 4010, NURSE 4020, and NURSE 4030. This course will focus on the synthesis of previous nursing concepts and general education courses with the goal of preparing the student for entry into professional nursing practice. Areas of study are selected from across the lifespan, including diverse populations in a variety of healthcare systems. This course builds upon knowledge developed in previous coursework. Concurrent enrollment in NURSE 4050 and NURSE 4065 is required.

NURSE 4065 Synthesis of Professional Practice Immersion Clinical: 4 semester hours

Prerequisites: NURSE 4010, NURSE 4020, and NURSE 4030. This clinical course includes a variety of experiences to prepare the student nurse to lead, coordinate, and manage client care in diverse health care settings. This course includes evidence-based strategies. Areas of practice are selected from across the lifespan, including diverse populations in a variety of health care systems. Students will complete 180 clinical hours. Concurrent enrollment in NURSE 4050 and NURSE 4060 is required.

NURSE 4075 Global Health Immersion: 3 semester hours

Prerequisite: Consent of instructor. This is an international healthcare trip that will include a full immersion experience into a foreign culture with emphasis on the analysis of healthcare systems and social determinants of health. Core coursework may include basic foreign language skills, a review of historical and cultural concepts relevant to the country, and application of medical/nursing treatment options. This course may be taken twice for credit.

NURSE 4105 Professional Nursing Leadership and Synthesis: 8 semester hours

Prerequisites: NURSE 4035 and NURSE 4045. This course is a leadership practicum experience which reflects synthesis of cognitive and affective skills acquired in the Accelerated BSN program. Areas of study are selected from across the lifespan, including diverse populations in a variety of healthcare systems. Didactic and clinical components are included.

NURSE 4125 Community Nursing and Public Health: 5 semester hours

Prerequisites: NURSE 4035 and NURSE 4045. This course is a synthesis of community and public health nursing that prepares students to apply, promote, and protect the health of patients, families, communities, and populations. Global perspectives on health equity, policy, and diversity are explored. Didactic and clinical components are included.

NURSE 4135 Evidence-Based Practice: Integration of Research in Professional Nursing: 2 semester hours

Prerequisites: Admission to the Accelerated BSN Program. This course is designed to provide a foundational theoretical review of evidence-based practice in the nursing profession. Students synthesize knowledge and skill from the natural and behavioral sciences, humanities, and nursing in order to understand the research process and its relevance in guiding nursing practice and improving patient care. Emphasis is placed on identifying and using research evidence in clinical decision making.

NURSE 4531 Clinical Leadership Development and Professional Nursing Practice: 4 semester hours

Prerequisites: NURSE 4530. This clinical course includes a variety of experiences to prepare the student nurse to lead, coordinate, and manage client care in diverse health care settings. This course includes research-based strategies utilized for health promotion and protection, health restoration, maintenance, and support. Areas of study are selected from across the lifespan, including diverse populations in a variety of health care systems.

NURSE 4720 Perioperative Nursing: 3 semester hours

Prerequisites: NURSE 3050 and NURSE 3070. Provides experiences in preoperative, intraoperative, and postoperative settings. Includes a clinical component.

NURSE 4723 Nurse Externship: 3 semester hours

Prerequisites: NURSE 4010, NURSE 4020, NURSE 4030, senior standing and 3.0 GPA (4.0 scale). This course provides the opportunity to apply theoretical and conceptual knowledge and skills in a structured clinical environment under the guidance of a mentor.

NURSE 4730 Nursing Care at the End of Life: 3 semester hours

Prerequisites: NURSE 3050, NURSE 3060, and NURSE 3070. This course focuses on the nursing care of terminally ill patients and their families. Topics explored will include the impact of personal values and beliefs about death, physiology of end stage disease processes, symptom assessment and management, psychosocial and spiritual support, consideration in special patient populations, societal issues and trends in end of life care, ethical considerations in caring for the dying patient, grief and bereavement processes, and the role nursing in end of life care across settings.

NURSE 4741 Advanced Nursing Assessment and Management of Clients with Cardiac Dysrhythmias: 3 semester hours

Prerequisites: NURSE 3050 and NURSE 3070. Focuses on advanced nursing assessment and management of clients with cardiac rhythm problems and conduction disturbances. Includes a clinical component.

NURSE 4900 Ethics and Values in Population Health: 3 semester hours

Prerequisites: Admission to the College of Nursing's RN to BSN program. This course provides an introduction to the impact of values and ethical issues on professional nursing practice and population health. Emphasis is on values clarification, ethical theories and principles, ethical decision-making, and professional ethical standards. Ethical issues affecting nursing practice and the delivery of care will be explored.

NURSE 4910 Health Policy for the Professional Nurse: 3 semester hours

Prerequisites: Admission to the College of Nursing's RN to BSN Program. This course familiarizes the professional nurse with health care policy and how it impacts the delivery of health care. The role of the nurse in influencing health outcomes and improving health care for populations through the policy process will be explored.

NURSE 4911 Community and Population Health Synthesis: 6 semester hours

Prerequisites: Admission to the College of Nursing's RN to BSN Program and RN Licensure. This practicum course focuses on community-based application and synthesis of professional nursing roles and responsibilities across a continuum of health care settings, with selected populations determined to be at risk for a variety of health-related problems. Students integrate and apply curricular concepts such as health policy, epidemiology, health promotion strategies, and evidence-based practice in planning care for a select population. This is taken during the last semester of RN to BSN courses. This course consists of 4 semester hours of didactic and 2 semester hours of clinical.

NURSE 6075 Advanced Global Health Immersion: 3 semester hours

Prerequisites: Consent of the instructor and graduate standing. This is an international healthcare trip that will include a full immersion experience into a foreign culture with emphasis on the analysis of healthcare systems and social determinants of health. Core coursework may include basic foreign language skills, a review of historical and cultural concepts relevant to the country, and application of medical/nursing treatment options. This course may be taken twice for credit.

NURSE 6111 Healthcare Systems: 3 semester hours

Prerequisites: Graduate standing. This course introduces the historical development, current structure, and projected transformation of the U.S. healthcare system and provides the student with an understanding of the complex nature of the healthcare sector.

NURSE 6130 Research, Interventions and Evidence-Based Practice: 3 semester hours

Prerequisites: Graduate standing. This course examines the processes and evaluation components of evidence-based practice, including the identification of significant clinical problems, evaluation of evidence underlying competing interventions, the effectiveness of interventions, and implementation and evaluation of health promotion and therapeutic interventions that improve the quality of care or health outcomes for individuals, groups, and populations. Students will develop the skills to critically analyze the scientific literature foundational to implementing evidence-based practice projects.

NURSE 6320 Learning and Curriculum Development in Nursing: 3 semester hours

Prerequisites: NURSE 6309. This course examines theoretical foundations, principles, and issues in curriculum design. Explores systematic evaluation of curriculum at all levels.

NURSE 6424 Social Determinants of Health for Underserved Populations: 3 semester hours

Prerequisites: Graduate standing. This course examines the health and well-being of underserved populations through the lens of the social determinants of health. The course will explore responses to social factors that adversely influence vulnerability and health behaviors.

NURSE 6518 Pathophysiology for Advanced Nursing Practice: 3 semester hours

Prerequisites: Graduate standing. This course prepares the student to interpret changes in physiology that result in symptoms indicative of illness by a systematic examination of disease processes. The graduate student will compare and contrast differential diagnosis within physiological systems of sub-cellular and cellular origin, biochemical, and anatomical changes across the life span.

NURSE 6520 Pharmacology for Advanced Nursing Practice: 3 semester hours

Prerequisites: NURSE 6518. This course in clinical pharmacotherapeutics builds on a student's prior knowledge of drug classifications, actions, interactions, and adverse drug reactions. The major focus of the course is the pharmacotherapeutic use of medications for primary healthcare management by advanced practice nurses. Emphasis is placed on clinical critical thinking processes used to prescribe drugs in the management of specific illnesses. The laws and regulations for advanced practice nurse prescriptive authority will be addressed. Emphases include pharmacodynamics, pharmacokinetics, pharmacotherapeutics, health-related information, medication compliance, and issues that pertain to the prescribing of medications in advanced nursing practice.

NURSE 6521 Healthcare Finance: 3 semester hours

Prerequisites: Graduate admission. This course analyzes various financial sectors of the healthcare system. Analyses of the financial and economic structures for providers, health insurance organizations, pharmaceutical industries, not-for-profit, and federally-funded clinics will occur.

NURSE 6524 Health Assessment for Advanced Nursing Practice: 4 semester hours

Prerequisites: NURSE 6518. This course provides a systematic approach to advanced physical assessment as well as psychological, sociocultural, developmental, and spiritual assessment of individuals across the life span. This course builds upon basic health assessment knowledge and skills, laboratory work interpretation, validation, documentation, and analysis of assessment findings. This course includes 3 credit hours of mandatory didactic and 1 credit hour of clinical experiences. One clinical credit hour is equivalent to 75 practicum hours.

NURSE 6527 Patient Safety, Performance Improvement, and Compliance: 3 semester hours

Prerequisites: Graduate standing. This course covers the key principles of patient safety, performance improvement, and compliance. The epidemiology of healthcare error, distinguishing safety from quality, and understanding the policy environment for patient safety will be examined. Strategies to enhance patient safety, evaluation of performance improvement activities, and the management for the risk of error will be addressed.

NURSE 6530 Introduction to Diagnostic Reasoning: 3 semester hours

Prerequisites: NURSE 6518, NURSE 6520, and NURSE 6524. This course provides an introduction to the interpretation and appropriate use of diagnostic measures for advanced practice nurses in primary care settings. Special attention is paid to laboratory, radiographic, and diagnostic testing. In addition, clinical opportunities will provide clinical interventional skills for advanced practice nursing.

NURSE 6660 Introduction to Health Systems Management, and Policy for Underserved: 3 semester hours

Prerequisites: Consent of Program Director. This course provides a comprehensive survey of the U.S. health care system, healthcare policy, integrative care practice models, and management principles useful in primary care settings dedicated to underserved populations. Selected topics include health behaviors, health maintenance and the management of primary healthcare in underserved populations, access to mental health care and substance abuse treatment, the U.S. healthcare system (both public and private sectors), the legal and ethical bases for caring for the underserved, the public policy-making process, and management principles of strategic planning, marketing, and project management in clinics serving the underserved. The analysis of community health indicators, health disparities, and healthcare trends impacting underserved populations will be incorporated into a community based experience.

NURSE 6721 Foundations of Psychiatric Mental Health: 3 semester hours

Prerequisites: NURSE 6518, NURSE 6520, NURSE 6524. This course provides a foundation for students to assume advanced practice nursing roles in health promotion, disease prevention, diagnosis, and management of psychiatric health and mental illness across the lifespan and within the family context. A foundation for an integrative practice, including psychiatric interviewing, psychotherapy, neurobiology, and psychopharmacology for the management of psychiatric conditions will be developed.

NURSE 6722 Foundations of Adolescent and Geriatric Health: 3 semester hours

Prerequisites: NURSE 6518, NURSE 6520, NURSE 6524. This course provides a foundation for students to assume an advanced practice nursing role in the care of adolescent and geriatric populations. Therapeutic strategies to address adolescent and geriatric health promotion, preventative care and the most common health conditions managed in these populations in primary care practice will be developed.

NURSE 6723 Foundations of Pediatric Health: 3 semester hours

Prerequisites: NURSE 6518, NURSE 6520, NURSE 6524. This course provides a foundation for students to assume advanced practice nursing roles in health promotion, disease prevention, diagnosis and management of health and illness in newborn, infant, child and adolescent populations within the family context. Therapeutic strategies about pediatric preventive care, behavioral health, common pediatric office-based procedures, pediatric prescribing practices, and the most common health problems managed in pediatric primary care will be developed.

NURSE 6724 Foundations of Women's Health: 3 semester hours

Prerequisites: NURSE 6518, NURSE 6520, NURSE 6524. This course provides a foundation for students to assume an advanced practice nursing role in health promotion, disease prevention, health maintenance, and the diagnosis and management of common conditions affecting women across the lifespan. Emphasis is placed on clinical assessment and decision making related to primary care management of reproductive growth and development, common acute and chronic primary health conditions, and behavioral health in gender-related populations.

NURSE 6737 Psychiatric Mental Health I: 4 semester hours

Prerequisites: NURSE 6721. This course develops the advanced practice nursing role in caring for individuals with a mental health disorder, across the lifespan and within the family context. Strategies for the assessment, diagnosis and holistic management of common mental health disorders will be developed.

NURSE 6738 Psychiatric Mental Health II: 4 semester hours

Prerequisites: NURSE 6737. This course investigates the role of the psychiatric health mental nurse practitioner in the restoration and promotion of mental health. Strategies into the assessment, diagnosis and holistic management of individuals with complex mental health needs, including the application of advanced prescribing practices, psychotherapeutic care, and maintenance of overall healthcare needs will be developed.

NURSE 6739 Adult Health I: 4 semester hours

Prerequisites: NURSE 6722 or NURSE 6723. This course prepares students to assume an advanced practice nursing role when caring for adults across the lifespan within a family context. Strategies for the assessment, diagnosis, and holistic management of common acute, chronic, and behavioral health conditions addressed in a primary care setting for adults will be developed.

NURSE 6740 Adult Health II: 4 semester hours

Prerequisites: NURSE 6739. This course prepares students to assume an advanced practice nursing role in caring for adults across the lifespan within a family context. Strategies for the assessment, diagnosis, and holistic management of common acute, chronic, and reproductive health conditions addressed in a primary care setting will be developed.

NURSE 6741 Family Health I: Diagnosis and Management of Advanced Practice Nursing: 4-5 semester hours

Prerequisites: NURSE 6518, NURSE 6520, NURSE 6524 or consent of the Program Director. This course builds upon the advanced practice foundational courses of pathophysiology, pharmacology and advanced physical assessment to prepare students to assume roles in the advanced nursing care of individuals and families across the lifespan. Emphasis is placed on clinical assessment and decision-making in the provision of direct patient care within a defined scope of practice. Students will synthesize prior learning and apply primary prevention strategies into the diagnosis and holistic management of common acute, chronic and mental health problems in this population.

NURSE 6742 Family Health II: Diagnosis and Management in Advanced Practice Nursing: 4-5 semester hours

Prerequisites: NURSE 6741 or consent of Program Director. This course builds upon the advanced practice foundational courses of pathophysiology, pharmacology and advanced physical assessment to prepare students to assume roles in the advanced nursing care of individuals and families across the lifespan. Emphasis is placed on clinical assessment and decision-making in the provision of direct patient care within a defined scope of practice. Students will synthesize prior learning and apply primary prevention strategies into the diagnosis and holistic management of common acute, chronic and mental health problems in this population.

NURSE 6743 Pediatric Health I: Acute and Chronic Care: 4 semester hours

Prerequisites: NURSE 6723. This course prepares students for the advanced practice nursing role when caring for infants, children, and the adolescent populations within the family context. Strategies for the assessment, diagnosis and holistic management of common episodic complaints and chronic condition management in the pediatric primary and acute care settings will be developed.

NURSE 6744 Pediatric Health II: Comprehensive Primary Care: 4 semester hours

Prerequisites: NURSE 6743. This course prepares students for the role of the advanced practice nurse in the pediatric primary care setting and in the promotion of child health. Strategies for the assessment, diagnosis and holistic management of children with complex health needs in providing effective health promotion and health care services will be developed.

NURSE 6745 Pediatric Health II: Complex Acute Care: 4 semester hours

Prerequisites: NURSE 6743. This course prepares students for the role of the pediatric nurse practitioner in restoring a child's health when complex illness or injury occurs in the acute care setting. Strategies into the assessment, diagnosis and holistic management of children with complex health needs will be developed.

NURSE 6746 Women's Health I: 4 semester hours

Prerequisites: NURSE 6724. This course prepares students to assume roles in the advanced nursing care of women considering related gender issues across the lifespan with an emphasis on common acute and chronic gynecologic conditions. Strategies for the diagnosis and holistic management of common acute and chronic gynecologic health problems in gender-related populations will be developed.

NURSE 6747 Women's Health II: 4 semester hours

Prerequisites: NURSE 6746. This course prepares students to assume roles in the advanced nursing care of women with an emphasis on reproductive healthcare. Strategies for the diagnosis and holistic management of complex reproductive health conditions including preconception, obstetrical, and postpartum care as well as family planning and infertility will be developed.

NURSE 6870 Special Topics in Advanced Practice Nursing: 1-3 semester hours

Prerequisites: Consent of instructor. Explore special topics for the advanced practice nurse in the areas of research, theory, education and administration. No more than three hours shall be applied toward the degree. This course is for graduate DNP or PhD levels.

NURSE 6875 Special Study in Graduate Nursing: 1-3 semester hours

Prerequisites: Graduate standing or consent of instructor. In-depth study of selected topics in nursing under the guidance of a specific instructor. No more than three hours may be applied to the master's program of study.

NURSE 6934 Leadership in Population Health and Healthcare Systems Residency I: 2-4 semester hours

Prerequisites: Consent of the instructor and graduate standing. This clinical course is designed to provide a theoretical and practical base for leadership development in population health and community health and organizational management. Emphasis is placed on clinical assessment and decision-making in the populations and community-level interventions to change health outcomes. The student is expected to clinically apply the concepts and theories discussed in class that address health disparities in underserved populations, infectious diseases, and community-level responses to chronic conditions. Clinical experiences are designed to enhance assessment and technical skills.

NURSE 6935 Leadership in Population Health and Healthcare Systems Residency II: 2-4 semester hours

Prerequisites: Consent of the instructor and graduate standing. This clinical course provides continued precepted experiences that allow students to develop the nurse practitioner role and clinical competencies within their specific emphasis area. Students integrate theory and clinical competencies to provide preventative care, health promotion, health education, health systems leadership, policy and evidence-based care populations.

NURSE 6954 Advanced Practice Nursing: Practicum I: 1-4 semester hours

Prerequisites: NURSE 6738, NURSE 6740, NURSE 6742, NURSE 6744, or NURSE 6747. This clinical course provides precepted experiences that allow students to continue to develop the nurse practitioner role and clinical competencies within their specific emphasis area. Students integrate theory and clinical competencies to provide preventative care, health promotion, health education and evidence-based care for acute, chronic and mental health conditions for individuals and families. An on-campus immersive learning experience is required for this course.

NURSE 6955 Advanced Practice Nursing: Practicum II: 1-4 semester hours

Prerequisites: NURSE 6954. This clinical course provides a continuation of precepted experiences that allow students to develop the nurse practitioner role and clinical competencies within their specific emphasis area. Students integrate theory and clinical competencies to provide preventative care, health promotion, health education and evidence-based care for acute, chronic and mental health conditions for individuals and families. An on-campus immersive learning experience is required for this course.

NURSE 7200 State of the Science in Nursing Research and Practice: 3 semester hours

Prerequisites: Consent of Program Director. This course examines the state of scientific knowledge in nursing research and practice. Gaps in the nursing research and practice are identified. Interrelationships between nursing science and scientific developments in other disciplines from the perspectives of health outcomes, population health indices, and policy implications of scientific progress are analyzed. Advances in biophysiological, psychosocial, sociocultural, health systems, and health economics research and the implications for translation to improve nursing science and practice are analyzed.

NURSE 7211 Biostatistics I: 3 semester hours

Prerequisites: Graduate standing. This course provides a foundational understanding of the use of biostatistics in conducting research. Types of data, data description, logic of sampling and test statistics, hypothesis testing, type 1 and type 2 errors, covariates and confounding variables, and clinical versus statistical significance are included. Opportunities will be provided to gain skills conducting statistical analysis using SPSS, interpreting the results of analytic processes, and applying the results to common health and illness examples encountered in research publications.

NURSE 7212 Biostatistics II: 3 semester hours

Prerequisites: NURSE 7211 or permission of the instructor. This course emphasizes applications of inferential statistics including analysis of variance, simple and multiple linear and logistic regression models, tests of mediation and moderation, and repeated measures and an introduction to longitudinal analyses. The analytic methods and applications will be framed within the health science research field with emphases placed on designing and conducting studies and appropriate analyses using the techniques described above.

NURSE 7213 Biostatistics III - Structural Equation Modeling: 3 semester hours

Prerequisites: NURSE 7211 Biostatistics I (or its equivalent), NURSE 7212 Biostatistics II (or its equivalent). This course serves as an introduction to structural equation modeling (SEM). The overall objective is to develop a solid conceptual and theoretical understanding and ability to use SEM and its extensions correctly and effectively in independent research. Topics include factor analysis, path analysis, and basic principles of model building. Applications and extensions of SEM, such as scale construction and validation, mediation and moderation, multi-group analyses, and latent growth modeling are also included. Students will have the opportunity to work on projects tailored to their research interests and needs.

NURSE 7215 Evidence-Based Practice for the DNP: 3 semester hours

Prerequisites: NURSE 6130 and NURSE 7260. This course examines the state of clinical inquiry and the implementation of evidence into practice. The relationship between clinical questions and the critical appraisal and synthesis of research and literature is explored. Models for implementing and sustaining change based on the evidence are examined.

NURSE 7220 Leadership in Practice: 3 semester hours

Prerequisites: Graduate standing. This course explores various leadership theories, models, and issues that facilitate effective planning, implementation, and evaluation of healthcare initiatives within select healthcare systems. A course focus will be on the use of advanced communication skills and interprofessional collaboration to achieve optimal health outcomes and sustain positive change initiatives.

NURSE 7230 Epidemiology: 3 semester hours

Prerequisites: NURSE 7211. This course covers epidemiology, logistic modeling, and public health surveillance in primary healthcare. It provides an introduction into investigation of outbreaks. The course will enable the healthcare professional to develop a knowledge base to address issues of health and illness of a population.

NURSE 7240 Health Informatics: 3 semester hours

Prerequisites: Graduate standing. This course explores information systems and computer technologies that can improve the health of individuals, families, communities, and populations by optimizing information management and communication. Focus areas include the electronic medical record, technologies to improve patient safety, standards for privacy and security, tele-health systems to improve healthcare access to underserved populations, use of web-enhanced technologies for research translation, and strategies to provide data for decision making and evidence-based databases. Emphasis is placed on developing competence in technology use for the purpose of program evaluation, establishing healthcare quality, and improving healthcare delivery to diverse populations in complex healthcare settings.

NURSE 7251 Healthcare Economics: 3 semester hours

Prerequisites: Consent of Program Director. This course introduces the student to the basic economic concepts and analytical methods used to understand, analyze, and evaluate economic aspects across various sectors of the healthcare system including clinics, underserved and rural populations, the role of government in the delivery of healthcare services, and the economic aspects of healthcare reform. The course applies tools of analysis to the behavior of households, healthcare providers, health insurance organizations, pharmaceutical industries, and not-for-profit and federally-funded clinics.

NURSE 7260 Program Evaluation and Quality Management in Healthcare: 3 semester hours

Prerequisites: NURSE 7211 and NURSE 7230. This course introduces students to the principles and procedures for assessing the quality and effectiveness of programs, projects, and materials related to planned interventions and systems changes in health settings. An overview is provided of past and current strategies to define and assess the quality of healthcare delivery using tools required to examine, evaluate, and implement the key structures and processes of quality improvement programs in healthcare organizations. Practical applications that prepare the participants to use the theory and techniques of quality improvement in situations with complex clinical and managerial implications will be incorporated.

NURSE 7291 DNP Clinical Scholarship Project I: 2 semester hours

Prerequisites: NURSE 7215 and NURSE 7260. This course provides opportunities for development of practice expertise into a systems-level approach to create change in a targeted population within a healthcare or related environment. Students will develop their clinical scholarship project proposal.

NURSE 7292 DNP Clinical Scholarship Project II: 2 semester hours

Prerequisites: NURSE 7291. This course provides opportunities to develop strategies to create change in a targeted population and complex healthcare environments. Students will implement evidence-based, clinical scholarship projects to improve health outcomes.

NURSE 7293 DNP Clinical Scholarship Project III: 2 semester hours

Prerequisites: NURSE 7292. This course provides opportunities for the development of practice expertise to create change in a targeted population and complex healthcare environment. Students will complete their clinical scholarship project and make recommendations for future practice.

NURSE 7295 History of Pregnancy and Birth: 3 semester hours

Prerequisites: Graduate Admission. This course is a philosophical discourse on the experience of pregnancy and birthing through history.

NURSE 7403 Development of the Nurse Scientist: 3 semester hours

Prerequisite: Admission to doctoral study in nursing. This course addresses the role of the PhD-prepared nurse as scientist, leader, academician, and policy maker. Students will analyze strategies for lifelong learning and development as nurse scientists and will explore avenues for building their programs of scholarship, funding opportunities, and contributing to nursing science in policy and clinical practice. Students will examine ways to collaborate effectively in order to improve health care and health outcomes.

NURSE 7443 Healthcare Policy and Economics: 3 semester hours

Prerequisites: Graduate admission. This course introduces the student to economic and healthcare policy concepts using analytical methods to understand and evaluate the impact across various sectors of the healthcare system. The historical context of healthcare policy is explored.

NURSE 7481 Development of Nursing Science and Theory: 3 semester hours

Prerequisite: Admission to PhD Program. This course focuses on the discipline of nursing, including the evolution of the state of scientific inquiry and knowledge development in nursing. The course includes the aims of nursing science, the nature of nursing knowledge and scientific theories, and a discussion of relationships among theory, research, method, and practice. Students engage in constructive dialogue as they begin to conceptualize nursing phenomena in their area of interest.

NURSE 7486 Research Residency: 3 semester hours

The course provides opportunities to apply research knowledge and skills in a directed research setting. This course will provide practical experience and the application of coursework to research as guided by faculty researchers.

NURSE 7488 Introduction to Qualitative Research Methodologies and Methods: 3 semester hours

Prerequisites: Admission to PhD program. This course introduces qualitative research methodologies and methods useful to healthcare and related sciences. Emphasis is placed on theoretical and philosophical perspectives, selection of appropriate methodologies, data collection and analysis methods, and critique. An overview of traditional and emerging designs, strengths and limitations of various methodologies, and ethical concerns will be addressed.

NURSE 7490 Advanced Nursing Research Designs and Methods: 3 semester hours

Prerequisite: Admission to the PhD program. This course focuses on development of the research plan including issues in sampling, design, and implementation nursing research. Students will evaluate research methods to answer research questions in their area of interest. Content includes design and analysis issues affecting validity, examination of measurement techniques for assessing validity, reliability, structure of data collection instruments, and criteria for instrument selection. A research proposal will be prepared.

NURSE 7491 Advanced Nursing Theory Development and Validation: 3 semester hours

Prerequisite: Admission to PhD program. This course focuses on a systematic study of contemporary nursing science and related theories in knowledge development, and the application of theory construction and validation strategies to specific nursing phenomena of interest. Students create and critically examine theoretical frameworks and models, with emphasis placed on constructing and testing theoretical statements.

NURSE 7495 Mixed Methods Research in Health Care: 3 semester hours

Prerequisites: NURSE 7490, NURSE 7488; or consent of the instructor. Emphasis will be on merging methods and addressing epistemological and paradigmatic issues. The value and use of the mixed methods approach, philosophical assumptions, types of designs, and approaches to designing and conducting mixed methods research in health care related disciplines will be emphasized.

NURSE 7496 Seminar in Advanced Qualitative Research Methods: 3 semester hours

Prerequisites: NURSE 7488 or consent of the instructor. This course is designed to engage nurse researchers in the applied collection and analysis of qualitative data and the dissemination of qualitative findings. This course explores congruent systematic analyses/interpretations based upon a variety of philosophical and/or theoretical stances, which could include phenomenology, hermeneutics, ethnography, grounded theory, case study, participatory action research, critical theory or other post-colonial and feminist approaches, textual analysis, aesthetic inquiry and others. Dissemination of findings will be emphasized as well as issues related to data management, rigor, and funding of qualitative proposals. Contemporary approaches to multiple methodology studies and innovative designs will be addressed. Students will be encouraged to practically engage in a methodology of choice in depth.

NURSE 7497 Design, Implementation and Evaluation of Health Interventions: 3 semester hours

Prerequisites: NURSE 7490 or consent of the instructor. This course focuses on developing skills in designing, delivering, and evaluating evidence-based health interventions that integrate relevant theoretical, research, social determinants, and biobehavioral variables with salient cultural variables for targeted groups. The course includes the application of research skills and empirical foundation for advanced research intervention design and evaluation related to a focal area of research interest.

NURSE 7499 Dissertation Research: 1-12 semester hours

Prerequisite: All required course work; successful completion of comprehensive examination. Investigation of an advanced nature culminating in successful defense of dissertation. Continuous registration is required.

NURSE 7529 Special Topics in Qualitative Systematic Reviews: 3 semester hours

Prerequisites: NURSE 7488 or equivalent. This course examines and carries out elements of qualitative systematic reviews, such as topic/problem identification, data collection, and analysis. Students will gain an understanding of how to limit threats to validity and maximize generalizability.

NURSE 7870 Special Topics in Scientific Foundations of Research: 1-3 semester hours

Prerequisites: Consent of the instructor and graduate standing. Explore special topics related to PhD dissertation. This course can be a cognate, elective, or for students who are enrolling in one of the shared courses available through the UM-funded CARMA initiative (Collaborations for Advanced Research Methods and Analysis).

NURSE 7934 Leadership in Population Health and Healthcare Systems Residency III: 2-4 semester hours

Prerequisites: Consent of the instructor and graduate standing. This clinical course provides continued precepted experiences that allow students to develop the leadership and population-focused role and clinical competencies within their specific emphasis area. Students integrate theory and clinical competencies to population preventative care, healthcare, health promotion, health education, health systems leadership, policy, and evidence-based care populations.

NURSE 7954 Advanced Practice Nursing: Practicum III: 1-4 semester hours

Prerequisites: NURSE 6955; may be taken concurrently with DNP Capstone. This clinical course provides continued precepted experiences that allow students to develop leadership and population-focused roles and clinical competencies within their specific emphasis area. Students integrate theory and clinical competencies into population preventative care, healthcare, health promotion, health education, health systems leadership, policy, and evidence-based care populations. An on-campus immersive learning experience is required for this course.

NURSE 7955 Research Topics in Nursing and Health: Psychometrics: 3 semester hours

Prerequisites: Admission to the College of Nursing PhD Program. This course focuses on theoretical foundations of measurement, item construction, instrument design, item analysis, validity and reliability assessment. Basic methodologies and techniques for constructing, testing, and evaluating instruments will be discussed. This course is for students who are enrolling in one of the shared courses available through the UM-funded CARMA initiative (Collaborations for Advanced Research Methods and Analysis).

NURSE 7956 Participatory Approaches for Health and Health Systems: 3 semester hours

Prerequisites: Admission to the College of Nursing PhD Program. This course will focus on the use of participatory approaches for the design of health and health-system interventions. This course is for students who are enrolling in one of the shared courses available through the UM-funded CARMA initiative (Collaborations for Advanced Research Methods and Analysis).

NURSE 7957 Research Topics in Nursing and Health: Hierarchical Linear Modeling: 3 semester hours

Prerequisites: Admission to the College of Nursing PhD Program. This course is an extension of regression methods to situations where data has multiple layers of meaningful structure. It emphasizes ability to specify, evaluate, and estimate a multilevel model using SPSS and HLM. This course is for students who are enrolling in one of the shared courses available through the UM-funded CARMA initiative (Collaborations for Advanced Research Methods and Analysis).

NURSE 7959 Research Topics in Nursing & Health: Structural Equation Modeling: 3 semester hours

Prerequisites: Admission to the College of Nursing PhD Program. This course focuses on factor analysis, path analysis, basic principles of model building, as well as applications and extensions of SEM such as scale construction and validation, mediation and moderation, multi-group analyses, and latent growth modeling. This course is for students who are enrolling in one of the shared courses available through the UM-funded CARMA initiative (Collaborations for Advanced Research Methods and Analysis).

College of Optometry

General Information

The UMSL College of Optometry enrolled its first class in 1980, graduating 32 students in May 1984. The College is located on the South Campus complex of the University of Missouri-St Louis at One University Blvd. A five-story building houses the College's classrooms, laboratories, research facilities, and administrative offices. The Patient Care Center (the Center for Eye Care campus facility), located on the South Campus, is open to the public, as well as to the faculty, staff, and students at the University. The Center serves to provide patients with the highest quality eye and vision care. The second floor of the Patient Care Center also houses laboratories, classrooms, and study spaces.

The College of Optometry is a member of the Association of Schools and Colleges of Optometry (ASCO) and is accredited by the Accreditation Council on Optometry Education (ACOE).

The Doctor of Optometry (O.D.) Degree

A student who satisfactorily completes all four years of the professional curriculum will be eligible to receive the Doctor of Optometry degree. The training and clinical experience optometry students receive at UMSL qualifies graduates to practice optometry in any state in the nation.

Program Curricular Outcomes

With Entry Level Practice Standards

The faculty has approved the following optometric Entry-level Standards:

Doctors of Optometry must have an established knowledge of the basic and clinical sciences in order to provide quality eye and vision care to their patients. The academic foundation must be broad and include the biological, medical, vision and optical sciences, as well as a basic understanding of the health care delivery system. Doctors of Optometry must recognize the dynamic nature of knowledge and possess the commitment and skills needed to responsibly assess and apply new information and treatment strategies throughout their career.

Upon completion of the program, graduates will be able to:

I. Identify, record, and analyze pertinent history and problems presented by the patient (PATIENT HISTORY).

1. the basic elements of a comprehensive patient history
2. the ability to obtain an efficient patient history necessary for a problem oriented examination
3. the proper standard of recording patient history in EHR
4. the ability to relate patient history to examination findings

II. Use evidence-based practices to examine and evaluate the patient, arrive at an appropriate diagnosis, and formulate a rational treatment and management plan (OPTOMETRIC KNOWLEDGE).

5. basic body systems, with special emphasis on the ocular and visual system and their interrelationships to the body as a whole;
6. the impact of genes and their interaction with behavior, diet and the environment on human health;
7. the various processes and causes that lead to dysfunction and disease and the effect that these processes can have on the body and its major organ systems, with special emphasis on the ocular and visual systems;

8. the mechanisms of actions of the various classes of pharmaceutical agents, including injectable agents, and their interactions;
9. the structures and processes contributing to the development of refractive error and other optical or perceptual abnormalities of the visual system;
10. the optics of the eye and ophthalmic lens systems - including spectacles, contact lenses, and low vision devices;
11. principles of the effects of radiant energy on the eye, including environmental lighting and ophthalmic lasers

III. Provide patient care which includes detection, diagnosis, treatment and management for each unique patient encounter (PATIENT CARE).

12. ophthalmic lens systems used to correct refractive, oculomotor and other vision disorders;
13. visual development and vision function with respect to deviation and enhancement of conditions such as, but not limited to, strabismus, amblyopia, ocular motility, accommodation, vergence and visual perception;
14. vision therapy and other rehabilitative methods used for the management of common visual disorders;
15. the detection, diagnosis, treatment and management of ocular disease and ocular manifestations of systemic disease;
16. the safe and effective use of pharmaceutical agents for the treatment of disease and conditions affecting the eye and visual system, and recognize adverse reactions;
17. the strategies, interventions, and support system to best meet the unique needs of each patient regardless of age, taking into account co-existing medical conditions, medications, dietary needs, family issues, and social concerns
18. the utilization of injectable agents for the management of ocular and systemic diseases
19. the concepts of refractive surgery and its management;
20. basic life support skills for prevention and response to life-threatening emergencies;
21. the use of ophthalmic lasers in the management of refractive error and other anomalies of the eye;
22. the use of evidence from well designed and conducted research in healthcare decision-making

IV. Perform necessary examination techniques competently and efficiently and have capacity to adapt the administration of clinical tests to meet the needs of the patient. with an obligation to maintain clinical skills through practice and repetition (CLINICAL SKILLS).

23. the importance of performing necessary examination techniques competently and efficiently
24. the capacity to adapt the administration of clinical tests to meet the needs of the patient
25. the obligation to maintain clinical skills through practice and repetition

V. Demonstrate proper documentation in the electronic health record, including proper use of abbreviations and appropriate notation of clinical observations (RECORD KEEPING).

26. the significance of proper documentation in the electronic health record
27. the proper use of abbreviations
28. the appropriate notation of clinical observations

VI. Provide relevant patient education and counseling, including culturally sensitive communications, both oral and written,

with other professionals and patients (INTERPERSONAL AND COMMUNICATION SKILLS).

- 29. the critical elements of verbal and written communications with patients and other health care professionals;
- 30. the psychosocial dynamics of the doctor/patient relationship;
- 31. the need for clear, accurate and appropriate documentation of patient encounters;
- 32. the manner in which people of diverse cultures and belief systems perceive human health and illness and respond to various symptoms, diseases and treatments;

VII. Apply knowledge of interprofessional collaborative care, ethics, medico-legal aspects, and culturally sensitive communication in the delivery of optometric care (INTRA/INTER PROFESSIONAL CONSULTATION/PRACTICE).

- 33. when there is a requirement for intra/inter professional consultation
- 34. the process of coordination among professionals involved in a patient's care

VIII. Articulate the need for a commitment to uphold the ethical obligations of the Optometric Oath including provisions to guarantee patient privacy, medical record security, and inter-professional values (PROFESSIONALISM).

- 35. the need for a commitment to uphold the ethical obligations of the Optometric Oath;
- 36. the specific duties and responsibilities toward the individuals they serve and toward society as a whole;
- 37. the provisions to guarantee patient privacy and medical record security as expressed by HIPAA regulations;
- 38. inter-professional values, related ethics and relationships among the professions;

IX. Describe the practice management, broad-based, multidisciplinary nature of the health care delivery system and the role of the optometrist as a primary health care provider (SYSTEMS-BASED PRACTICE).

- 39. the practice management structure and strategies as they pertain to different practice settings;
- 40. the broad-based, multidisciplinary nature of the health care delivery system;
- 41. the role of the optometrist as a primary health care provider;

X. Describe current best practices in patient care decision making, a commitment to lifelong learning and knowledge of information management system and technology used in the delivery of eye and health care (PRACTICE-BASED LEARNING).

- 42. the conscientious use of current best practices in patient care decision making;
- 43. the necessity for a commitment to lifelong learning;
- 44. the information management systems and technology used in the delivery of eye and health care.

2001 College of Optometry; Revised 2001, 2010, 2011, 2012, 2015, 2016 and 2024

Admission Requirements and Application Procedures

Admission requirements, application procedures, and all related information is located on the College of Optometry website located under "Optometry Admissions." If you are interested in the program, please visit the website to review the requirements and procedures.

Academic Program

The curriculum leading to the Doctor of Optometry degree is a four-year, full-time program of study. The first year of the professional program emphasizes optical principles, the biomedical sciences and an introduction to the optics of the visual system. The second year pertains to vision science and instruction in clinical examination techniques. The third year emphasizes patient care and introduces the student to specialty areas within optometry, such as ocular disease treatment and management, contact lenses, pediatrics and geriatric vision care, binocular vision and vision therapy, and low vision rehabilitation. The second and third years also include course work and clinical instruction in ocular disease and pharmacology. The fourth year requires the completion of rotations in the following areas: institutional, ocular disease, community service, University Eye Center, specialty, and elective. Successful completion of professional years one through four with a degree audit will allow professional students to be granted a Doctor of Optometry degree.

To view the Four-Year Professional Degree (O.D.) Curriculum, select the "Program A-Z" index tab located on the left side of the screen. From the list, choose "Optometry OD." The curriculum includes an outline of the entire four-year academic program required to receive the O.D. degree.

For Course Descriptions, select the Courses tab at the top of this page.

Licensure and Certification

As of July 1, 2024 it has been determined that the following programs meet educational requirements in for Optometrist licensure in Illinois and Missouri.

- Doctor of Optometry

We have not determined if the above programs meet the educational requirements for licensure in the remaining U.S states and U.S. Territories. For the most up to date information about Licensure and Certification requirements, please visit <https://teaching.missouri.edu/student/state-authorization/umsl/licensure>.

Under federal regulations, we may not enroll into licensure or certification program students located in a state or territory in which our program does not meet the educational requirements to be eligible for licensure or which the University has not made a determination. However, if you plan to seek licensure and employment in any of the following states or territories listed below, you may enroll in the program after signing an attestation indicating your plans to become licensed and employed in a state that meets requirements.

If you plan to seek licensure in one of the states listed above, please contact the College of Optometry at 314-516-5506 for more information.

Courses

OPTOM 8010 Anatomy, Physiology and Disease Processes I: 5 semester hours

This course is the first in a two-semester course sequence that will detail the general anatomy of the human body along with the histology (microanatomy), physiology and disease processes of major organ systems. The course content will be presented in a modular format. Areas of discussion will include cardiovascular, respiratory, endocrine, digestive, reproductive, integumentary and peripheral and autonomic nervous systems. The laboratories will emphasize and augment important concepts introduced in the classroom environment.

OPTOM 8020 Basic and Clinical Optics I: 4 semester hours

Prerequisites: Consent of instructor. The principles of geometrical optics as applied to refracting and reflecting surfaces, thin lenses, thick lenses, and lens systems. The optics of various ophthalmic instruments and techniques will be examined.

OPTOM 8030 Introduction to Optometry: 1 semester hour

An introduction to the profession of optometry, including a consideration of the characteristics of a profession, the behaviors and attitudes of a professional, the history of optometry, the profession's legal basis, the major optometric organizations and sources and types of information available to optometrists. One hour of lecture per week.

OPTOM 8040 Neuroanatomy: 4 semester hours

Prerequisites: Consent of instructor. Detailed gross and microscopic anatomy of human central nervous system with a special emphasis on the cranial nerves, nuclei, and the visual system.

OPTOM 8050 Basic and Applied Immunology: 2 semester hours

This course will address the basic concepts of immunology including innate and adaptive immune responses. Mechanisms of hypersensitivity reactions and applications of immunology to ocular and systemic disease, transplantation, and treatment or prevention of cancer are included. Students must be concurrently enrolled in OPTOM 8010.

OPTOM 8060 Biochemistry: 2 semester hours

Basic concepts of general and cellular biochemistry. Study of nomenclature, structure, and reactions of organic molecules. Some emphasis on visual system - tears, intraocular fluids, lens, and photochemistry.

OPTOM 8080 Clinical Optometry I: 2 semester hours

Introduction to ocular assessment including case history and entrance examination procedures and theory.

OPTOM 8090 Case Based Discovery for the Developing Clinician: 1 semester hour

Students acquire curricular competencies appropriate for the professional year in which they are enrolled via in depth individual and group discovery via case based presentations. The experience will provide students the opportunity to assimilate and recognize the relationships among diverse topics emphasized within the optometric curriculum. Participants work in groups of no more than 10.

OPTOM 8110 Anatomy, Physiology and Disease Processes II: 4 semester hours

Prerequisites: OPTOM 8010, OPTOM 8060. Continuation of OPTOM 8010 Anatomy, Physiology and Disease Processes I.

OPTOM 8120 Basic and Clinical Optics II: 5 semester hours

Prerequisite: OPTOM 8020. Radiometry and photometry, polarization, scattering, emmetropia, myopia, hyperopia, astigmatism, models of experimental myopia, accommodation, diffraction, retinal image size, entoptic phenomena, aberrations, lasers and the eye, apertures, and optical instruments.

OPTOM 8160 Anatomy and Physiology of the Eye: 5 semester hours

Prerequisites: OPTOM 8040, OPTOM 8010 or consent of instructor. Vegetative anatomy and physiology of the eye, optic nerve, orbit, and adnexa will be discussed. This includes discussion of embryology and the dynamics of ocular fluids. Four lecture hours and a two-hour laboratory per week.

OPTOM 8180 Clinical Optometry II: 5 semester hours

Prerequisites: OPTOM 8080. Continuation of Clinical Optometry I. Patient care instruction including entrance examination procedures, refraction, ophthalmoscopy and biomicroscopy.

OPTOM 8190 Introduction to Clinical Diagnostic Reasoning: 1 semester hour

Prerequisite: OPTOM 8090. Introduction to clinical diagnostic reasoning by individual and group case-based learning. Scenarios give students an understanding of the relationship between basic and clinical sciences and provide an introduction to established best practices.

OPTOM 8220 Ophthalmic Optics: 4 semester hours

Prerequisites: OPTOM 8120. Ophthalmic materials, physical characteristics of lenses and frames, paraxial optics of ophthalmic lenses, ophthalmic prisms, lens specifications, special lenses, multifocal lenses, unique designs, aniseikonic lenses, aberration theory and its application to lens design, lenses for low vision, protective eyewear.

OPTOM 8230 Interpersonal Communications: 1 semester hour

Prerequisites: OPTOM 8030. This course covers the principles of human interpersonal relationships. The enhancement of listening and verbal skills will be provided. Emphasis will be on preparing the student to understand and manage the many human interpersonal relationships necessary in the practice of optometry.

OPTOM 8240 Ocular Motility: 2 semester hours

Prerequisites: OPTOM 8040 or consent of instructor. The anatomy, physiology, neurology, measurement, characteristic, and control of the intra- and extraocular system.

OPTOM 8250 Monocular Sensory Processes: 4 semester hours

Prerequisite: OPTOM 8160 or consent of instructor. Monocular sensory processes of vision: phototransduction, visual neurophysiology, spatial and temporal vision, acuity, light adaptation and discrimination, color, motion, objects and attention. Sensory processes are considered from both the psychophysical aspects and neurophysiological bases, including the changes during development, adulthood and aging. Four hours of lecture and two hours of laboratory per week.

OPTOM 8260 General and Ocular Pharmacology: 4 semester hours

Prerequisites: OPTOM 8110, OPTOM 8160, OPTOM 8080, OPTOM 8180. This course establishes an understanding of both systemic and ocular pharmacology focusing on mechanisms of action, drug interactions within the body, and drug interactions with other medications. Attention is given to clinical cases relevant to optometric practice and a broad overview of general and ocular pharmacology as a whole.

OPTOM 8280 Clinical Optometry III: 4 semester hours

Prerequisites: OPTOM 8080 and OPTOM 8180. Continuation of clinical optometry. Patient care in the areas of refraction, binocular integration, perimetry, and biomicroscopy.

OPTOM 8320 Ophthalmic Dispensing: 1 semester hour

Prerequisites: OPTOM 8220. Clinical experience in verification and dispensing of ophthalmic materials.

OPTOM 8340 Binocular Vision and Space Perception: 4 semester hours

Prerequisites: OPTOM 8240, OPTOM 8280 and OPTOM 8250 or consent of instructor. Binocular vision and space perception. Visual direction, theory of correspondence, fusion, rivalry, ocular dominance, and stereopsis. Developmental aspects and neurophysiological mechanisms.

OPTOM 8370 Foundations of Ocular and Systemic Disease and Management I: 5 semester hours

Prerequisite: OPTOM 8260. The first in the series of courses that address diseases of the eye, clinical diagnoses, and optometric and medical management of ocular and systemic disease. The laboratories emphasize diagnostic techniques and treatment skills, preparation for the initial clinic privileging examination and augment important concepts introduced in the classroom environment.

OPTOM 8380 Clinical Optometry IV: 2 semester hours

Prerequisites: OPTOM 8280. Continuation of Clinical Optometry III. Diagnosis, prognosis and management of visual problems. Emphasis on conducting comprehensive eye exams in preparation for the initial clinical privileging examination.

OPTOM 8390 Specialty Clinic Laboratory: 1 semester hour

Prerequisite: OPTOM 8280. Students acquire and practice skills for pediatric, binocular vision, low vision, and contact lens examinations. The course format is one 2-hour laboratory per week.

OPTOM 8391 Clinical Topics in Contact Lenses: 1 semester hour

Prerequisite: OPTOM 8280. This is the first in a series of 3 courses addressing contact lenses. The focus is on contact lens care and evaluation. The course format is one 50-minute lecture per week.

OPTOM 8392 Clinical Topics in Binocular Vision and Pediatric Optometry: 1 semester hour

Prerequisite: OPTOM 8240 and OPTOM 8280. This course presents clinical diagnostic and management skills for both pediatric patients and those with binocular vision anomalies. The course format is lecture.

OPTOM 8393 Clinical Topics in Low Vision: 1 semester hour

Prerequisite: OPTOM 8280. This course presents clinical diagnostic and management skills for patients with low vision. the course format is one 50-minute lecture per week.

OPTOM 8400 Directed Readings: 1-3 semester hours

Prerequisite: Consent of Instructor. Credit is given for independent literature review of a specific topic in any area of basic or clinical vision science guided by a full time faculty member with appropriate interests. Credit is awarded upon approval of a written paper regarding the selected topic. This elective may be repeated up to a total of 3 credit hours.

OPTOM 8410 Directed Research: 1-3 semester hours

Prerequisite: Consent of Instructor. Credit is given for independent research. Projects may be laboratory, library, or clinically based research in any area of vision science. Projects will be supervised by one or more full time faculty members. This elective may be repeated up to a total of 6 credit hours.

OPTOM 8450 Introduction to Primary Care Clinic: 4 semester hours

Prerequisites: OPTOM 8230, OPTOM 8320, OPTOM 8340, OPTOM 8370, OPTOM 8380, OPTOM 8390, OPTOM 8391, OPTOM 8392, OPTOM 8393, OPTOM 8560, and successful completion of the Clinical Proficiency Examination. The first in a series of adult primary care courses. Students perform comprehensive examinations, make diagnoses, and develop management plans with patient education under supervision of a faculty attending. Students participate in accompanying clinic seminar discussion groups.

OPTOM 8460 Foundations of Ocular and Systemic Disease and Management III: 3 semester hours

Prerequisites: OPTOM 8370. The third course in the foundation series that addresses ocular and systemic diseases and their management. The laboratories will emphasize and augment important concepts introduced in the classroom environment.

OPTOM 8480 Pharmaceutical Management in Patient Care: 2 semester hours

Prerequisites: OPTOM 8260; OPTOM 8370; OPTOM 8460. This course will discuss the clinician's responsibility in the treatment and management of ocular conditions and systemic complications of pharmaceutical use. Principles of ocular pharmacology in regards to specific management and treatment of ocular disease, trauma, and surgery by systemic, local, and topical therapy. In addition, simulated case studies are used to illustrate the basic and subtle clinical aspects of treating patients using pharmaceutical agents.

OPTOM 8500 Primary Care Clinic I: 6 semester hours

Prerequisites: OPTOM 8450. Continuation of Introduction to Primary Care Clinic. Weekly clinic seminar will supplement clinical experience with discussion of medical billing and coding, pharmacology, and patient case discussion and review.

OPTOM 8520 Contact Lenses I: 3 semester hours

Prerequisites: OPTOM 8380 and OPTOM 8391. Historical development of the contact lens and its use. Basic lens terminology, specifications, physiochemical characteristics, optics, fabrication, and verification. Preliminary patient evaluation, indications and contraindications for contact lenses. Basic fitting philosophies for all lens types. Lens care and patient education. Patient and practice management considerations.

OPTOM 8540 Diagnosis and Management of Binocular Vision Anomalies: 4 semester hours

Prerequisites: OPTOM 8340, OPTOM 8380 and OPTOM 8392 or consent of instructor. The etiology, epidemiology, symptoms, signs, and course sequelae of the obstacles to binocular vision-sensory, integrative, and motor. The detection, diagnosis, prognosis, and orthoptic treatment of such anomalies. Clinical care of aniseikonas.

OPTOM 8550 Low Vision: 2 semester hours

Prerequisite: OPTOM 8380 and OPTOM 8393. The etiology, epidemiology, symptoms, signs, course, and sequelae of low vision problems. Methods of testing, prognosis, selection of therapy, design of environmental and optical aids, problems of rehabilitation. Agencies, laws, public and social assistance for the partially sighted and blind. The course format is lecture and 1 two-hour laboratory per week.

OPTOM 8560 Epidemiology and Public Health: 3 semester hours

The essentials of epidemiological study procedures and a discussion of the epidemiology of vision disorders are discussed. The course reviews descriptive statistics, probability sampling, correlation, and prediction. The public health component includes a review of local, state, and federal organizations involved in health care, comprehensive health planning, new trends in health care delivery, and the assessment of the quality of health care delivery.

OPTOM 8570 Advanced Topics in Ocular and Systemic Disease and Management: 5 semester hours

Prerequisites: OPTOM 8370. The third semester of a comprehensive, systems based course sequence. Advanced topics in diagnoses as well as optometric and medical management of ocular and systemic disease will be discussed.

OPTOM 8600 Primary Care Clinic II: 6 semester hours

Prerequisites: OPTOM 8500, OPTOM 8520, OPTOM 8540, OPTOM 8550, OPTOM 8570, and OPTOM 8650. The final course in the adult primary care sequence. Students examine and care for patients under supervision of a faculty attending. Students are expected to function nearly independently in final preparation for the Externship Program.

OPTOM 8615 Applied Basic Science Review: 1 semester hour

The course focuses on a review of important basic science concepts presented during the first two and one half years of the program curriculum. Technology will be used to gauge student knowledge and adjust topics of curricular review. This course is given during the first half of the semester for two hours each week.

OPTOM 8620 Contact Lenses II: 2 semester hours

Prerequisites: OPTOM 8520. Advanced contact lens fitting, theories, and clinical methods for astigmatic, presbyopic, keratoconic, and aphakic designs. Special considerations include the use of corneal topography, orthokeratology, disposable lenses, lenses for extended wear and lenses for color deficiencies. The course format is one lecture per week.

OPTOM 8630 Practice Management I: 3 semester hours

Prerequisites: OPTOM 8030 and OPTOM 8230. The development and management of an optometric practice from a patient and community service point of view - office design, office routine, patient care administration, personnel management, recall systems and the establishment, development and management of an optometric practice from a business point of view - legal developments, governmental regulations, legislation and the legislative process, malpractice, professional ethics, taxes, fee structures, insurance and accounting methods.

OPTOM 8640 Pediatric Optometry and Visual Perception: 2 semester hours

Prerequisites: OPTOM 8380 and OPTOM 8540. Special examination and management considerations of the pediatric patient. Psychological, physiological, social, and demographic aspects of early visual development. Discussion of the optometric considerations of children with learning and reading disabilities. The course format is two lecture/discussions per week.

OPTOM 8645 Neurologic Disorders of the Eye and Visual System: 2 semester hours

Prerequisites: OPTOM 8570. Diagnosis, management and treatment of selected neurologic disorders of the eye and visual system. Emphasis is on diagnostic imaging of the visual system, diagnosis of central and peripheral disorders of eye movements, space occupying lesions, acquired brain injury, and optic nerve disease.

OPTOM 8650 Geriatric Optometry: 2 semester hours

Prerequisite: OPTOM 8380. Special examination and management considerations of the geriatric patient will be discussed. Psychological, physiological, social, and demographic aspects of aging, as well as ocular changes associated with the aging process will be taught.

OPTOM 8660 Contact Lens Specialty Clinic: 1 semester hour

Prerequisites: OPTOM 8391. The clinical examination and care of patients in the optometric specialty area of contact lenses.

OPTOM 8670 Comprehensive Case Review and analysis: 1 semester hour

Prerequisites: Enrollment in OPTOM 8500 or OPTOM 8600. Discussion of the diagnosis and management of common clinic patient encounters via Socratic teaching techniques. Interns are encouraged to present actual cases which have been particularly challenging for them. The course format is a weekly seminar.

OPTOM 8680 Ophthalmic Lasers and Advanced Procedures: 2 semester hours

Prerequisites: OPTOM 8570. This course will review the principles and applications of lasers for the anterior segment. Topics will include the principles, physics, laser tissue interactions and safety concerns for ophthalmic lasers. The indications, contraindications and potential complications of lasers used for open angle glaucoma, closed angle glaucoma and posterior capsulotomy will be reviewed. In addition, the course will review epiluminescence microscopy, minor surgical procedures, suture techniques, office emergencies including anaphylaxis, chalazion management and radiofrequency surgery. An overview of the anatomy of eyelids, post-operative wound care, complications of surgical procedures, surgical instruments, asepsis and OSHA will be provided. The medicolegal aspects of anterior segment procedures will be discussed. Co-Management of patients who have corneal refractive surgery will also be covered.

OPTOM 8690 Pediatric/Binocular Vision Specialty Clinic: 1 semester hour

Prerequisites: OPTOM 8392. The clinical examination and care of patients in the optometric specialty areas of binocular vision and pediatric vision.

OPTOM 8700 UM-St. Louis Pediatric/Binocular Vision Patient Care: 3 semester hours

Prerequisites: Successful completion of all first, second and third year coursework. Comprehensive clinical care of patients in pediatric/binocular vision clinic at the University of Missouri-St. Louis Center for Eyecare. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with OPTOM 8710 and OPTOM 8720.

OPTOM 8710 UM-St. Louis Contact Lens Patient Care: 3 semester hours

Prerequisites: Successful completion of all first, second and third year coursework required Comprehensive clinical care in the contact lens clinic at the University of Missouri-St. Louis Center for Eyecare. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with OPTOM 8700 and OPTOM 8720.

OPTOM 8720 UMSL Eye Health Management Patient Care: 1 semester hour

Prerequisites: Successful completion of all first, second, and third year course work. Comprehensive clinical care in the eye health management clinic with ophthalmologists at the University of Missouri-St. Louis University Eye Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with OPTOM 8700 and OPTOM 8710.

OPTOM 8730 Community Service Patient Care Rotation A: 7 semester hours

Prerequisites: Successful completion of all first, second and third year coursework. Comprehensive clinical care of patients at St. Louis area community health centers. This course fulfills one of the clinic courses required for graduation.

OPTOM 8770 External Rotation in Clinical Care III: 7 semester hours

Prerequisites: Successful completion of all first, second, and third year coursework. One of three external rotations that includes comprehensive clinical care of patients. The clinical care can occur at St. Louis area community health centers, affiliated University clinics, private optometry practices, or MD/OD practices. Patient encounters will be reflective of the clinical location and will include primary care optometry for all patient ages and demographics. This course fulfills one of the clinic courses required for graduation.

OPTOM 8780 External Rotation at VA or Hospital Based: 7 semester hours

Prerequisites: Successful completion of all first, second and third year coursework. Comprehensive clinical care of primary care patients at external sites approved by the School of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8790 External Rotation in Ocular Disease Patient Care: 7 semester hours

Prerequisites: Successful completion of all first, second and third year coursework. Comprehensive clinical care of patients with ocular disease at external sites approved by the School of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8800 External Rotation in Pediatric/Binocular Vision Patient Care: 7 semester hours

Prerequisites: Successful completion of all first, second and third year coursework. Comprehensive clinical care of pediatric/binocular vision patients at an external site approved by the School of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8810 External Rotation in Contact Lens Patient Care: 7 semester hours

Prerequisites: Successful completion of all first, second and third year coursework. Comprehensive clinical care of contact lens patients at an external site approved by the School of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8811 External Rotation in Ophthalmic Surgical Patient Care: 7 semester hours

Prerequisites: Successful completion of all second and third year coursework. Comprehensive clinical care of Ophthalmic Surgical Patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8812 External Rotation in Geriatric Patient Care: 7 semester hours

Prerequisites: Successful completion of all second and third year coursework. Comprehensive clinical care of Geriatric Patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8813 External Rotation in Ophthalmic Sports Vision: 7 semester hours

Prerequisites: Successful completion of all second and third year coursework. Comprehensive clinical care of Sports Vision Patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8814 External Rotation in Clinical Care I: 7 semester hours

Prerequisites: Successful completion of all second and third year coursework. One of three external rotations that includes comprehensive clinical care of patients. The clinical care can occur at St. Louis area community health centers, affiliated University clinics, private optometry practices, or MD/OD practices. Patient encounters will be reflective of the clinical location and will include primary care optometry for all patient ages and demographics. This course fulfills one of the clinic courses required for graduation.

OPTOM 8815 External Rotation in Pathology and Treatment: 7 semester hours

Prerequisites: Successful completion of all second and third year coursework. Comprehensive clinical care in pathology and treatment of patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8816 External Rotation in Ophthalmic Laser Treatment: 7 semester hours

Prerequisites: Successful Completion of all second and third year coursework. Comprehensive clinical care in ophthalmic laser treatment of patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8817 External Rotation in Rehabilitative Patient Care: 7 semester hours

Prerequisites: Successful completion of all second and third year coursework. Comprehensive clinical care in Rehabilitative Patient Care at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8820 External Rotation in Low Vision Patient Care: 7 semester hours

Prerequisites: Successful completion of all first, second and third year coursework. Comprehensive clinical care of low vision patients at an external site approved by the School of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

OPTOM 8830 External Rotation in Clinical Care II: 7 semester hours

Prerequisites: Successful completion of all first, second, and third year coursework. One of three external rotations that includes comprehensive clinical care of patients. The clinical care can occur at St. Louis area community health centers, affiliated University clinics, private optometry practices, or MD/OD practices. Patient encounters will be reflective of the clinical location and will include primary care optometry for all patient ages and demographics. This course fulfills one of the clinic courses required for graduation.

OPTOM 8840 External Supplementary Rotation in General Patient Care: 7 semester hours

Prerequisites: Successful completion of all first, second, and third year coursework. Comprehensive clinical care of general population of optometric patients at external site approved by the School of Optometry's Externship Council.

OPTOM 8850 Supplementary Rotation in General Patient Care: 7 semester hours

Prerequisites: Successful completion of all first, second, and third year coursework. Comprehensive clinical care of general population of optometric patients at the UM-St. Louis Center for Eye Care, UM-St. Louis Optometric Center, or the UM-St. Louis East St. Louis Eye Center.

OPTOM 8870 Practice Management II: 2 semester hours

Prerequisites: Successful completion of all first-, second- and third-year coursework. Further in-depth discussion in practice management.

OPTOM 8880 Practice Management III: 1 semester hour

Prerequisites: Successful completion of all first-, second- and third-year coursework. Presentation and discussion of interesting clinical patients. Additional clinical testing techniques and concepts. Further discussion of patient data analysis-the process of determining diagnosis, prognosis, and therapy. Further discussions in the optometric specialties.

The Graduate School

The Graduate School of the University of Missouri-St Louis promotes a culturally and intellectually diverse learning environment in which scholarship and creativity flourish. To fulfill the teaching and research goals of the university, the Graduate School provides leadership to graduate programs that inspire in students a passion for discoveries. Our programs reflect our mission as a public metropolitan research university. The scholarly and creative activity of our faculty and graduate students serves the local community and advances academic disciplines at the national and international level.

Graduate Faculty

The regular Graduate Faculty (GF) shall consist of all tenured and tenure-track faculty. Visiting and part-time faculty will not normally be members of the Graduate Faculty. Exceptions may be made on a case-by-case basis per approval of the Graduate Council. All regular members of the Graduate Faculty may:

- (a) teach graduate courses
- (b) serve on and chair comprehensive examination and exit project committees
- (c) serve on and chair master's thesis committees and doctoral dissertation committees

Term Appointments

Upon recommendation by a college, qualified non-tenure track and adjunct faculty may be approved by the Graduate Council for term appointments to the Graduate Faculty for a period of 1 to 5 years. Term members of the Graduate Faculty may:

- (a) teach graduate courses
- (b) serve on, but not chair, Ph.D. comprehensive exam committees and exit project committees
- (c) serve on, but not chair, master's thesis committees and Ph.D. dissertation committees

Term graduate faculty who demonstrate scholarship in their discipline may serve on and chair comprehensive exam and capstone project committees for professional doctoral degrees. Upon recommendation of the unit and approval of the Graduate Dean, a term Graduate Faculty member who brings a particular expertise may chair a Ph.D. dissertation committee.

To request a term appointment, the appropriate unit Chair/Dean shall submit a nomination form and CV for the nominee to the Graduate Dean for review and approval by the Graduate Council. A terminal degree is normally required for appointment to the Graduate Faculty. For nominees without a terminal degree, other documented professional accreditation and/or licensure may be used to justify the appointment. Current graduate students at UMSL are not eligible for Graduate Faculty appointment, but under extraordinary circumstances, a current doctoral student may teach a graduate course upon approval of the Dean and the Graduate Council.

Emeritus Appointments

Upon request of the unit, members of the Graduate Faculty who retire or move to a new academic position may be given emeritus status (GFE). Emeritus faculty may continue to teach graduate courses and serve on comprehensive exam committees and dissertation/capstone committees.

With the approval of the Academic Dean and the Dean of the Graduate School, faculty transitioning to GFE status may continue to chair any existing doctoral committees, but may not be appointed to chair any new doctoral committees.

Special Appointments

External scholars with relevant specialized expertise may be appointed to replace a member of the graduate faculty on a qualifying exam, thesis, or dissertation committee. The appointment is limited to one committee and does not entitle the appointee to teach graduate courses. Special appointees may not chair a dissertation or qualifying exam committee. Although there is no strict limit on the number of special appointees serving on a committee, in all cases a voting majority of the committee must be members of the graduate faculty.

Each unit with a doctoral program must include in its 5-year review a summary of its policies and practices regarding the methods of assuring the quality of the dissertations in that unit as well as the outcomes of its quality assessment of the dissertations. The Graduate Dean will review the 5-year reviews and confer with the unit and its academic dean regarding the strengths or weaknesses noted.

The Graduate Dean will be the chairperson of the Graduate Faculty.

Conflict of Interest Policy for Student Engagement in Faculty Enterprise

The Conflict of Interest (COI) Committee determines whether a faculty member has a conflict regarding student engagement in an enterprise in which the faculty member has an outside interest as defined in the University's Collected Rules and Regulations (CRR 330.015 B2). Given the diversity of faculty activities, and potential student engagement, the COI Committee may determine:

- a. the conflict is manageable
- b. the conflict is manageable only through a Student Monitoring Plan and appointment of a COI Student Monitor
- c. the conflict is not manageable and the faculty member may not engage the student

If a Student Monitoring Plan is implemented,

- a. A COI Student Monitor will be appointed by the Conflict of Interest Committee. Monitors should be disinterested parties relative to the faculty member's outside interest and preferably a faculty member at or above the rank of the faculty member with the conflict of interest. A director of graduate studies in the faculty member's unit or an associate dean are likely appointees.
- b. COI Student Monitors will have access to the faculty COI Management Plan that includes recommendations for student monitoring as well as information regarding the role of the student in the company.
- c. The COI Student Monitor will meet with assigned student upon student request, and must meet, at minimum, annually and upload or submit the COI Student Monitor Report to the COI office. These reports will be reviewed by the COI Committee to ensure the student's education/academic interest is upheld as "primary."
- i. "Primary" indicates the student is making the expected progress on their degree, without being unduly compromised or biased by their industry affiliation/

responsibilities, and can openly discuss and publish their work without retribution or unnecessary delay.

- ii. COI Student Monitor Report is available on the web site for COI Office.

Concerns regarding student academic progress/success identified by the Student Monitor and/or COI Committee will be addressed with the faculty member within 60 days and may result in removal of the student from the enterprise. Failure of the faculty member to remedy concerns expressed by the COI Committee to adequately protect the academic interest of students could lead to charges of faculty irresponsibility (CRR 300.010 L) and/or violations of standards of faculty conduct (CRR 330.110 D2) for failure to meet their responsibility as “teacher” as defined in CRR 300.010 C2a.

Graduate Council

The Graduate Council is an elected faculty body that works closely with the Graduate Dean to:

- (a) approve all non-regular appointments to the Graduate Faculty
- (b) continuously review and amend Graduate School policies to improve procedures and maintain rigorous academic standards.
- (c) facilitate interdisciplinary communication and respond to innovations in teaching and research.
- (d) review and approve all curricular changes in graduate courses and degree programs.

After the Graduate Council approves a curricular proposal, the proposal goes to the Faculty Senate for review and approval. New programs also require approval of the University of Missouri System and the Missouri Coordinating Board for Higher Education.

A list of Graduate Programs can be found at <http://www.umsl.edu/gradschool/gradprograms/index.html>.

Graduate School Policies can be found at <http://bulletin.umsl.edu/graduatestudy/> (p. 45)

Pierre Laclede Honors College

At the Pierre Laclede Honors College, we transform lives through engaged, individualized learning in and outside of the classroom. Our graduates are economically productive, ethically committed, thoughtfully engaged, active citizens who flourish within their culture and world.

Our vision is a community that empowers students to develop unique paths that allow them to pursue individual goals. Small classes (on average 13) allow students to learn by active questioning and conversation. Students develop strong communication and writing skills while exploring connections across areas of knowledge as they think critically within and beyond their majors. By exploring a wealth of beyond-the-classroom opportunities, Honors students develop the crucial foundation for future professional success.

The Honors College offers a certificate program that can be paired with any major without extending time to graduation. Classes in the Honors College are seminar-style, meaning that they are based in reading, writing, discussion, and critical thinking. This format fosters an intellectual climate centered around democracy, diversity, civility, and academic excellence. Members of the Honors College are engaged with their peers in a close-knit community of scholars from all majors and backgrounds, creating an invaluable interdisciplinary educational experience.

The four-year program is open to entering freshmen and extends over a student's entire undergraduate career. The two-year program is open to select third-year students who are either continuing at or have transferred to the university, and a two-plus program is available for transferring sophomores.

The Honors College Writing Program

Both two- and four-year programs include participation in the Honors College writing program, writing across the curriculum, which involves writing in most honors seminars as well as formal courses in composition (including HONORS 1100, HONORS 3100, HONORS 3120, or HONORS 3160). In the final year, this writing emphasis culminates in the development of a personal Honors College writing portfolio (HONORS 4100).

Independent Study Requirement

All Honors College students, whether in the four-year or the two-year program, must fulfill a 6-credit-hour independent study requirement. This can be met in several ways, including supervised research, guided reading, internships, and in many cases capstone courses in the major.

Faculty Overview

Honors College instructors are drawn from university faculty in all academic divisions but mainly from the traditional disciplines of the Arts, Humanities, Social Sciences, and Sciences. These teachers share a desire to work closely with intellectually curious, high-achieving students in specially designed, small discussion seminars. The honors faculty grows each year as new faculty join the honors project. Their talents add to the Honors College's rich instructional pool of more than 100 regular and full-time faculty, many of whose teaching and scholarship have been singled out for special awards.

In addition, the Honors College has nine full-time academic faculty members whose responsibilities (besides instruction) include administration, admissions, student advising, and curricular design.

Honors College Certificate

Four Year Program (40 credit hours total):

Approximately one-third of the 120 hours honors students earn toward graduation are taken in the Honors College. Most of these credits are associated with a sequence of honors courses designed specifically for the college, the majority of which are taken during the first two years. During this period, these students fulfill virtually all of the university's general education requirements (p. 30), usually in innovative ways. In their junior and senior years, honors students also may earn honors credit for work done within their major fields, work which includes the possibility of internships, independent study projects, and advanced undergraduate research.

First Year

Students take HONORS 1100, HONORS 1200 and HONORS 1201 or HONORS 1202 and HONORS 1203, and one course each from the Western Traditions and Non-Western Traditions seminar series. Students may take a seminar from the American Traditions series as an elective or in place of the Western Traditions seminar.

| | | |
|-------------|--|---|
| HONORS 1100 | Honors First-Year Writing | 3 |
| HONORS 1110 | Western Traditions: Humanities | 3 |
| HONORS 1130 | Western Traditions: Social and Behavioral Sciences | 3 |
| HONORS 1150 | Western Traditions: The Sciences | 3 |
| HONORS 1200 | Freshman Symposium: Cultural Traditions I - Humanities | 3 |
| HONORS 1201 | Freshman Symposium: Cultural Traditions II - Humanities | 3 |
| HONORS 1202 | Freshman Symposium: Cultural Traditions I - Social Science | 3 |
| HONORS 1203 | Freshman Symposium: Cultural Traditions II - Social Science | 3 |
| HONORS 1230 | American Traditions: Social and Behavioral Sciences ¹ | 3 |
| HONORS 1310 | Non-Western Traditions Series Humanities | 3 |
| HONORS 1330 | Non-Western Traditions Series-Social Sciences | 3 |

¹ Elective as an alternate to Western Traditions.

Second Year

Students take two of the following Honors classes:

| | | |
|-------------|---|---|
| HONORS 2001 | Topics in Communication Proficiency | 3 |
| HONORS 2002 | Topics in Information Literacy | 3 |
| HONORS 2003 | Topics in American History and Government | 3 |
| HONORS 2010 | Inquiries in The Humanities | 3 |
| HONORS 2020 | Inquiries in the Fine and Performing Arts | 3 |

| | | |
|-------------|---|---|
| HONORS 2030 | Inquiries in the Social and Behavioral Sciences | 3 |
| HONORS 2040 | Inquiries In Mathematics And Computing | 3 |
| HONORS 2050 | Inquiries in the Natural Sciences | 3 |
| HONORS 2060 | Inquiries In Business | 3 |
| HONORS 2080 | Inquiries in Nursing | 3 |
| HONORS 2310 | Cultural Diversity in the Humanities | 3 |
| HONORS 2330 | Cultural Diversity in the Social Sciences | 3 |

During the first two years, honors students will take additional course work in other areas, such as mathematics, natural science, foreign language, and major prerequisite classes to satisfy various university, Honors College, and specific degree requirements.

Third and Fourth Years

Honors students in the four-year program take at least four seminars (12 credit hours) from the Advanced Seminar (3000 level series). They may take more where this is compatible with their major and/or minor requirements. Honors students in the four-year program who take HONORS 3100 ("Writing the City"), HONORS 3120 ("Business Writing") or HONORS 3160 ("Writing in the Sciences") may present it for their honors certificate as one of their 3000-level seminars. They may also, depending on their major, present it to meet their graduation requirement for Junior-level composition.

| | | |
|-------------|---|---|
| HONORS 3001 | Topics in Global Awareness | 3 |
| HONORS 3010 | Advanced Honors Seminar in the Humanities | 3 |
| HONORS 3020 | Advanced Honors Seminar in the Fine and Performing Arts | 3 |
| HONORS 3030 | Advanced Honors Seminar in the Social and Behavioral Sciences | 3 |
| HONORS 3100 | Honors Advanced Composition: Writing The City | 3 |
| HONORS 3120 | Honors Business Writing | 3 |
| HONORS 3160 | Honors Writing in the Sciences | 3 |

In addition, honors students do 6 credit hours in independent study projects, normally in or closely related to their major field. These independent study projects normally carry credit in the major, but can be done as Honors College independent study or research projects (HONORS 4900, HONORS 4910). During the final year, students also take HONORS 4100, a one-hour capstone for the Honors College writing program; HONORS 4100 may be taken for two hours.

Two year Program (22 credit hours total):

Students in this program will take a combination of Honors College seminars and honors independent study credit (usually for work done in their major fields). The 22 credit hours must include 6 credits of independent study, as for the four-year program.

Third Year

During the first year of the two-year program, students take three honors seminars, including HONORS 3100 (Writing the City), HONORS 3120 (Honors Business Writing), or HONORS 3160 (Honors Writing in the Sciences); one course from the Inquiries series (2000 level); one course from either the Advanced Seminar (3000 level). In addition, 3 credit hours

of independent study may be taken during this year, normally in or closely related to their major.

Fourth Year

The final year of the two-year program involves three courses chosen from the 3000 and 4000 level options, including HONORS 4100, the honors writing portfolio, and at least one course chosen from the 3000 level. In addition, students will complete their independent study requirements with 3 or 6 hours of project, internship, or research work.

Honors and Nursing; Honors and Engineering

Because of the extensive professional requirements for both Nursing and Engineering, the Honors College has, with the support of the relevant faculties, created special programs for Nursing and Engineering majors who wish to pursue the Honors College certificate. Both programs feature reduced Honors College credit hour requirements but retain the core of the Honors program and give students ample opportunities to practice interdisciplinary inquiry, experience seminar-based learning, and take part in the Honors College Writing Program.

Honors and the Bachelor of Liberal Studies (BLS)

Pierre Laclede Honors College students who wish to present the honors Certificate as a minor for the BLS must complete the Honors Capstone (HONORS 4100, one or two credit hours) and also direct three to six hours of their Honors independent study requirement as part of their BLS program. Students should consult the BLS faculty advisor in the Honors College about this requirement, as well as an Arts and Sciences advisor.

Other Academic Features and Requirements Satisfactory/Unsatisfactory

The satisfactory/unsatisfactory option does not apply to any course work undertaken for Honors College credit.

Admission and Retention

To be considered for admission to either the two-year or four-year honors program, a candidate must file a special Honors College application, as well as a general university application. These application forms and additional information concerning scholarship awards, general eligibility guidelines, and the admissions process are available from the Honors College admissions office at (314) 516-7769 or from the University Admissions. See also the Honors College website.

Scholarships

Every new freshman or transfer student admitted in good standing to the Honors College receives academic scholarship support. Students continue to receive these awards as long as they meet the criteria associated with their particular scholarship.

Good academic standing: To remain in good standing, a student must maintain a cumulative GPA, in all his or her UMSL courses, of at least 3.2, and must continue to meet the requirements of the honors program for which he or she was initially admitted. Unless other arrangements have been made, Honors College students are also expected to be full time, that is, to register for and satisfactorily complete at least 12 credit hours per semester. Students wishing to enter the Honors College as part-time

students or to change to part-time status must make prior arrangements with the Honors College dean or associate dean.

Learning Outcomes

- Honors graduates synthesize knowledge from various perspectives by comparing and contrasting diverse cultural viewpoints, academic disciplinary approaches, and information; they have a holistic approach to creating knowledge and understand their discipline in a larger context.
- Honors graduates communicate effectively, across disciplines, in speech and writing by focusing on various perspectives, audiences, and disciplinary approaches and by employing correct diction, syntax, usage, grammar, and mechanics.
- Honors graduates think and write critically and value and manage information effectively:
 - By distinguishing among opinions, facts, and inferences; identifying underlying or implicit assumptions; making informed judgments; and solving problems through applying evaluative standards.
 - By locating, critiquing, synthesizing, and distinguishing information from various scholarly and non-scholarly sources.
 - By analyzing and synthesizing information from a variety of sources, applying the results to resolving complex situations and problems, and defending conclusions using relevant evidence and reasoned argument.
 - By utilizing cultural, behavioral, and historical knowledge to clarify and articulate value systems while recognizing the ramifications of value decisions on the self, others, and the community.
 - By identifying conflicts within and between multiple perspectives and value systems, recognizing and analyzing ethical issues in a variety of contexts, and employing standards of logic to formulate a reasonable position among perspectives.
- Honors graduates, having completed coursework and experiential learning in diverse fields, are practiced in various disciplines and demonstrate essential skills and approaches relevant to those disciplines; they can apply those skills and approaches to their own areas of specialization.
 - Honors graduates understand data and mathematical concepts; they are quantitatively literate; they understand and analyze data, draw conclusions, and solve problems.
 - Honors graduates understand themselves and the world around them; they describe, explain, and predict human behavior and social systems; they understand the diversity and complexity of the cultural and social world, past and present, and come to an informed sense of self and others.
 - Honors graduates understand the ways in which people have addressed their condition through art and literature; they analyze cultural works and their historical circumstances; they formulate judgments of these works.
 - Honors graduates understand scientific principles, research procedures, and empirical methods of inquiry; they understand how scientific discoveries affect and are affected by theoretical views of the world and human history.
- Honors graduates have well-developed awareness of career and advanced study opportunities.
 - Honors graduates demonstrate advanced knowledge in discipline(s), professional skills, and career and educational goals via participation in internships, independent study, undergraduate

research, creative endeavors, community engagement, and study abroad.

- Honors graduates are self-aware of their writing skills and development and devise and revise documents for professional purposes, employment searches, and academic applications.

Courses

HONORS 1100 Honors First-Year Writing: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. This course, the first in the Honors College writing sequence, is required and should be taken during freshman year. Through formal and informal writing assignments, discussion, instruction, and research, students will improve their critical reading, thinking, and writing skills, and their research techniques. The course is designed to help students meet the rigorous challenges of college writing across the disciplines by emphasizing intellectual inquiry, logic, style, correct and concise expression, and formal research and documentation. This course fulfills the University's general education first year writing requirement.

HONORS 1110 Western Traditions: Humanities: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. All Western Traditions seminars will be based on the reading and discussion of works of exceptional importance in the development of western culture and civilization. The works to be discussed in each seminar will follow a central theme (defined by its particular relevance to the traditional academic disciplinary areas of the humanities, arts, social sciences, mathematics, or sciences) but will relate that theme to wider developments in Western Traditions and to the American concept of a liberal education.

HONORS 1130 Western Traditions: Social and Behavioral Sciences: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. All Western Traditions seminars will be based on the reading and discussion of works of exceptional importance in the development of western culture and civilization. The works to be discussed in each seminar will follow a central theme (defined by its particular relevance to the traditional academic disciplinary areas of the humanities, arts, social sciences, mathematics, or sciences) but will relate that theme to wider developments in Western Traditions and to the American concept of a liberal education.

HONORS 1150 Western Traditions: The Sciences: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. All Western Traditions seminars will be based on the reading and discussion of works of exceptional importance in the development of western culture and civilization. The works to be discussed in each seminar will follow a central theme (defined by its particular relevance to the traditional academic disciplinary areas of the humanities, arts, social sciences, mathematics, or sciences) but will relate that theme to wider developments in Western Traditions and to the American concept of a liberal education.

HONORS 1200 Freshman Symposium: Cultural Traditions I - Humanities: 3 semester hours

Prerequisite: Consent of the Dean of the Honors College. This course surveys Western and non-Western cultural traditions from their beginnings until the 1700s. It will introduce the intellectual traditions of a wide variety of cultures through major works of literature, religion and philosophy. This course will approach texts and materials from a humanities perspective.

HONORS 1201 Freshman Symposium: Cultural Traditions II - Humanities: 3 semester hours

Prerequisite: Consent of the Dean of the Honors College. This course surveys Western and non-Western cultural traditions from the 1700s to current times. It will introduce intellectual traditions of a wide variety of cultures through major works of literature, religion and philosophy. This course will approach texts and materials from a humanities perspective.

HONORS 1202 Freshman Symposium: Cultural Traditions I - Social Science: 3 semester hours

Prerequisite: Consent of the Dean of the Honors College. This course surveys Western and non-Western cultural traditions from their beginnings until the 1700s. It will introduce the intellectual traditions of a wide variety of cultures through major works of literature, religion, history, and political theory. This course will approach texts and materials from a social science perspective.

HONORS 1203 Freshman Symposium: Cultural Traditions II - Social Science: 3 semester hours

Prerequisite: Consent of the Dean of the Honors College. This course surveys Western and non-Western cultural traditions from the 1700s. It will introduce the intellectual traditions of a wide variety of cultures through major works of literature, religion, history, science and political theory. This course will approach texts and materials from a social science perspective.

HONORS 1230 American Traditions: Social and Behavioral Sciences: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Honors seminars in the American Traditions series involve reading and discussion of texts of major importance in the development of the culture, politics, ideologies, and values which are or have been characteristic of the United States of America. Every American Traditions seminar will cover a broad range of time, and each may include contemporary issues. Any course in the American Traditions sequence may be taken to satisfy one of the 'core' requirements for the American Studies Minor. This course satisfies the University's general education American history and government requirement.

HONORS 1310 Non-Western Traditions Series Humanities: 3 semester hours

Prerequisite: Consent of the Dean of the Honors College. Seminars focus on different topics in the humanities but address themes and problems in non-western cultures that are related to the freshmen core classes (HONORS 1200 and HONORS 1201). These topics will be examined in depth through reading discussion, and students will produce formal papers and participate in individual or small group presentations.

HONORS 1330 Non-Western Traditions Series-Social Sciences: 3 semester hours

Prerequisite: Consent of the Dean of the Honors College. Seminars focus on different topics in the social sciences but address themes and problems in non-western cultures that are related to the freshmen core classes (HONORS 1200 and HONORS 1201). These topics will be examined in depth through reading discussion, and students will produce formal papers and participate in individual or small group presentations.

HONORS 2001 Topics in Communication Proficiency: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Honors courses approved for Core: Communication Proficiency in UMSL's General Education program.

HONORS 2002 Topics in Information Literacy: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Honors topics approved for Core: Information Literacy in UMSL's General Education program.

HONORS 2003 Topics in American History and Government: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Honors topics approved for Core: American History and Government in UMSL's General Education program.

HONORS 2010 Inquiries in The Humanities: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Inquiries seminars focus on the particular contributions academic disciplines can make to relatively broad areas of inquiry, and reading, discussion, writing and where appropriate laboratory work or field trips will enhance students' understanding of the strengths, frailties, and particular characteristics of one of more disciplinary strategies. Inquiries courses may be used to meet relevant General Education requirements. Where special arrangements have been agreed, they can meet more specific departmental and divisional requirements. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 2020 Inquiries in the Fine and Performing Arts: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Inquiries seminars focus on the particular contributions academic disciplines can make to relatively broad areas of inquiry, and reading, discussion, writing and where appropriate laboratory work or field trips will enhance students' understanding of the strengths, frailties, and particular characteristics of one or more disciplinary strategies. Inquiries courses may be used to meet relevant General Education requirements. Where special arrangements have been agreed, they can meet more specific departmental and divisional requirements. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 2030 Inquiries in the Social and Behavioral Sciences: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Inquiries seminars focus on the particular contributions academic disciplines can make to relatively broad areas of inquiry, and reading, discussion, writing and where appropriate laboratory work or field trips will enhance students' understanding of the strengths, frailties, and particular characteristics of one or more disciplinary strategies. Inquiries courses may be used to meet relevant General Education requirements. Where special arrangements have been agreed, they can meet more specific departmental and divisional requirements. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 2040 Inquiries in Mathematics and Computing: 3 semester hours

Prerequisite: Consent of the Dean of the Honors College. HONORS 2040 Inquiries courses may be used to meet relevant General Education requirements in the Explore area of Math and Life/Natural Sciences. Where special arrangements have been agreed, they can meet more specific departmental and divisional requirements. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 2050 Inquiries in the Natural Sciences: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Inquiries seminars focus on the particular contributions academic disciplines can make to relatively broad areas of inquiry, and reading, discussion, writing and where appropriate laboratory work or field trips will enhance students' understanding of the strengths, frailties, and particular characteristics of one or more disciplinary strategies. Inquiries courses may be used to meet relevant General Education requirements. Where special arrangements have been agreed, they can meet more specific departmental and divisional requirements. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 2051 Inquiries in the Sciences: Laboratory or Field Work: 1 semester hour

Prerequisites: Consent of the Dean of the Honors College. This course develops students' understanding of how the experimental procedures of the life and physical sciences are used to collect data and to develop and test scientific hypotheses. HONORS 2051 is taken as a required companion course to specific sections of HONORS 2050, (Inquiries in the Sciences), when laboratory or field work experience is essential to students' understanding of and competence in the scientific subject matter of the companion section of HONORS 2050.

HONORS 2060 Inquiries in Business: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Inquiries seminars focus on the particular contributions academic disciplines can make to relatively broad areas of inquiry, and reading, discussion, writing and where appropriate laboratory work or field trips will enhance students' understanding of the strengths, frailties, and particular characteristics of one or more disciplinary strategies. Courses in the 2060 series of courses, "Inquiries in Business," satisfy the Social Science area of General Education. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 2080 Inquiries in Nursing: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Inquiries seminars focus on the particular contributions academic disciplines can make to relatively broad areas of inquiry, and reading, discussion, writing and where appropriate laboratory work or field trips will enhance students' understanding of the strengths, frailties, and particular characteristics of one or more disciplinary strategies. Inquiries courses may be used to meet relevant General Education requirements. Where special arrangements have been agreed, they can meet more specific departmental and divisional requirements. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 2310 Cultural Diversity in the Humanities: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. This seminar focuses upon cultural diversity themes, texts, and perspectives within the humanities.

HONORS 2330 Cultural Diversity in the Social Sciences: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. This seminar focuses upon cultural diversity themes, texts, and perspectives within the social sciences.

HONORS 3001 Topics in Global Awareness: 3 semester hours

Prerequisite: Consent of the Dean of the Honors College. Honors topics approved by the College of Business for their Global Awareness requirement.

HONORS 3010 Advanced Honors Seminar in the Humanities: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Open only to Honors College students and not acceptable for graduate credit. Usually restricted to Juniors and Seniors, these advanced seminars focus on in-depth study of a significant body of subject matter. The perspective employed will normally be interdisciplinary or multidisciplinary and will underscore the value of making connections between diverse areas of study. These courses will not usually require specific prerequisites, but may (with the consent of the appropriate department or division) be taken as major or minor courses. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 3020 Advanced Honors Seminar in the Fine and Performing Arts: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Open only to Honors College students and not acceptable for graduate credit. Usually restricted to Juniors and Seniors, these advanced seminars focus on in-depth study of a significant body of subject matter. The perspective employed will normally be interdisciplinary or multidisciplinary and will underscore the value of making connections between diverse areas of study. These courses will not usually require specific prerequisites, but may (with the consent of the appropriate department or division) be taken as major or minor courses. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 3030 Advanced Honors Seminar in the Social and Behavioral Sciences: 3 semester hours

Prerequisites: Consent of the Dean of the Honors College. Open only to Honors College students and not acceptable for graduate credit. Usually restricted to Juniors and Seniors, these advanced seminars focus on in-depth study of a significant body of subject matter. The perspective employed will normally be interdisciplinary or multidisciplinary and will underscore the value of making connections between diverse areas of study. These courses will not usually require specific prerequisites, but may (with the consent of the appropriate department or division) be taken as major or minor courses. The course number may be repeated for credit whenever the topic is substantially different.

HONORS 3100 Honors Advanced Composition: Writing The City: 3 semester hours

Prerequisites: 48 credit hours and consent of the Dean of the Honors College. This Honors course enhances critical thinking, research, discussion and writing skills by focusing on the city of St. Louis and on the specific fields of study of those enrolled. Issues such as depth and development of content, voice, style, tone, correct expression, and research techniques are among the topics emphasized. This course is required for transfer students (two-year Honors Program) and an elective for students on the four-year program. HONORS 3100 fulfills the University's junior-level writing requirement.

HONORS 3120 Honors Business Writing: 3 semester hours

Prerequisites: 48 credit hours and consent of the Dean of the Honors College. This Honors course further develops the experienced writer's style and analytical capabilities to the level of sophistication necessary for upper-division writing assignments and for business and professional settings. Writing assignments may include business correspondence, reports, resumes, proposals, analyses, feasibility studies, and articles for in-house publications. The course emphasizes clarity, conciseness, organization, format, style, tone and mechanical correctness; expands upon students' research and documentation skills; and requires research in university libraries. Formal assignments, including one large project and several informal papers, are required for this challenging Honors course. HONORS 3120 fulfills the University's junior-level writing requirement.

HONORS 3160 Honors Writing in the Sciences: 3 semester hours

Prerequisites: 48 credit hours and consent of the Dean of the Honors College. This honors course is designed to meet the needs for students in the science disciplines; it will stress writing observation reports, academic journals, laboratory reports and a major project suited to the specific area of study of each student enrolled in the class. Instruction will include correct documentation of science sources, synthesis techniques of research information, technology-based research skills and effective laboratory reporting methods. Four formal papers, including one large project and several informal papers, will be required. HONORS 3160 fulfills the University's junior-level writing requirement.

HONORS 4100 Independent Portfolio Writing: 1-2 semester hours

Prerequisites: Senior standing and consent of the Dean of the Honors College. Students in this course will meet with their instructor on a regular basis to discuss and revise their writing portfolio and write their master resume, career or academic resume, personal statements for graduate school, or other projects for careers or their futures. The course is required to be at least one hour and may be taken for two hours to allow for more personal time and assistance from the instructor.

HONORS 4900 Independent Study in Honors: 1-6 semester hours

Prerequisites: Consent of the Dean of the Honors College. Open only to Honors College students and not acceptable for graduate credit. Many Honors students will fulfill their Honors independent study requirements in another department or division of the university. Where this is not possible, the project may be undertaken as HONORS 4900. Students will complete substantial reading, research, and/or field work, and will be supervised by a permanent member of the Honors College academic staff.

HONORS 4910 Independent Study: Internships: 1-6 semester hours

Prerequisites: Consent of the Dean of the Honors College. Open only to Honors College Students. Students enrolled in HONORS 4910 work at on- or off-campus locations to gain practical experience while developing professional skills. Students work with an honors faculty member as they document and reflect on these experiences in journals and a final report.

School of Social Work

General Information

Degrees and Areas of Specialization

The Social Work program offers courses leading to a bachelor of social work (BSW), a master of social work (MSW), and a minor in social work. The BSW and the MSW programs are fully accredited by the Council on Social Work Education. The programs stress the critical, empirical, and applied aspects of social work, incorporating a liberal arts perspective throughout the curriculum. There is a strong accent on community and agency field work as an integral part of the program. Professional social work education enables students to integrate the knowledge, values, and skills of the profession into competent practice.

Students must apply for admission into the BSW and the MSW programs. After admission, undergraduate social work majors and Master's students should obtain a copy of the Student Handbook (available on the School of Social Work's web page). Students in both programs must meet with a social work advisor for advisement each semester, and must set up an appointment with the practicum office and attend a series of pre-practicum orientation sessions one semester prior to enrolling in the practicum.

Career Outlook

The Bachelor of Social Work program prepares students for entry-level employment in social welfare agencies, schools, hospitals, correctional institutions, social action and community organizations, and day care, geriatric, or rehabilitation and residential centers. The Master of Social Work program prepares professionals for advanced social work practice with individuals, families, groups, organizations, and communities. Individuals currently working in social welfare can develop skills and increase employment and job advancement opportunities with the BSW and MSW degrees.

The following programs are offered by the School of Social Work:

Bachelor of Social Work (BSW) (p. 742)

Master of Social Work (MSW) (p. 744)

Social Work Minor (p. 744)

Licensure and Certification

As of July 1, 2024 it has been determined that the following programs meet educational requirements for Licenses Clinical Social Worker in Illinois and Missouri.

- Bachelors of Social Work
- Masters of Social Work

We have not determined if the above programs meet the educational requirements for licensure in the remaining U.S. Territories. For the most up to date information about Licensure and Certification requirements, please visit <https://teaching.missouri.edu/student/state-authorization/umsl/licensure>.

Under federal regulations, we may not enroll into licensure or certification program students located in a state or territory in which our program does not meet the educational requirements to be eligible for licensure or which the University has not made a determination. However, if you plan to seek licensure and employment in any of the following states or territories

listed below, you may enroll in the program after signing an attestation indicating your plans to become licensed and employed in a state that meets requirements.

If you plan to seek licensure in one of the states listed above, please contact The School of Social Work at 314-516-6385 for more information.

Courses

SOC WK 1000 Introduction to the Field of Social Work: 1 semester hour

This course introduces students to social work as a profession and helps them to become familiar with the various roles of social workers across service sectors and throughout society.

SOC WK 2000 Social Work and Social Issues: 3 semester hours

Prerequisites: SOC 1010 or PSYCH 1003. Examination of the network of social programs and services developed in response to social problems in modern urban communities and the various roles and functions performed by the helping professions. Students will be introduced to basic values, skills, and training involved in a helping relationship as well as the characteristics of clients seeking help and professionals engaged in the helping process.

SOC WK 2001 Social Work and Social Issues Lab: 1 semester hour

Prerequisites: SOC WK 2000 (may be taken concurrently). The lab session will be used for field trips to social agencies which will allow students to better understand the many roles social workers are involved in. This course is required for social work majors. Concurrent enrollment in SOC WK 2000 is required.

SOC WK 2102 Introduction to Gender Studies: 3 semester hours

Same as HIST 2102, SOC 2102, POL SCI 2102 and GS 2102. This core class is required for all Gender Studies Certificate earners. This class introduces students to cultural, political and historical issues that shape gender. Through a variety of disciplinary perspectives in the humanities, social sciences, and natural sciences, the course familiarizes students with diverse female and male experiences and gendered power relationships.

SOC WK 2200 Social Welfare as a Social Institution: 3 semester hours

Same as SOC 2290. Prerequisites: SOC WK 2000 (may be taken concurrently). This course 1) examines the development of social welfare service and philosophies underlying existing practices and systems; 2) analyzes social welfare programs with particular emphasis given to public income maintenance provisions; 3) presents issues surrounding special needs of minority and diverse populations; and 4) provides an overview of the development of social work as a profession.

SOC WK 3100 Social Work Practice with Individuals: 3 semester hours

Prerequisites: SOC WK 2200, SOC 1010 and PSYCH 1003 (any of these prerequisites may be taken concurrently with this course). This course presents basic knowledge, skills, and theory used for entry-level professional practice, such as problem assessment, interviewing skills, crisis intervention, and referral procedures. Students learn to assist clients to negotiate systems effectively and to use resources, services, and opportunities.

SOC WK 3210 Social Issues and Social Policy Development: 3 semester hours

Prerequisites: SOC WK 2200, POL SCI 1100, and ECON 1000. The identification of issues concerning governmental provisions to meet contemporary social needs, with analysis of the principles and values underlying alternative solutions. A study of the processes by which citizen opinions and public policies evolve and are implemented in areas such as income maintenance, crime and delinquency, employment, family and child welfare, and public mental health.

SOC WK 3410 Research Design in Social Work: 3 semester hours

Prerequisites: SOC 3220 or CRIMIN 2220 or PSYCH 2201. Students explore research concepts and procedures (hypothesis testing, sampling, measurement, and design) emphasizing issues in social work research. Students learn to collect, analyze and present data.

SOC WK 3510 Human Behavior in the Social Environment: 3 semester hours

This course will focus on the normative stages in the life span, and specifically, how human development is affected by the physical environment and social status characteristics. Empirical information and theoretical views on human development will be included. Human development will be viewed as a complex interaction of individual developmental stages with family, social, and community systems.

SOC WK 3700 Diversity and Social Justice: 3 semester hours

Same as GS 3700. Prerequisites: SOC WK 3100; and PSYCH 2250 or SOC 2160 (prerequisites may be taken concurrently). Analyzes the structure, dynamics, and consequences of social and economic injustice, and the impact on diverse groups in American society. Examines theoretical models and practice principles for work with diverse groups.

SOC WK 4110 Social Work Practice with Families and Groups: 3 semester hours

Prerequisites: Admission to the BSW program, SOC WK 3100, SOC WK 3510 (may be taken concurrently), and SOC WK 3700 (may be taken concurrently). This course continues the presentation of basic knowledge and practice skills for entry level professional practice begun in SOC WK 3100. It builds on the generalized helping model, incorporating specialized skills for working with specific groups of clients (e.g., children, older adults, and people with mental illnesses and/or disabilities), with families, and with small groups.

SOC WK 4300 Social Work Practice with Communities: 3 semester hours

Prerequisites: SOC WK 3210 (may be taken concurrently) and admission to the BSW program. This course includes basic practice skills with an emphasis on analysis and intervention at the community level. It includes an assessment of community assets and needs and the development of community-level interventions. An emphasis is also placed on helping the practitioner evaluate the impact of interventions.

SOC WK 4350 Human Service Organizations: 3 semester hours

Prerequisites: POL SCI 1100; PSYCH 2250 or SOC 2160 and admission to the BSW program. This course seeks to help develop knowledge of organizational functioning and an understanding of organizational history, principles and philosophy of effective administration. Students develop theoretical and empirical understanding of groups and organizations, including concepts such as power and authority, organizational structure, goals, membership, leadership, motivation, technology and organizational culture. They will learn to develop a budget and to submit proposals for grant funding. Using a systemic perspective with organizations as settings for practice students learn to function in and through organizations.

SOC WK 4398 Child Maltreatment: A Multidisciplinary Approach: 3 semester hours

Same as PSYCH 4398 and CAST 4398. Prerequisites: CAST 3798 (Majors/Certificates) or CAST 3290/PSYCH 3290 (Non-Majors/ Non-Certificates). This course, with its interdisciplinary emphasis, focuses on the systemic response to the primary domains of child maltreatment by multidisciplinary teams and child advocacy centers. Risk factors, cultural considerations, and mandated reporting of child abuse and neglect are emphasized. Students will begin to develop professional skills pertaining to child maltreatment, using a variety of experiential learning modalities.

SOC WK 4604 Introduction to Motivational Interviewing: 1 semester hour

Prerequisites: Junior standing. This course focuses on skill development in Motivational Interviewing (MI), a specific style of interaction used to help clients/patients increase internal motivation to change behavior. The course will include theoretical underpinnings of MI, including a review of research establishing MI as an evidence-based intervention for a number of behavior areas. The course will also review a model of learning MI and provide opportunities for students to practice the skill. This course will provide social work students with an overview of MI and its application to various domains of social work. Students cannot receive credit for both SOC WK 4604 and SOC WK 5604.

SOC WK 4610 Intimate Partner Violence: 3 semester hours

Same as GS 4610. Prerequisites: SOC WK 3510. This course focuses on theoretical and empirical understanding of domestic violence in US society and social work practice with battered women and their families. It addresses direct services, community organizing, and public policy changes to help end violence against women. Relationships between violence against women and other forms of oppression (e.g., racism, economic exploitation, heterosexism and social class) are explored.

SOC WK 4620 Substance-Related and Addictive Disorders: 3 semester hours

Prerequisites: Junior standing. This course examines the interface of psychological, physical, social, and spiritual aspects of addiction. It is designed to deepen students' abilities to address clients' issues related to addictions and addictive behaviors, including prevention, assessment, and intervention. It builds on the generalized helping model within a systems perspective, and it introduces specialized skills for working with individuals, with specific groups of clients, with families, and with small groups.

SOC WK 4631 Social Perspectives of Global Migration: 3 semester hours

Prerequisites: Junior standing. This course examines the causes and consequences of human migration and provides a multidisciplinary backdrop for students to develop an understanding of the phenomenon of population movements with relevance for their particular fields of study. For example, students in business would gain knowledge of the migration experience for consumers, small business owners, and human resource management; education majors would benefit as they work with diverse student populations in schools; nursing students may develop an appreciation for cultural norms that prevent patient compliance; students in social work, psychology, and counseling may get a better understanding of issues of adaptation; and majors in political science could gain an appreciation for causes of policy development and implications of implementation.

SOC WK 4641 Crisis Intervention: 1 semester hour

Prerequisites: SOC WK 4110 or SOC WK 5100 or equivalent (or are taking concurrently), or consent of instructor. This course introduces students to the theoretical framework and skills needed to understand and engage in effective crisis intervention. Students will learn a specialized model for assessment and intervention with people in crisis and will have an opportunity to apply this model to a variety of case situations. Credit cannot be granted for both SOC WK 4641 and SOC WK 5641.

SOC WK 4670 Cross Cultural Perspectives on Social Policy: 3 semester hours

Prerequisites: Junior standing. This course examines social policies in different countries, which may include social insurance, social assistance, health care, and social services. Using a comparative framework, the course examines the nature of government involvement and public and private sector relations. Students will examine the adequacy, equity, inclusiveness, comprehensiveness, effectiveness, and efficiency of social policies in the countries being studied.

SOC WK 4751 Skills for Healing Racism: Facilitating Dialogue for Institutional Change: 1 semester hour

Prerequisites: BSW senior standing or graduate standing. This course will enable students to explore the social structures, institutions and patterns of thinking and behavior that perpetuate racism. In this very interactive format, participants will develop facilitation skills necessary to attempt institutional change in their agency, school or community. Students will explore their roles, both as the oppressed and the oppressor, in the dynamics of race relations and societal change.

SOC WK 4752 Social Action and Social Movements: 1 semester hour

Prerequisites: Junior standing. This course will enable students to explore social justice movements in the United States and the St. Louis metropolitan area. Students will focus on the oppression of groups based on identities including, race, social class, gender, ability status, and sexual orientation. In addition, students will also focus on social actions that developed in response to the oppression faced by diverse identity groups, (i.e. protests, boycotts, letter writing campaigns, etc). In this very interactive class format, participants will explore specific ways to become involved in social action to make changes in the U.S. and local communities. Upon completion of this course, students will be prepared to become change agents who actively engage in social action to make a difference in the lives of individuals, families, and the broader community.

SOC WK 4755 Introduction to Poverty, Human Rights, and Social Justice: 3 semester hours

Prerequisites: Junior level standing. This course examines poverty as a human-rights issue and considers local, state, national, and global interventions from a social-justice perspective. The course examines poverty related outcomes at different levels (individuals, families, communities, and systems), and discuss efforts to reduce poverty across the life spectrum. The course also addresses issues such as environmental justice, disparities, and special topics such as human trafficking and drug use that are exacerbated by poverty. Students may not receive credit for both SOC WK 4755 and SOC WK 5755.

SOC WK 4800 Supervised Field Experience in Social Work I: 4 semester hours

Prerequisites: Admission to the BSW program; SOC WK 4110 (may be taken concurrently); consent of instructor. This course provides students with practical experience in social service agencies. Students work at the agencies approximately 20 hours per week. The purpose of this experience is to familiarize students with agency operations. Selection of the agency is based on student educational needs. Concurrent enrollment in SOC WK 4801 is required.

SOC WK 4801 Integrative Field Experience Seminar I: 2 semester hours

Prerequisite: Consent of instructor. This seminar provides an opportunity for students to integrate previous course work with their experience in social work agencies. Classroom discussion will emphasize direct practice issues. Concurrent enrollment in SOC WK 4800 is required.

SOC WK 4850 Supervised Field Experience in Social Work II: 4 semester hours

Prerequisite: SOC WK 4800, SOC WK 4801 and consent of instructor. This is a continuation of agency practice experience. Students work at the agency approximately 20 hours per week and continue at the same agency as SOC WK 4800 or change agencies with the consent of the instructor. Concurrent enrollment in SOC WK 4851 is required.

SOC WK 4851 Integrative Field Seminar II: 2 semester hours

Prerequisites: Consent of instructor and concurrent registration in SOC WK 4850. This seminar is a continuation of SOC WK 4801. Classroom discussion will emphasize administration and community organization issues.

SOC WK 4900 Special Study: 1-10 semester hours

Prerequisite: Consent of instructor. Independent study through advanced readings in method and philosophy on a topic of particular interest, or field research in an agency.

SOC WK 5100 Generalist Social Work Practice: 3 semester hours

Prerequisites: Admission to MSW program. This social work practice course uses a problem-solving approach to help students develop theoretical and empirical understanding and practical application of generalist social work methods. Students gain knowledge and skills that include interviewing, assessment, crisis and short-term intervention, contracting, resource development, and case documentation needed for competent direct practice with diverse populations.

SOC WK 5150 Perspectives on Trauma and Crisis for Social Work Practice: 3 semester hours

Prerequisites: Admission to the MSW Program or permission of MSW Program Director. This course examines trauma and crisis including developmental trauma, physical and environmental traumas, sexual abuse, mental health crises (suicide), child abuse, and intimate partner violence. Students will explore the ways in which historical trauma and the inter-generational transmission of trauma affect individuals, families, and communities and relate to their past and present functioning. Students will learn to practice from a trauma-informed perspective and will be introduced to appropriate methods for crisis intervention along with self-care strategies to address burnout and secondary traumatic stress.

SOC WK 5200 Social Policy and Social Services: 3 semester hours

Prerequisites: Admission to MSW program or permission of MSW Program Director. This course covers the history and development of social welfare policies, legislative processes, and existing social welfare programs. Students examine frameworks for social policy analysis, analyze how social and economic conditions impact the process of social policy development and implementation, and learn to address policy practice in social work.

SOC WK 5300 Community Practice and Social Change: 3 semester hours

Prerequisites: Admission to MSW program or permission of MSW Program Director. This course focuses on economic, social, as well as political theory and research on social change in communities. It examines conceptual models of community practice within the generalist model and develops skills in organizing, advocacy, and planning.

SOC WK 5350 Social Work and Human Service Organizations: 3 semester hours

Prerequisites: Admission to MSW program or permission of MSW Program Director. This course helps students to develop theoretical and empirical understanding of groups and organizations, including concepts such as power and authority, structure, goals, membership, leadership, motivation, technology, and organizational culture. Using organizations as settings for social work practice and as targets for change, students learn strategies and skills for assessment and intervention.

SOC WK 5410 Critical Thinking and Analysis: 3 semester hours

Prerequisites: Admission to MSW program or permission of MSW Program Director. This course requires students to think critically about social work practice and analyze its evidence base. It is the first of a two-course sequence designed to provide students with the knowledge base and skills for using the scientific method ethically to advance social work practice, knowledge, and theory. It focuses on understanding a variety of methods for critical analysis and synthesis of academic literature. Students learn the importance of critically assessing quantitative and qualitative research methods and how to apply an ethical decision-making model to resolve ethical dilemmas including the use of research results to inform practice.

SOC WK 5450 Social Work Research Methods and Analysis: 3 semester hours

Prerequisites: Admission to the MSW Program. This course requires students to think critically about social work practice and analyze its evidence base. It provides students with the knowledge base and skills for using the scientific method ethically to advance social work practice, knowledge, and theory. It focuses on understanding a variety of methods for critical analysis and synthesis of academic literature. Students learn the importance of critically assessing quantitative and qualitative research methods and how to apply an ethical decision-making model to resolve ethical dilemmas including the use of research results to inform practice.

SOC WK 5500 Human Behavior in the Social Environment: 3 semester hours

Same as GS 5500. Prerequisites: Graduate standing. This course focuses on theoretical and empirical understanding of human behavior in the social environment using a life-span perspective. It introduces biological, behavioral, cognitive, and sociocultural theories of individuals, families, and small groups, and their implications for the professional social worker's understanding of socioeconomic status, gender, disability, ethnicity, race, and sexual orientation.

SOC WK 5604 Motivational Interviewing: 1 semester hour

Prerequisites: Graduate standing. This course focuses on skill development in Motivational Interviewing (MI), a specific style of interaction used to help clients/patients increase internal motivation to change behavior. The broad objective of this course is to provide social work students with an overview of MI and its application in various domains of social work. The course will include theoretical underpinnings of MI, including a review of research establishing MI as an evidence-based intervention for a number of behavior areas. The course will also review a model of learning MI and provide specific opportunities for students to practice the skill. Students cannot receive credit for both SOC WK 4604 and SOC WK 5604.

SOC WK 5615 Advanced Intimate Partner Violence: 3 semester hours

Prerequisites: SOC WK 3510 or SOC WK 5500. This course focuses on a theoretical and empirical understanding of domestic violence in US society and social work practice with battered women and their families. It addresses direct services, community organizing, and public policy changes to help end violence against women. Relationships between violence against women and other forms of oppression (e.g., racism, economic exploitation, heterosexism, and social class) are explored. Students may not earn credit for both SOC WK 4610 and SOC WK 5615.

SOC WK 5625 Advanced Substance-Related and Addictive Disorders: 3 semester hours

This course examines the interface of psychological, physical, social, and spiritual aspects of addiction. This practice class is designed to deepen students' abilities to address clients' issues related to addictions and addictive behaviors, including prevention, assessment, and intervention. It builds on the generalized helping model within a systems perspective, and it introduces specialized skills for working with individuals, with specific populations of clients, with families, and with small groups. Students may not receive credit for both SOC WK 4620 and SOC WK 5625.

SOC WK 5635 Social Work Practice with LGBT Populations: Deconstructing the Alphabet Soup: 3 semester hours

Same as GS 5635. Prerequisites: SOC WK 5100 and SOC WK 5500 or consent of instructor. This advanced-practice course focuses on developing the knowledge and skills necessary for effective social work practice with LGBT persons, families, and communities. The goal of this course is to facilitate deeper understanding of LGBT identities, relationships, health and mental health challenges, and issues of race, age, religion, spirituality, and class and how these intersect. The course treats lesbian women, gay men, bisexual, and transgender persons as four distinct communities.

SOC WK 5641 Advanced Crisis Intervention: 1 semester hour

Prerequisites: SOC WK 4110 or SOC WK 5100 or equivalent (may be taken concurrently), or consent of instructor. This course introduces students to the theoretical framework and skills needed to understand and engage in effective crisis intervention. Students will learn a specialized model for assessment and intervention with people in crisis and will have an opportunity to apply this model to a variety of case situations. Credit cannot be granted for both SOC WK 4641 and SOC WK 5641.

SOC WK 5700 Diversity and Social Justice for Social Work: 3 semester hours

Same as GS 5700. Prerequisites: Graduate standing. This course analyzes the structure, dynamics, and consequences of social and economic injustice and the impact on diverse groups in American society. It examines theoretical models and practice principles for work with diverse groups.

SOC WK 5755 Advanced Poverty, Human Rights, and Social Justice: 3 semester hours

Prerequisites: Graduate standing. This course examines poverty as a human-rights issue and considers local, state, national, and global interventions from a social justice perspective. The course examines poverty-related outcomes at different levels (individuals, families, communities, and systems) and discusses efforts to reduce poverty across the life spectrum. The course also addresses issues such as environmental justice, disparities, and special topics such as human trafficking and drug use that are exacerbated by poverty. Students may not receive credit for both SOC WK 4755 and SOC WK 5755.

SOC WK 5800 Graduate Field Practicum I: 4 semester hours

Prerequisites: Admission to MSW program and consent of academic advisor. This course provides integrative field experience in generalist social work practice.

SOC WK 5801 Foundation Field Practicum Seminar: 2 semester hours

Prerequisites: Admission to MSW program and consent of academic advisor. This course integrates academic content from foundation course work and experiential learning in field placements. The course goals are to conceptualize the problem-solving process in field practice, synthesize theory into a social work approach that encourages creative use of self, and underscore ethics and service to diverse groups in practices.

SOC WK 6150 Theory and Practice with Families: 3 semester hours

Prerequisites: SOC WK 5100 or equivalent, graduate standing and departmental approval. This course will examine theoretical approaches to social work with families, including the impact of the social environment. Skills will include assessment and multi-disciplinary intervention with multi-problem families. Special emphasis will be given to poverty, chemical dependency, intra-familial violence, physical and mental illnesses, and working with family members of diverse cultures, socioeconomic backgrounds, races, sexual orientation, and ability. Values and ethics will be emphasized.

SOC WK 6160 Advanced Social Work Practice Across the Life Span: 3 semester hours

Prerequisites: SOC WK 5100 or equivalent or consent of instructor. Examines theory and empirically-based assessment and intervention strategies for diverse populations across the life span. Students will gain basic mastery of behavioral, cognitive-behavioral, brief therapeutic and supportive psychotherapeutic techniques and their appropriate use with children, adolescents, and young, middle and older adults. The course will also consider the effects of family, peers, and societal context (e.g. poverty, racism, and ageism) in understanding psycho-social stressors particular to each life era, including academic failure and delinquency, substance abuse, physical and mental illness, family disruption and instability, and grief and loss issues.

SOC WK 6200 Family Policy: 3 semester hours

Prerequisites: SOC WK 5200 or equivalent or consent of instructor and graduate standing. Examines policy development, implementation and impact of social policies on children, youth, and families. International, national, and state policies that affect basic family needs will be the focus, including topics such as economic support, health care, child care and protection, and child and youth development. Intended and unintended consequences of existing policies on the family will be examined as well as future policy directions.

SOC WK 6250 Social and Economic Development Policy: 3 semester hours

Same as POL SCI 6418. Prerequisites: SOC WK 5200 or equivalent, or consent of instructor. This course examines the economic and political urban processes that planners, policy makers, service organizations and advocates seek to influence. In this course students will develop skills in policy analysis and development. The course provides an introduction to three models of modern political economy, then seeks to deepen these broad analytic approaches by examining more recent policy developments in cities like St. Louis. This course also focuses on recent strategies to address issues such as employment, wages, housing, education, taxes and social services.

SOC WK 6300 Leadership and Management in Nonprofit Organizations: 3 semester hours

Same as P P ADM 6300 and POL SCI 6300. Prerequisite: Graduate standing required. Addresses the role and scope of the independent sector in the United States, as well as the leadership and management of nonprofit organizations within that sector. Topics include the economic and political scope of the independent sector, the role of volunteerism in a democratic society, and the role and scope of philanthropy. Topics in voluntary organization management and leadership include the dynamics, functions, and membership structure of NPOs, especially staff-board and other volunteer relations; governance and management of NPOs; resource mobilization; and program development management and evaluation.

SOC WK 6310 American Philanthropy and Nonprofit Resource Development: 3 semester hours

Same as P P ADM 6310. Prerequisite: Graduate standing. This course addresses the history, philosophy, roles and scope of philanthropy in the United States, including its role in the nonprofit, voluntary sector. It further examines the contemporary forces which impact philanthropy and charitable giving, both by institutions and individuals. The course examines the effective planning and management of development programs (e.g., annual giving), fund raising vehicles (e.g., mail solicitations) and the fund raising process, from planning through donor relations.

SOC WK 6311 Staff Management Issues in Nonprofit Organizations: 1 semester hour

Same as P P ADM 6311. Prerequisites: Graduate standing required. This course addresses issues involved in managing staff in nonprofit organizations. The course will cover the following topics: fundamentals of staff supervision; balancing supervisory processes with counseling and coaching; selecting, hiring, evaluating, and terminating staff, and legal issues that affect these processes.

SOC WK 6312 Legal Issues in Managing Nonprofit Organizations: 1 semester hour

Same as P P ADM 6312. Prerequisite: Graduate standing. This course addresses legal issues involved in managing and governing nonprofit organizations. The course will cover the following topics: The Board as steward of the organization; Director and officer liability; tax laws concerning charitable giving; legal issues in managing staff and volunteers (e.g., hiring, evaluating, and terminating employees); Missouri nonprofit law.

SOC WK 6313 Financial Issues in Managing Nonprofit Organizations: 1 semester hour

Same as P P ADM 6313. This course addresses financial issues involved in governing and managing nonprofit organizations. The course will cover the following topics: cash flow analysis; budgeting; fund accounting; cost accounting (determining costs for programs and services); understanding and using standard financial statements, including balance sheets, cash flow statements, statements of activity, and operating and capital budgets.

SOC WK 6380 Advanced Community Development Theory & Practice: 3 semester hours

Prerequisites: SOC WK 5200 and SOC WK 5300. In this advanced community practice course, students examine concepts, theories, and models of macro level practice and gain skills for addressing complex community building challenges. Course content focuses on theories of social change, empowerment, and promotion of social and economic justice for culturally diverse and at-risk communities. The roles of community organizer, community developer, and social planner are emphasized in this course to help students understand and apply mezzo-macro social work interventions in urban settings.

SOC WK 6400 Practice and Program Evaluation: 3 semester hours

Prerequisites: SOC WK 5410 and SOC WK 5450 or equivalent or consent of instructor; concurrent enrollment in concentration practicum (SOC WK 6800 or SOC WK 6850). This course provides students with specialized knowledge in the use of qualitative and quantitative research skills to evaluate the effectiveness of social work practice. Topics will include single system design, group designs, and program evaluation. Students will design and conduct a research project associated with their advanced social work practicum. Students will present results of their evaluations to the class and to the agency. Issues related to values and ethics will be emphasized as students develop and conduct their research.

SOC WK 6443 Health Care Policy: 3 semester hours

Same as POL SCI 6443, P P ADM 6430, GERON 6443. Prerequisites: Graduate Standing and consent of instructor. (MSW students will normally take the social policy foundation course prior to enrolling in this course.) Survey course examining current issues in health care policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

SOC WK 6444 Integrated Health Care: 3 semester hours

Prerequisites: SOC WK 5500 or its equivalent. This course will introduce students to the essential practice skills needed to effectively address the challenges of integrating services, care and support for persons with health, mental health, and substance use problems.

SOC WK 6449 Human Resources in the Public Sector: 3 semester hours

Same as POL SCI 6449 and P P ADM 6490. This course presents an overview of personnel and labor relations in the public sector. It places particular emphasis on issues which are unique to the public sector, such as the merit system, the questions of representative bureaucracy, and the constraints of personnel in the nonprofit sector. Course topics may include personnel reforms in the federal sector, equal employment and affirmative action policies, testing, selection, hiring, comparable worth, job evaluation and labor relations, including grievance arbitration and collective bargaining.

SOC WK 6491 Strategic and Program Planning for Nonprofit Organizations: 3 semester hours

Same as POL SCI 6490 and P P ADM 6550. Prerequisites: Graduate standing. This course covers strategic and program planning and its ability to enable an organization to concentrate on efforts and set priorities guided by a mission, vision, and an understanding of its environment. The course focus is on preparing a strategic plan and a program plan for a nonprofit organization and analyzing an organization's ability to deliver goods and/or services to its constituents in today's economic, social, and political climate.

SOC WK 6601 Cognitive and Rational Emotive Behavioral Therapy Models for Social Work: 1 semester hour

Prerequisites: SOC WK 5100 or advanced standing, and graduate standing, or consent of MSW Director. This course examines the theory and evidence-informed practices through the use of the Cognitive Behavioral and Rational Emotive Behavioral therapy models. Students will use these theories to conduct hands-on intervention practice of assessment, treatment planning, interventive strategies, and termination when working with a family or direct practice setting. Student-conducted interventions will be reviewed by the instructor and classmates at each stage of the therapeutic process. The Diagnostic and Statistical Manual of Mental Disorders will be integrated through the psychotherapeutic process.

SOC WK 6603 Play and Interactive Models for Social Work: 1 semester hour

Prerequisites: SOC WK 5100 or advanced standing status and graduate standing or consent of MSW Director. This course examines theory and evidence-informed practices through use of Play and Interactive therapy models. Students will use these theories to conduct hands-on intervention practices of assessment, treatment planning, interventive strategies, and termination when working with a family or direct practice setting. The instructor and classmates will review student-conducted interventions through the use of role-plays at each stage of the therapeutic process. The Diagnostic and Statistical Manual of Mental Disorders will be integrated through the psychotherapeutic process.

SOC WK 6605 Screening, Brief Intervention, and Referral to Treatment: 1 semester hour

Prerequisites: SOC WK 5100 or its equivalent, or consent of MSW Director. This course will include in-depth information on screening tools to identify high-risk substance use. It will include the application of Screening, Brief Intervention and Referral to Treatment (SBIRT), and specific motivational interviewing techniques. In addition, it will include referral procedures with information on how and to whom to refer patients for further treatment and how to communicate with specialty providers. It also covers procedures for following patients after referral, the use of electronic health records, and how to integrate SBIRT into established systems of care.

SOC WK 6606 Dialectical Behavior Therapy for Social Work Practice: 1 semester hour

Prerequisites: SOC WK 5100 or advanced standing status, and graduate standing, or consent of MSW Director. This course examines theory and evidence-based practices through the Dialectical Behavior Therapy (DBT) model. DBT combines cognitive and behavioral theories in individual and group treatment. Students will use these theories to understand the DBT skills of Mindfulness, Emotion Regulation, Interpersonal Effectiveness, and Distress Tolerance. Students will engage in role-playing while learning the four components of DBT: DBT skills training, DBT individual therapy, DBT phone coaching, and DBT therapist consultation team meetings. This course will include the integration and application of the Diagnostic and Statistical Manual of Mental Disorders.

SOC WK 6610 Telehealth: The Integration of Social Work and Technology: 1 semester hour

Prerequisites: SOC WK 5100 or equivalent. This course explores the use of technology to facilitate social work practice with individuals and families. By examining the pros and cons of telehealth, ethical and legal considerations, and best practice methods, students will be able to assess the feasibility of telehealth as a service delivery mechanism for their own practice. Through structured role play and reflection, students will become familiar with techniques to enhance their practice effectiveness when using telehealth with clients.

SOC WK 6611 Trauma Informed Social Work Practice: 1 semester hour

Prerequisites: SOC WK 5100 or equivalent or consent of MSW Director. This course explores the role of social workers in engaging clients who have experienced trauma. Students will gain an understanding of how trauma impacts client functioning and the impact of trauma on relationships and human development. Students will apply a strengths-based approach and critical thinking theory to case scenarios, and they will learn the coping process for compassion fatigue.

SOC WK 6630 Diagnosis and Related Pharmacology for Social Work**Practice: 3 semester hours**

Prerequisites: SOC WK 5100 or equivalent or consent of instructor.

Course is designed for social work students, and will provide an overview of the development and treatment of selected mental health disorders classified by Diagnostic and Statistical Manual of Mental Disorders. In particular, the course will examine, from a systems perspective, the psychological and neuropsychological etiologies of mood, psychotic, personality and other disorders and their preferred pharmacological treatment.

SOC WK 6640 School Social Work Practice: 3 semester hours

Prerequisites: SOC WK 5100 or equivalent, or graduate standing and consent of MSW Director. This course examines the role of the social worker in school settings and includes work with youth, families, and communities in relation to the child or adolescent functioning in school.

SOC WK 6645 Social Work in Healthcare Settings: 3 semester hours

Prerequisites: SOC WK 5100 and SOC WK 5500 or equivalent. This course provides students with a framework for the practice of social work in a rapidly changing healthcare system. The course examines the role and scope of practice of the social worker within the healthcare team in various settings and on different levels of the healthcare continuum (e.g. acute in-patient care, chronic out-patient care, long-term care, community health, telehealth, and hospice.) Students will learn how to incorporate the bio-psycho-social-spiritual elements of health into assessments of persons presenting a variety of health concerns and issues. Students will learn how to develop an effective treatment plan utilizing various short-term interventions including, but not limited to: solution focused therapy, motivational interviewing, crisis intervention, and resource referral. This course will address other topics that affect social work practice including ethics, policy/organization, current use of technology, interdisciplinary treatment models, and outcome evaluation.

SOC WK 6800 Graduate Field Practicum II: 3 semester hours

Prerequisites: SOC WK 5800 and SOC WK 5801 and consent of academic advisor. This course provides integrative field experience in students' graduate social work practice concentration areas. It may be taken concurrently with SOC WK 6850 with special permission.

SOC WK 6801 Integrated Health Seminar I: 1 semester hour

Prerequisites: Concurrent enrollment in SOC WK 6800 and consent of instructor. This course teaches students to apply knowledge of integrated health concepts and process their learning of integrated health practices within field settings. It is to be taken in conjunction with practicum (SOC WK 6800). Students apply classroom concepts to real-world social work practice.

SOC WK 6850 Graduate Field Practicum III: 3 semester hours

Prerequisites: SOC WK 6800. This course provides advanced integrative field experience in students' graduate social work concentration areas.

SOC WK 6851 Integrated Health Seminar II: 1 semester hour

Prerequisites: Concurrent enrollment in SOC WK 6850 and consent of instructor. This course deepens students' ability to apply knowledge of integrated health concepts and to process their learning of integrated health practices within field settings. It is to be taken in conjunction with practicum (SOC WK 6850). Students apply classroom concepts to real-world social work practice.

SOC WK 6900 Directed Study in Professional Social Work: 1-10 semester hours

Prerequisite: Graduate standing and consent of instructor. Independent graduate-level study on a topic of particular interest through readings, reports, and field work under faculty supervision.

UMSL/Washington University Joint Undergraduate Engineering Program

General Information

The Joint Undergraduate Engineering Program of UMSL and Washington University was approved in 1993 by the University of Missouri and the Coordinating Board for Higher Education. The program is designed to offer course work beyond the pre-engineering courses at UMSL and the area community colleges. Pre-engineering and general education courses are offered at UMSL, and upper-level engineering courses are offered in the late afternoons, evenings and on Saturdays on the Washington University campus: this schedule permits students to co-op during the day at local engineering firms. Students will be admitted to the upper-division program only after they have completed an acceptable pre-engineering program. They can earn a bachelor of science in civil engineering (BSCIE), a bachelor of science in electrical engineering (BSEE), or a bachelor of science in mechanical engineering (BSME).

Mission Statement

The University of Missouri-St. Louis/Washington University Joint Undergraduate Engineering Program provides high quality accredited engineering education to a diverse student body, preparing them for successful engineering careers. The program strives to excite and nurture the intellectual, technical, professional and personal development of the students through a partnership that provides a mechanism for Washington University to share its campus, resources and personnel with the UMSL students, many of whom are place-bound individuals. The Joint Program educates students from the diverse St. Louis community to elevate their future to enter the engineering profession, thereby elevating the St. Louis region.

Program Educational Objectives

Our program aspires to make positive, substantive and lasting contributions to the lives of our students. The traditional and nontraditional students in the civil, electrical or mechanical engineering programs often have prior experience in industry or the military, and have the opportunity for experiential learning through internships. The program seeks to impart an education that inspires the graduates to constantly share their knowledge with others, to continually improve their knowledge and understanding, and to persistently adapt to change in technology and world needs. Graduates of the program are expected to develop and use professional skills that facilitate their continued career growth well beyond their graduation. Graduates should be able to apply their comprehensive education with the highest ethical standards within the engineering profession or a related field. The objectives are to:

- Meet the needs of employers of civil, electrical or mechanical engineers, with an emphasis on the St. Louis region.
- Meet the expectations of graduate schools that our alumni attend.

Student Outcomes

The student outcomes are the skills and knowledge expected of all students at the time of their graduation. Faculty members will assess

these student outcomes. The student outcomes for the Joint Engineering Program are:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics;
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors;
3. an ability to communicate effectively with a range of audiences;
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts;
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives;
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions;
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The Joint Engineering Program degrees, the BSCIE, the BSEE, and the BSME are accredited by the Engineering Accreditation Commission of ABET. <https://www.abet.org>

Latin Honors

In accordance with the University's Latin Honors policy (p. 23), candidates graduating from the University of Missouri St. Louis/Washington University Joint Undergraduate Engineering Program in the 2024-2025 Academic Year must meet the following GPA qualifications:

| | |
|-----------------|-------|
| Summa Cum Laude | 3.969 |
| Magna Cum Laude | 3.919 |
| Cum Laude | 3.777 |

Fees

Students register on the UMSL campus and pay UMSL fees plus an engineering fee for engineering courses. Limits on enrollments are determined by the availability of resources.

Career Outlook

Engineering is one of the few careers in which the bachelor's degree is a professional degree. Students earning a bachelor of science degree in one of the engineering disciplines are well qualified for entry-level engineering positions in a variety of businesses, industries, consulting firms, and government agencies. As society becomes increasingly dependent on technology, the outlook for all engineering disciplines becomes increasingly bright. Engineering careers typically rank at, or very near, the top of virtually any published rating of promising jobs for the 21st Century. Besides tackling challenging technical problems, roughly two-thirds of all engineers will have some level of management responsibility within ten years of receiving their bachelor's degrees. Many practicing engineers will eventually continue their education by pursuing graduate degrees on a part-time basis. Typical areas of graduate study include all advanced technical and scientific fields and management.

For Further Information

For information about enrolling in this program, please contact the UMSL/ Washington University Joint Undergraduate Engineering Program at 314-516-6800.

Degrees

Civil Engineering BSCIE (p. 472)
Electrical Engineering BSEE (p. 554)
Mechanical Engineering BSME (p. 623)

Minors

Civil Engineering (p. 476)
Electrical Engineering (p. 556)
Mechanical Engineering (p. 625)

Licensure and Certification

As of July 1, 2024 it has been determined that the following programs meet educational requirements in for Professional Engineer licensure in all 50 U.S. States

- Bachelor of Science in Civil Engineering
- Bachelor of Science in Electrical Engineering
- Bachelor of Science in Mechanical Engineering

We have not determined if the above programs meet the educational requirements for licensure in the remaining U.S. Territories. . For the most up to date information about Licensure and Certification requirements, please visit <https://teaching.missouri.edu/student/state-authorization/umsl/licensure>.

Under federal regulations, we may not enroll into licensure or certification program students located in a state or territory in which our program does not meet the educational requirements to be eligible for licensure or which the University has not made a determination. However, if you plan to seek licensure and employment in any of the following states or territories listed below, you may enroll in the program after signing an attestation indicating your plans to become licensed and employed in a state that meets requirements.

If you plan to seek licensure in one of the states listed above, please contact UMSL/Washington University Joint Undergraduate Engineering Program Advisor at 314-516-6801 for more information.

Engineering Courses

ENGR 1010 Introduction to Engineering: 1 semester hour

This course, required of all new Freshman with an interest in Engineering, is designed to assist students in their transition to the university experience and to UMSL by giving students the knowledge and tools needed to succeed as scholars. Students will learn about faculty expectations, support services, and student life, as well as engineering.

ENGR 2310 Statics: 3 semester hours

Prerequisites: MATH 1900 and PHYSICS 2111. Statics of particles and rigid bodies. Equivalent systems of forces. Distributed forces; centroids. Applications to trusses, frames, machines, beams, and cables. Friction. Moments of inertia. Principle of virtual work and applications.

ENGR 2320 Dynamics: 3 semester hours

Prerequisites: MATH 2000 and ENGR 2310. Review of vector algebra and calculus. Kinematics of a particle. Newton's laws and the kinetics of a particle. Work and energy. Impulse and momentum. Kinematics of rigid bodies. General theorems for systems of particles. Kinetics of rigid bodies. The inertia tensor.

Joint Civil Engineering Courses

J C ENGR 1430 Introduction to Engineering Design: CAD & GIS: 2 semester hours

Prerequisites: Civil Engineering major. An introduction to engineering design in the context of civil engineering problems and applications. Students will learn the basics of GIS and computer-aided design and drafting concepts and techniques to learn the fundamentals of spatial reasoning and graphical representation. Introduction to terminology, symbols, multiple use blocks and details, origins and uses of survey data, contours, alignments, working with 2D and 3D, using both model space and layouts, dimensioning and dimension styles, attributes, and xrefs, and using templates. Freehand sketching, including pictorial and orthographic views, applied to the design process as well.

J C ENGR 2160 Surveying: 3 semester hours

Prerequisites: Civil Engineering major. Horizontal and vertical control surveys, including traverses, triangulation, trilateration, and leveling; basic adjustments of observations; geologic data; coordinate systems. Basic route surveying, including horizontal and vertical curves.

J C ENGR 3210 Computer Methods of Engineering Analysis: 2 semester hours

Prerequisites: MATH 2020, CMP SCI 1250 (may be taken concurrently), and Civil Engineering major. This course provides an introduction to engineering design and analysis utilizing numerical methods, spreadsheet functions, and database queries. Students will build on skills gained in CMP SCI 1250 to utilize a high level programming language and spreadsheet functions to develop techniques for civil engineering design and problem solving.

J C ENGR 3360 Civil Engineering Materials Lab: 1 semester hour

Prerequisites: J M ENGR 2410 and Civil Engineering major. This course and J M ENGR 3360 should be taken concurrently. Testing procedures, testing machines, use of laboratory equipment, analysis of data, and presentation of results. Laboratory tests on static tension, compression, bending, and torsion of metal specimens. Tests on wood. Determination of compressive and tensile strengths of concrete. Design of concrete mixes and verification of strength. Experiments in advanced topics in mechanics of materials.

J C ENGR 3410 Structural Analysis: 3 semester hours

Prerequisites: ENGR 2310, J M ENGR 2410 and Civil Engineering major. A review of the calculation of reactions, shear, and bending moment. Definition, construction and use of influence lines. Deflections for statically determinate structures using the work method. Analysis of statically indeterminate trusses using the method of consistent deformations. Analysis of continuous beams and planar frames using the consistent deformation, slope-deflection and moment distribution methods. The influence of span on strength, stability, and economy of structures. An introduction to structural analysis software.

J C ENGR 3420 Structural Design: 3 semester hours

Prerequisites: J M ENGR 2410, J C ENGR 3410 and Civil Engineering major. Fundamentals of structural design in steel, reinforced concrete, and timber. Familiarization with the sources of various design codes and practice in interpreting them. Computer graphics applications.

J C ENGR 3430 Civil Engineering Design CAD & GIS: 2 semester hours

Prerequisites: J C ENGR 1430 or J M ENGR 1413, and Civil Engineering major. This course provides an introduction to engineering design in the context of civil engineering. Students will build on skills gained in J C ENGR 1430 or J M ENGR 1413 to utilize computer-aided design software and GIS software to learn techniques of civil engineering design and problem solving.

J C ENGR 3460 Transportation Engineering: 3 semester hours

Prerequisites: Civil Engineering major. Fundamental treatment of the planning, engineering, design, and procedural aspects of multimodal transportation are covered. Intermodal freight and urban transportation planning processes and overview of environmental, energy, and economic issues are discussed.

J C ENGR 3520 Water and Wastewater Treatment: 3 semester hours

Prerequisites: J M ENGR 3700 (may be taken concurrently) and Civil Engineering major, or consent of instructor. Application of the basic principles of chemistry, microbiology, and fluid mechanics to the analysis of environmental problems, especially those involving control of water and land contamination. Properties of municipal and industrial wastewater, solid waste, and hazardous waste. Estimation of assimilative capacity and other characteristics of receiving waters. Introduction to unit processes and unit operations used in the treatment of municipal and industrial wastewater. Design of processes and facilities used for treating drinking water, wastewater, and sludge disposal. Waste minimization and recycling in both industrial and municipal settings.

J C ENGR 3760 Hydraulic Engineering: 3 semester hours

Prerequisites: J M ENGR 3700 and Civil Engineering major. The principles of open channel flow will be discussed and illustrated with practical examples. Methods for channel design, storm sewer, culvert and bridge analysis will be presented using the concepts of gradually-varied, steady flow. A design project using computerized analysis and design is used to implement concepts in a large practical application.

J C ENGR 4000 Independent Study: 1-3 semester hours

Prerequisites: Civil Engineering major and consent of instructor. Independent investigation of a civil engineering topic of special interest to a student performed under the direction of a faculty member.

J C ENGR 4190 Soil Mechanics: 3 semester hours

Prerequisites: J M ENGR 2410, J M ENGR 3700 and Civil Engineering major. Basic geology as it relates to index and classification properties of soil. Exploration, sampling, and testing techniques. Soil classification systems. clay minerals and soil structures. Compaction and stabilization. Capillary, shrinkage, swelling, and frost action in soils. Effective stress, permeability, seepage, and flow nets. Consolidation and consolidation settlements. stresses in soil. Time rate of consolidation. Mohr's circle, stress path, and failure theories. Shearing strength of sand and clays.

J C ENGR 4200 Soil Exploration and Testing: 1 semester hour

Prerequisites: J C ENGR 4190 (may be taken concurrently) and Civil Engineering major. Soil exploration; in-situ soil testing, laboratory testing of soil; processing of test data using a microcomputer; statistical analysis of test data; use of test results in the decision-making process.

J C ENGR 4600 Highway and Traffic Engineering: 3 semester hours

Prerequisites: J C ENGR 2160 and Civil Engineering major. Study of basic highway design and traffic circulation principles. Study of design elements of alignment, profile, cross section, intersection types, interchange types, and controlled access highways. Investigation of functional highway classification. Traffic volume, delay and accident studies. Analysis of highway capacity of uninterrupted flow, interrupted flow. Freeway, ramp and weaving sections.

J C ENGR 4630 Design of Steel Structures: 3 semester hours

Prerequisites: J C ENGR 3410, J C ENGR 3420, and Civil Engineering major. Behavior and design of steel frames by "allowable stress" and "maximum strength" based on deterministic and LRFD (Load-resistance factor design) methods. Design of beams, columns, beamcolumns, plate girders, connections, multistory frames, and bridge girders, Torsional design of steel structures. Plastic analysis and design of steel structures. Miscellaneous topics in structural steel construction and design.

J C ENGR 4640 Foundation Engineering: 3 semester hours

Prerequisites: J C ENGR 3420, J C ENGR 4190, J C ENGR 4200 and Civil Engineering major. Principal problems in design and construction of foundations for bridges and buildings. Bearing capacity of deep and shallow foundations; pressure on retaining walls and shallow foundations; pressure on retaining walls and slope stability; modern developments in piling, cofferdams, open caissons, pneumatic caissons.

J C ENGR 4660 Advanced Design of Concrete Structures: 3 semester hours

Prerequisites: J M ENGR 3360, J C ENGR 3410, J C ENGR 3420, and Civil Engineering major. Flexural behavior and design, strength and deformation of rectangular and nonrectangular sections, shear strength, beamcolumns, long columns, slab systems, design of frames, and footings will be covered.

J C ENGR 4670 Structural Design Projects: 3 semester hours

Prerequisites: J C ENGR 4630 and Civil Engineering major. Students carry out the complete design of typical and unusual building and bridge structures. Use of the computer as a design tool is emphasized. Projects are conducted in cooperation with production engineers.

J C ENGR 4730 Construction Operations and Management: 3 semester hours

Prerequisites: Civil Engineering major. The construction industry, its development, components, and organization. Contracting methods. Applications and limitations. Selection of equipment using production analysis and economics. Field engineering, including form design, shoring, embankment design. Purchasing and change orders. Safety and claims.

J C ENGR 4740 Economic Decisions in Engineering: 3 semester hours

Same as J M ENGR 4730. Prerequisites: Civil Engineering major, Electrical Engineering major or Mechanical Engineering major. This course examines the principles of economics involved in engineering decisions. It looks at decisions between alternatives based on the efficient allocation of resources. Topics include the time element in economics, analytical techniques for economic studies and taxes.

J C ENGR 4830 Fundamentals of Surface Water Hydrology and Environmental Engineering: 3 semester hours

Prerequisites: J M ENGR 3700 and Civil Engineering major. The principles of the hydrologic cycle including precipitation, evaporation, transpiration, infiltration, runoff, streamflow, and groundwater will be discussed and illustrated. In addition, computational fundamentals of hydrologic analysis will be presented such as unit hydrographs, routing, data analysis, and flood frequency. Elements of quantitative problems in urban stormwater systems and management, water quality and urbanization. Concepts of sustainability and green engineering such as low impact development and other best management practices will be presented. Computer software will be utilized.

J C ENGR 4910 Hydrology and Hydraulic Design Project: 3 semester hours

Prerequisites: J M ENGR 3700, J C ENGR 3760, J C ENGR 4830 and Civil Engineering major. This course is designed to provide seniors in Hydrology and Hydraulics with a major design/facility plan project. The principals of hydrologic and hydraulic design will be utilized in developing the hydrology, hydraulics and floodplain analysis for a local watershed or land area. Hydrologic analysis is performed to size hydraulic systems and evaluate watershed and floodplain performance. The course is structured to apply hydrologic theory and modeling techniques to engineering hydrology and hydraulics for watershed analysis, floodplain delineation, and urban stormwater. The student will also consider the next generation of hydrologic computation, watershed evaluation and the importance of severe storm impacts and flood management. Consideration of sustainability and green infrastructure practices will also be included. A final written report and class presentation of the design project is included.

J C ENGR 4950 Fundamentals of Civil Engineering Review: 1 semester hour

Prerequisites: Senior standing and Civil Engineering major. A review and preparation of the most recent NCEES Fundamentals of Engineering (FE) Exam specifications for Civil Engineering students is offered in a classroom setting. Exam strategies will be illustrated using examples.

J C ENGR 4990 Senior Civil Engineering Seminar: 1 semester hour

Prerequisites: Senior standing and Civil Engineering major. Students will research assigned topics of importance to graduates entering the Civil Engineering profession and prepare oral presentations and a written report. Student presentations will be augmented by lectures from practicing professionals. Topics include professional registration, early career development, graduate study, effective presentations, construction quality, and case histories of civil engineering projects.

Joint Computer Science Courses***J CMP SC 1002 Introduction to Computing Tools: Matlab Skills: 1 semester hour***

Prerequisites: Electrical Engineering or Mechanical Engineering major. This course is aimed at the acquisition of MATLAB skills through hands-on familiarization and practice. Students practice the array, vector, and meshgrid representations, programming and plotting, and apply these skills to solve numerical problems and generate reports.

Joint Electrical Engineering Courses***J E ENGR 2300 Introduction to Electrical Networks: 3 semester hours***

Prerequisites: Electrical Engineering or Mechanical Engineering major. Elements, sources, and interconnects. Ohm's and Kirchoff's laws, superposition and Thevenin's theorem; the resistive circuit, transient analysis, sinusoidal analysis, and frequency response.

J E ENGR 2320 Introduction to Electronic Circuits: 3 semester hours

Prerequisites: J E ENGR 2300 and Electrical Engineering major. Introduction to contemporary electronic devices and their circuit applications. Terminal characteristics of active semiconductor devices. Incremental and D-C models of junction diodes, bipolar transistor (BJTs), and metal-oxide semiconductor field effect transistors (MOSFETs) are developed and used to design single-and multi-stage amplifiers, Models of the BJT and MOSFET in cutoff and saturation regions are used to design digital circuits.

J E ENGR 2330 Electrical and Electronic Circuits Laboratory: 3 semester hours

Prerequisites: J E ENGR 2300 and Electrical Engineering major. Lectures and laboratory exercises related to sophomore topics in introductory networks and basic electronics.

J E ENGR 2340 Electrical Laboratory for Mechanical Engineers: 1 semester hour

Prerequisites: J E ENGR 2300 (may be taken concurrently) and Mechanical Engineering major. Laboratory in introductory electrical circuits and devices of relevance to mechanical engineers.

J E ENGR 2600 Introduction to Digital Logic and Computer Design: 3 semester hours

Prerequisites: CMP SCI 1250 and Electrical Engineering major. Digital computers and digital information-processing system; Boolean algebra, principles and methodology of logical design; machine language programming; register transfer logic; microprocessor hardware, software, and interfacing; fundamental of digital circuits and systems; computer organization and control; memory systems; arithmetic unit design. Occasional laboratory exercises.

J E ENGR 3300 Engineering Electromagnetic Principles: 3 semester hours

Prerequisites: Electrical Engineering major. Electromagnetic theory as applied to electrical engineering; vector calculus; electrostatics and magnetostatics; Maxwell's equations, including Poynting's theorem and boundary conditions; uniform plane-wave propagation; transmission lines-TEM modes, including treatment of general, lossless line, and pulse propagation; introduction to guided waves; introduction to radiation and scattering concepts.

J E ENGR 3310 Electronics Laboratory: 3 semester hours

Prerequisites: J E ENGR 2300, J E ENGR 2330 and Electrical Engineering major. Laboratory exercises for juniors covering topics in computer-aided measurements, computer simulation, and electronic circuits.

J E ENGR 3320 Power, Energy and Polyphase Circuits: 3 semester hours

Prerequisites: J E ENGR 2300 and Electrical Engineering major. Fundamental concepts of power and energy; electrical measurements; physical and electrical arrangement of electrical power systems; polyphase circuit theory and calculations; principal elements of electrical systems such as transformers, rotating machines, control, and protective devices, their description and characteristics; elements of industrial power system design.

J E ENGR 3370 Electronic Devices and Circuits: 3 semester hours

Prerequisites: J E ENGR 2320 and Electrical Engineering major. Introduction to semiconductor electronic devices: transistors and diodes. Device electrical DC and high-frequency characteristics. Bipolar transistors, field-effect transistors for analog electronics applications. Transistors fabrication as discrete devices and as integrated-circuit chips. Large-signal analysis of transistor amplifiers: voltage gain, distortion, input resistance and output resistance. Analysis of multitransistor amplifiers: Darlington, Cascode, and coupled-pair configurations. Half-circuit concepts, differential-mode gain, common-mode gain, and differential-to-single-ended conversion. Transistor current sources, active loads, and power-amplifier stages. Applications to operational amplifiers and feedback circuits.

J E ENGR 3510 Signals and Systems: 3 semester hours

Prerequisites: J E ENGR 2300, J E MATH 3170 and Electrical Engineering major. Elementary concepts of continuous-time and discrete-time signals and systems. Linear time-invariant (LTI) systems, impulse response, convolution, Fourier series, Fourier transforms, and frequency-domain analysis of LTI systems. Laplace transforms, Z-transforms, and rational function descriptions of LTI systems. Principles of sampling and modulation. Students participate weekly in recitation sections to develop oral communications skills using class materials.

J E ENGR 3620 Computer Architecture: 3 semester hours

Prerequisites: J E ENGR 2600 and Electrical Engineering major. Study of interaction and design philosophy of hardware and software for digital computer systems: Machine organization, data structures, I/O considerations. Comparison of minicomputer architectures.

J E ENGR 4000 Independent Study: 1-3 semester hours

Prerequisites: Electrical Engineering major and consent of instructor. Opportunities to acquire experience outside the classroom setting and to work closely with individual members of the faculty. A final report must be submitted to the department. Open as a senior elective only. Hours and credit to be arranged. Credit variable, maximum credit per semester 3 hours. Maximum program total credit 3 hours.

J E ENGR 4050 Reliability and Quality Control: 3 semester hours

Prerequisites: MATH 1320 and Electrical Engineering major. An integrated analysis of reliability and quality control function in manufacturing. Statistical process control, analysis, reliability prediction, design, testing, failure analysis and prevention, maintainability, availability, and safety are discussed and related. Qualitative and quantitative aspects of statistical quality control and reliability are introduced in the context of manufacturing.

J E ENGR 4340 Solid State Power Circuits and Applications: 3 semester hours

Prerequisites: J E ENGR 2320, J E ENGR 3510, and Electrical Engineering major. Study of the strategies and applications of power control using solid-state semiconductor devices. Survey of generic power electronic converters. Applications to power supplies, motor drives, and consumer electronics. Introduction to power diodes, thyristors, and MOSFETs.

J E ENGR 4350 Electrical Energy Laboratory: 3 semester hours

Prerequisites: J E ENGR 2330 and Electrical Engineering major. Experimental studies of principles important in modern electrical energy systems. Topics: power measurement, transformers, batteries, static frequency converters, thermoelectric cooling, solar cells, electrical lighting, induction, commutator, and brushless motors, synchronous machines.

J E ENGR 4360 Energy Alternatives: 3 semester hours

Same as J M ENGR 4360. Prerequisites: J E ENGR 2300 or J M ENGR 3200, and Electrical Engineering major or Mechanical Engineering major. This course introduces engineering analyses of the human uses of energy. Both non-renewable (e.g., oil, natural gas, coal, nuclear) and sustainable (e.g., hydropower, solar, wind, biomass) resources are covered. Topics include the engineer's role in harvesting, production, storage, conversion, delivery, and uses of energy. Students will learn system analysis, design, integration, optimization, and operational aspects of selected resources delivery systems, and end uses. Technical content will include site selection, conversion and delivery efficiency calculations, engineering economic analyses, control systems, and energy resource systematic classification. Students will be assessed based on homework, quizzes, tests, class participation, and projects.

J E ENGR 4410 Control Systems I: 3 semester hours

Same as J M ENGR 4310. Prerequisites: J E MATH 3170, J E ENGR 2300 and Electrical Engineering major or Mechanical Engineering major. Introduction to automatic control concepts. Block diagram representation of single and multiloop systems. Multi-input and multi-output systems. Control system components. Transient and steady-state performance; stability analysis; Routh, Nyquist, Bode, and root locus diagrams. Compensation using lead, lag and lead-lag networks. Synthesis by Bode plots and root-locus diagrams. Introduction to state-variable techniques, state-transition matrix, state-variable feedback.

J E ENGR 4440 Sensors and Actuators: 3 semester hours

Prerequisites: Electrical Engineering major. The course provides engineering students with basic understanding of two of the main components of any modern electrical or electromechanical system; sensors as inputs and actuators as outputs. This course is useful for those students interested in control engineering, robotics and systems engineering.

J E ENGR 4470 Robotics Laboratory: 3 semester hours

Prerequisites: Electrical Engineering major. Introduces the students to various concepts such as modeling, identification, model validation and control of robotic systems. The course focuses on the implementation of identification and control algorithms on a two-link robotic manipulator (the so-called pendubot) that will be used as an experimental testbed. Topics include: introduction to the mathematical modeling of robotic systems; nonlinear model, linearized model; identification of the linearized model: input-output and state-space techniques; introduction to the identification of the nonlinear model: energy-based techniques; model validation and simulation; stabilization using linear control techniques; a closer look at the dynamics; stabilization using nonlinear control techniques.

J E ENGR 4520 Power Systems Analysis: 3 semester hours

Prerequisites: J E ENGR 3320 and Electrical Engineering major. Introduction to the modeling and elements of power systems; machines, lines, and loads; load flow methods and applications; short circuit analysis using symmetrical components on symmetrical and unsymmetrical faults; methods of economic operation of power systems and contingency; state estimators, stability, and introduction of the independent system operator.

J E ENGR 4710 Communications Theory and Systems: 3 semester hours

Prerequisites: J E ENGR 3510, MATH 1320 and Electrical Engineering major. Introduction to the concepts of transmission of information via communication channels. Amplitude and angle modulation for the transmission of continuous-time signals. Analog-to-digital conversion and pulse code modulation. Transmission of digital data. Introduction to random signals and noise and their effects on communication. Optimum detection systems in the presence of noise. Elementary information theory. Overview of various communication technologies such as radio, television, telephone networks, data communication, satellites, optical fiber, and cellular radio.

J E ENGR 4820 Digital Signal Processing: 3 semester hours

Prerequisites: J E ENGR 3510 and Electrical Engineering major. Introduction to analysis and synthesis of discrete-time linear time-invariant (LTI) systems. Discrete-time convolution, discrete-time Fourier transform, Z-transform, rational function descriptions of discrete-time LTI systems. Sampling, analog-to-digital conversion and digital processing of analog signals. Techniques for the design of finite impulse response (FIR) and infinite impulse response (IIR) digital filters. Hardware implementation of digital filters and finite register effects. The discrete Fourier transform and the fast Fourier transform (FFT) algorithm.

J E ENGR 4950 Fundamentals of Electrical Engineering Review: 1 semester hour

Prerequisites: Senior standing and Electrical Engineering major. A review and preparation of the most recent NCEES Fundamentals of Engineering (FE) Exam specifications for Electrical Engineering students is offered in a classroom setting. Exam strategies will be illustrated using examples.

J E ENGR 4980 Electrical Engineering Design Projects: 3 semester hours

Prerequisites: Senior standing and Electrical Engineering major. Working in teams, students address design tasks assigned by faculty. Each student participates in one or more design projects in a semester. Projects are chosen to emphasize the design process, with the designer choosing one of several paths to a possible result. Collaboration with industry and all divisions of the university is encouraged.

J E ENGR 4990 Electrical Engineering Senior Seminar: 1 semester hour

Prerequisites: Senior standing and Electrical Engineering major. This course focuses on personal and professional development to prepare graduates entering the electrical engineering profession. Topics may include personality characteristics, diversity, team dynamics, professionalism, early career development, graduate study, effective presentations, and case histories of electrical engineering projects. Performance is based on class participation, oral presentations, and written reports.

Joint Engineering Communication Courses***J E COMM 2000 Engineering Studio I: 1 semester hour***

Prerequisites: Civil Engineering or Electrical Engineering or Mechanical Engineering major. This one credit hour seminar introduces a holistic, professional formation approach to engineering education. This seminar will help students build real-world understanding of business, ethics, and society; integrate real-world perspective with traditional coursework; and build their own professional identity. Students will learn from local leaders in industry and work in teams to explore modern problems and solutions. This course must be taken during the first semester of the upper level engineering program.

Joint Engineering Mathematics Courses***J E MATH 3170 Engineering Mathematics: 4 semester hours***

Prerequisites: MATH 2020 or equivalent, and Electrical Engineering or Mechanical Engineering major. The Laplace transform and applications; series solutions of differential equations, Bessel's equation, Legendre's equation, special functions; matrices, eigenvalues, and eigenfunctions; Vector analysis and applications; boundary value problems and spectral representation; Fourier series and Fourier integrals; solution of partial differential equations of mathematical physics.

Joint Mechanical Engineering Courses***J M ENGR 1413 Introduction to Engineering Design: CAD: 2 semester hours***

Prerequisites: Civil Engineering or Mechanical Engineering major. An introduction to engineering design in the context of mechanical engineering. Students learn the fundamentals of spatial reasoning and graphical representation. Freehand sketching, including pictorial and orthographic views, are applied to the design process. Computer modeling techniques provide accuracy, analysis, and visualization tools necessary for the design of devices and machines. Topics in detailing design for production, including fasteners, dimensioning, tolerancing, and creation of part and assembly drawings are also included.

J M ENGR 1414 Introduction to Engineering Design: Project: 2 semester hours

Prerequisites: Mechanical Engineering major. An introduction to engineering design in the context of mechanical engineering. Students complete a series of labs and assignments that introduce physical phenomena related to mechanical engineering. The course proceeds to a design contest in which the students design and build from a kit of parts a more significant machine that competes in a contest held at the end of the course. The students also get to complete an individual design project on a topic which they select.

J M ENGR 2110 Machine Shop, Fabrication, and Prototyping: 2 semester hours

Prerequisites: Mechanical Engineering major. Basic machine shop and mechanical fabrication skills, including blacksmithing and industrial electrical control. "Design and build" activities will emphasize appropriate design for fabrication. Students learn machine shop skills including precision measurement, work holding, sawing, drilling, turning, and milling. Completion of the course provides certification to use the Washington University engineering machine shop.

J M ENGR 2410 Mechanics of Deformable Bodies: 3 semester hours

Prerequisites: MATH 1900, ENGR 2310, and Civil Engineering or Mechanical Engineering major. Normal and shear stresses and strains. Stress-strain diagrams. Hooke's law and elastic energy. Thermal stresses. Stresses in beams, columns, torsional members, and pressure vessels. Elastic deflection of beams and shafts. Statically indeterminate structures. Mohr's circle of stress. Stability concepts.

J M ENGR 3010 Computer Aided Design: 3 semester hours

Prerequisites: J M ENGR 1413 and Mechanical Engineering major. Computer aided design, analysis and optimization of parts and assemblies; solid modeling of complex surfaces, creation of detail drawings, dimensioning and tolerancing; assembly modeling, assembly constraints, interference checking; motion constraints, force and acceleration analysis, thermal analysis; part optimization for weight, strength and thermal characteristics using SolidWorks software. Solid modeling for additive manufacturing and 3D printing topics included.

J M ENGR 3110 Mechanical Design and Machine Elements: 3 semester hours

Prerequisites: J M ENGR 2410 and Mechanical Engineering major. Provides a thorough overview of the steps in the engineering design process and introduces analytical/quantitative techniques applicable to each step. Topics include recognition of need, specification formulation, concept generation, concept selection, embodiment, and detail design. Includes an introduction to several classes of machine elements such as shafts, bearings, gears, brakes, and threaded fasteners. Underlying analytical models of the machine elements are presented along with guidelines about designing and choosing such elements for practical applications. Students complete a case study project to conclude the course.

J M ENGR 3200 Thermodynamics: 3 semester hours

Prerequisites: MATH 1900, CHEM 1111 and PHYSICS 2111, and Electrical Engineering or Mechanical Engineering major. Classical thermodynamics; thermodynamic properties; work and heat; first and second laws. Entropy, irreversibility, availability. Application to engineering systems.

J M ENGR 3250 Material Science for J M ENGR: 4 semester hours

Prerequisites: CHEM 1111 and Mechanical Engineering major. Introduces the chemistry and physics of engineering materials. Emphasis on atomic and molecular interpretation of physical and chemical properties, the relationships between physical and chemical properties, and performance of an engineering material.

J M ENGR 3360 Material Science for J C ENGR: 3 semester hours

Prerequisites: CHEM 1111 and Civil Engineering major. Introduces the chemistry and physics of engineering materials. Emphasis on atomic and molecular interpretation of physical and chemical properties, the relationships between physical and chemical properties, and performance of an engineering material.

J M ENGR 3700 Fluid Mechanics: 3 semester hours

Prerequisites: MATH 2020 and ENGR 2320, Civil Engineering major or Mechanical Engineering major. Fundamental concepts of fluids as continua. Viscosity. Flow field: velocity, vorticity, streamlines. Fluid statics: hydrostatic forces manometers. Conservation of mass and momentum. Incompressible inviscid flow. Dimensional analysis and similitude. Flow in pipes and ducts. Flow measurement. Boundary-layer concepts. Flow in open channels.

J M ENGR 3710 Principles of Heat Transfer: 3 semester hours

Prerequisites: J M ENGR 3200, J M ENGR 3700 and J E MATH 3170, and Mechanical Engineering major. Introductory treatment of the principles of heat transfer by conduction, convection, or radiation. Mathematical analysis of steady and unsteady conduction along with numerical methods. Analytical and semiempirical methods of forced and natural convection systems. Heat exchangers: LMTD and e-NTU analysis. Boiling and condensation heat transfer. Radiation between blackbody and real surfaces. Radiation network analysis.

J M ENGR 3721 Fluid Mechanics Laboratory: 1 semester hour

Prerequisites: J M ENGR 3700 and Civil Engineering or Mechanical Engineering major. Physical laboratory exercises focusing on fluid properties and flow phenomena covered in J M ENGR 3700. Calibration and use of a variety of equipment; acquisition, processing, and analysis of data by manual as well as automated methods.

J M ENGR 3722 Heat Transfer Laboratory: 1 semester hour

Prerequisites: J M ENGR 3721, J M ENGR 3710 and Mechanical Engineering major. Physical laboratory exercises, including some numerical simulations and computational exercises, focusing on heat-transfer phenomena covered in J M ENGR 3710. Calibration and use of variety of laboratory instrumentation; acquisition, processing, and analysis of data by manual as well as automated methods; training in formal report writing.

J M ENGR 4000 Independent Study: 1-3 semester hours

Prerequisites: Mechanical Engineering major and consent of instructor. Independent investigation of a mechanical engineering topic of special interest to a student performed under the direction of a faculty member.

J M ENGR 4110 Mechanical Engineering Design Project: 3 semester hours

Prerequisites: J M ENGR 3110 and Mechanical Engineering major. Small student teams complete design projects subject to various constraints (e.g. economic, safety, legal, environmental, ethical), and appropriate codes and standards. Teams first perform a background information study, which is followed by a specification and conceptual design study. Embodiment and fabrication plans are produced for the chosen concept. The results of an engineering analysis study influence the final design of a working prototype, which is built and demonstrated. This is "documented" in an appropriate manner (e.g. a CAD model) that allows others to reproduce a version, and it is "published" so that other interested parties learn of its existence.

J M ENGR 4120 Design of Thermal Systems: 3 semester hours

Prerequisites: J M ENGR 3200 and Mechanical Engineering major. Analysis and design of advanced thermo-fluid systems. Student teams participate in the design process which could involve research, design formulation, codes, standards, engineering economics, a design project report, and formal presentations. Topics include: thermal-fluid systems and components, such as power, heating, and refrigeration systems, pumps, fans, compressors, combustors, turbines, nozzles, coils, heat exchangers and piping.

J M ENGR 4170 Dynamic Response of Physical Systems: 2 semester hours

Prerequisites: ENGR 2320 and J E MATH 3170, and Mechanical Engineering major. Free and forced vibration of mechanical systems with lumped inertia, springs, and dampers. Methods of Laplace transform, complex harmonic balance, and Fourier series. Electrical analogs. Introduction to Lagrange's equations of motion and matrix formulations. Transient response of continuous systems by partial differential equations, by rayleigh methods, and by lumped parameters. Must be taken concurrently with J M ENGR 4180.

J M ENGR 4180 Dynamic Response Laboratory: 1 semester hour

Prerequisites: J M ENGR 4170 and J M ENGR 4180 must be taken during the same semester. Laboratory problems focusing on materials covered in J M ENGR 4170.

J M ENGR 4250 Material Selection in Engineering Design: 3 semester hours

Prerequisites: J M ENGR 3250 and Mechanical Engineering major. Analysis of the scientific bases of material behavior in the light of research contributions of the last 20 years. Development of a rational approach to the selection of materials to meet a wide range of design requirements for conventional and advanced applications. Although emphasis will be placed on mechanical properties, other properties of interest in design will be discussed, e.g., acoustical, optical and thermal.

J M ENGR 4310 Control Systems I: 3 semester hours

Same as J E ENGR 4410. Prerequisites: J E MATH 3170, J E ENGR 2300 and Electrical Engineering major or Mechanical Engineering major. Introduction to automatic control concepts. Block diagram representation of single and multiloop systems. Multi-input and multi-output systems. Control system components. Transient and steady-state performance; stability analysis; Routh, Nyquist, Bode, and root locus diagrams. Compensation using lead, lag and lead-lag networks. Synthesis by Bode plots and root-locus diagrams. Introduction to state-variable techniques, state-transition matrix, state-variable feedback.

J M ENGR 4360 Energy Alternatives: 3 semester hours

Same as J E ENGR 4360. Prerequisites: J E ENGR 2300 or J M ENGR 3200, and Electrical Engineering major or Mechanical Engineering major. This course introduces engineering analyses of the human uses of energy. Both non-renewable (e.g., oil, natural gas, coal, nuclear) and sustainable (e.g., hydropower, solar, wind, biomass) resources are covered. Topics include the engineer's role in harvesting, production, storage, conversion, delivery, and uses of energy. Students will learn system analysis, design, integration, optimization, and operational aspects of selected resources delivery systems, and end uses. Technical content will include site selection, conversion and delivery efficiency calculations, engineering economic analyses, control systems, and energy resource systematic classification. Students will be assessed based on homework, quizzes, tests, class participation, and projects.

J M ENGR 4630 Nanotechnology: Concepts and Applications: 3 semester hours

Prerequisites: Mechanical Engineering major. The aim of this course is to introduce to students the general meaning, terminology and ideas behind nanotechnology and its potential application in various industries. The topics covered will include nanoparticles - properties, synthesis and applications, carbon nanotubes - properties, synthesis and applications, ordered and disordered nanostructured materials and their applications, quantum wells, wires and dots, catalysis and self-assembly, polymers and biological materials, nanoelectronics and nanophotonics, nanomanufacturing and functional nano-devices, health effects and nanotoxicity etc.

J M ENGR 4700 Sustainable Environmental Building Systems: 3 semester hours

Prerequisites: Mechanical Engineering major. Sustainable design of building lighting and HVAC systems considering performance, life-cycle cost and downstream environmental impact. Criteria, codes and standards for comfort, air quality, noise/vibration and illumination. Life cycle and other investment methods to integrate energy consumption/conservation, utility rates, initial cost, system/component longevity, maintenance cost and building productivity. Direct and secondary contributions to acid rain, global warming and ozone depletion.

J M ENGR 4706 Aircraft Performance: 3 semester hours

Prerequisites: Mechanical Engineering major. This course introduces the principles and applications of aerodynamics to determine the performance of typical jet engine and propeller airplanes. The performance calculations include flight conditions of takeoff, climb, level flight, and landing. The topics covered also include range and endurance computation, turning flight, flight envelope, constraint analysis and design process. The knowledge and skill gained in this course can be readily applied in the preliminary design of an airplane.

J M ENGR 4730 Economic Decisions in Engineering: 3 semester hours

Same as J C ENGR 4740. Prerequisites: Civil Engineering major, Electrical Engineering major or Mechanical Engineering major. This course examines the principles of economics involved in engineering decisions. It looks at decisions between alternatives based on the efficient allocation of resources. Topics include the time element in economics, analytical techniques for economic studies and taxes.

J M ENGR 4810 HVAC Analysis and Design I: 3 semester hours

Prerequisites: Mechanical Engineering major. Moist air properties and the psychrometric chart. Classic moist air processes and design procedures for heating and cooling systems. Design of heating, ventilating, and air conditioning systems for indoor environmental comfort and health. Basics of heat transfer in building structures. Solar radiation effects on building heat transfer. Calculation procedures for the analysis of heating and cooling loads in buildings.

J M ENGR 4820 HVAC Analysis and Design II: 3 semester hours

Prerequisites: Mechanical Engineering major. Energy calculations to estimate the quantity of energy needed to heat and cool building structures. Fundamentals of incompressible flow, basics of centrifugal pump performance, and design procedures for water piping systems. Space air diffuser design to assure that temperatures, humidities, and air velocities within occupied spaces are acceptable. Air duct design and fan analysis for optimally distributing air through building air duct systems. Performance analysis of refrigeration systems, including the effects of pressure losses and heat transfer. Direct contact heat and mass transfer.

J M ENGR 4900 Engineering Project Management: 3 semester hours

Prerequisites: Electrical Engineering or Mechanical Engineering major. Basic fundamentals and advanced concepts of engineering project management applicable to projects and programs, both large and small. Project management skills, techniques, systems, software and application of management science principles will be covered and related to research, engineering, architectural, and construction projects from initial evaluations through approval, design, procurement, construction and startup.

J M ENGR 4950 Fundamentals of Mechanical Engineering Review: 1 semester hour

Prerequisites: Mechanical Engineering major. A review and preparation of the most recent NCEES Fundamentals of Engineering (FE) Exam specifications for Mechanical Engineering students is offered in a classroom setting. Exam strategies will be illustrated using examples.

J M ENGR 4990 Mechanical Engineering Senior Seminar: 1 semester hour

Prerequisites: Mechanical Engineering major. Personal and professional development to prepare graduates entering the mechanical engineering profession. Topics may include personality characteristics, diversity, team dynamics, professionalism, early career development, graduate study, effective presentations, and case histories of mechanical engineering projects. Performance is based on class participation, oral presentations, and written reports.

International Studies and Programs

General Information

UMSL Global supports academic programs, seminars, and conferences designed to promote research in international studies, improve teaching of international studies, and encourage an interest in international affairs in the university and community.

UMSL Global houses the E. Desmond Lee Global Ethnic Collaborative, the Karakas Family Foundation Alliance for the Advancement of Hellenic Studies, and endowed professorships in African/African American studies, Chinese studies, Greek studies, International Education, Irish studies, and Japanese studies. UMSL Global is also home to the German Culture Center and Nicholas and Theodora Matsakis Hellenic Culture Center. The Culture Centers and endowed professorships play a vital role in making internationally-focused conferences, lectures, seminars, and performances to accessible to UMSL students and the wider St. Louis community.

Supporting the international research efforts of UMSL faculty is a central mission of UMSL Global. The International Fellowship Program is designed to strengthen UMSL's internationalization efforts by supporting international travel for conferences, research, and creative endeavors through one-time investments. The program aims to benefit all faculty who are traveling to engage in or present research/creative outputs that are international in scope and who may need to supplement their funding.

Study Abroad and Exchange Programs

The Study Abroad section of this Bulletin contains details about campus study abroad and international exchange programs. Those programs are administered by UMSL Global's Study Abroad team.

International Student and Scholar Services

International Student and Scholar Services (ISSS) provides services for international students and scholars, including admissions, visa and immigration matters, credential evaluations, health insurance, tax matters, nonacademic advising, initial campus arrival, orientation, social activities, and referrals to other campus units.

International Partnerships

The University of Missouri-St. Louis maintains a number of academic partnerships around the world. These range from joint research initiatives and consulting agreements to faculty and student exchanges. UMSL Global maintains data on these agreements and serves as the university's main point of contact for all international academic collaborations.

Study Abroad and Exchange Programs

The University of Missouri-St. Louis is committed to broadening students' understanding of different cultures and preparing them for the global community in which we live. One of the most successful ways of achieving this global mindset is to study overseas. The opportunity to live and study in a different culture is an enriching experience, both academically and personally.

UMSL Global (formerly The Office of International Studies and Programs) provides UMSL students of nearly any major the opportunity to study around the globe. Most programs run for an academic year, semester, or summer. Two to three week-long faculty-led programs are offered during

the winter intersession and summer. Through individual advising, students can find the program best suited to their personal, academic, and career goals.

Fees and Financial Aid

The cost of the program depends on the type of program, the services provided and the country of study. For most programs, participants continue to pay UMSL fees plus airfare, room and board, and spending money. Students studying abroad for a semester or more are usually housed in dormitories or are assisted in finding apartments. In most cases, students are able to use their UMSL financial aid toward a study abroad program. Study abroad scholarships are available for qualified applicants through UMSL Global.

Application

Applications are generally due in mid-February (summer, fall and academic year programs) and mid-September (winter intersession and spring programs). Students should plan to spend at least one or two months researching a program before applying.

Participant selection is based on academic achievement, faculty recommendations, departmental/divisional approval of the proposed course of study, and for some programs, proficiency in the foreign language of instruction. Most programs are designed for undergraduate students in their sophomore to senior years of study; however, a limited number of programs for freshmen and graduate students are available.

Courses

C I ST 3200 Study Abroad, Non UM-St. Louis Program: 1-24 semester hours

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C I ST 5200 Study Abroad Non UM-St Louis Program Grad: 1-15 semester hours

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Supporting Offices

Academic Affairs

Campus Testing Center

93 JC Penney
Phone: 314-516-6396
Email: assessctr@umsl.edu
Website: <http://www.umsl.edu/~campustesting/>

Center for Teaching and Learning

519 Lucas Hall
Phone: 314-516-4508
Fax: 314-516-7130
Email: ctl@umsl.edu
Website: <http://www.umsl.edu/services/ctl/>

Computer Education Training Center

West County Computer Education
12837 Flushing Meadows Dr.
St. Louis MO 63131
Phone: 314-984-9000
Fax: 314-966-0409
Email: info@cetc.umsl.edu
Website: <http://www.cetc.umsl.edu>

English-as-a-Second Language/English for Academic Purposes

554 Clark Hall
Phone: 314-516-6240
Fax: 314-516-6237
Website: <https://www.umsl.edu/divisions/artscience/forlanglit/languages/eap/index.html>

International Student and Scholar Services

361 Social Sciences Building
Phone: 314-516-5229
Fax: 314-516-5636
Email: iss@umsl.edu
Website: <http://www.umsl.edu/~intelstu/>

Mathematics and Writing Academic Center

222 Social Sciences Building
Phone: 314-516-6863
Website: http://umsl.edu/divisions/artscience/math_cs/math-academic-center/index.html
Website: <http://www.umsl.edu/~umslenglish/Writing%20Center/index.html>

New Student Programs and Welcome Center

366 Millennium Student Center
Phone: 314-516-5291
Email: orientation@umsl.edu
Website: <http://www.umsl.edu/newstudentprograms>

Science and Technology Academic Center

125 Stadler Hall

Website: <http://www.umsl.edu/~stac/contactus.html>

Student Affairs

218 Millennium Student Center
Phone: 314-516-5211
Fax: 314-516-5221
Email: umslstudenta@umsl.edu
Website: <http://www.umsl.edu/studentlife/dsa/>

Career Services

278 Millennium Student Center
Phone: 314-516-5111
Fax: 314-516-6535
Email: careerservices@umsl.edu
Website: <http://www.umsl.edu/depts/career/>

Disability Access Services

144 Millennium Student Center
Phone: 314-516-6554
TDD: 314-516-5212
Fax: 314-516-6561
Website: <http://www.umsl.edu/services/disabled/>

Recreation and Wellness Center

229 Student Recreation and Wellness Center
Phone: 314-516-2238
Website: <http://www.umsl.edu/campusrecreation/>

Student Advocacy and Care

144 Millennium Student Center
Phone: 314-516-6369
Website: <https://www.umsl.edu/studentadvocacy>

Student Conduct and Academic Integrity

218 Millennium Student Center
Email: umslstudenta@umsl.edu (umslstudenta@umsl.edu)
Website: <https://www.umsl.edu/studentconduct>

Triton Pantry

170 Millennium Student Center
Email: tritonpantry@umsl.edu
Website: <https://www.umsl.edu/studentadvocacy/triton-pantry/>

University Bookstore and Triton Tech

Phone: 314-516-5763
Fax: 314-516-5770
Website: <http://www.umslbookstore.com/>

University Health, Wellness and Counseling Services

131 Millennium Student Center
Phone: 314-516-5671
Fax: 314-516-5988
Email: health_services@umsl.edu
Website: <http://www.umsl.edu/~uhwcs/>

Veteran's Center

211 Clark Hall
Phone: 314-516-5705
Email: VeteransOffice@umsl.edu

Website: <http://www.umsl.edu/veterans/>

Advancement

Alumni Association

414 Woods Hall
Phone: 314-516-5833
Fax: 314-516-5858
Email: alumni@umsl.edu
Website: <http://www.umslalumni.org>

Athletics

Intercollegiate Sports

225 Mark Twain Building
Phone: 314-516-5661
Fax: 314-516-5503
Website: <http://www.umsltritons.com/>

Enrollment Management

Admissions

351 Millennium Student Center
Phone: 314-516-5451 / 1-800-462-8675
Fax: 314-516-5310
Email: admissions@umsl.edu
Website: <http://www.umsl.edu/admissions/index.html>

Degree Audit Reporting System (DARS)

261 Millennium Student Center
Phone: 314-516-6815
Fax: 314-516-4725
Website: <http://www.umsl.edu/services/dars/index.html>

New Student Programs and Welcome Center

366 Millennium Student Center
Phone: 314-516-5291
Email: orientation@umsl.edu
Website: <http://www.umsl.edu/newstudentprograms>

Registrar

269 Millennium Student Center
Phone: 314-516-5545
Fax: 314-516-7096
Email: registration@umsl.edu
Website: <http://www.umsl.edu/~register>

Student Outreach and Support

Student Enrichment and Achievement

107 Lucas Hall
Phone: 314-516-5300
Email: umslsea@umsl.edu (umslsea@umsl.edu)
Website: <http://www.umsl.edu/services/sea>

TRIO Student Support Services

180 Millennium Student Center
Phone: 314-516-4332
Email: umsltrio@umsl.edu

University Student Support

225 Millennium Student Center
Phone: 314-516-6807
Email: uss@umsl.edu
Website: <http://www.umsl.edu/uss>

University Tutoring Center

225 Millennium Student Center
Phone: 314-516-6807
Email: tutoring@umsl.edu
Website: <https://www.umsl.edu/~webdev/tutoring/index.html>

Advanced Workforce Center

225 Millennium Student Center
Phone: 314-516-4478
Website: <https://www.umsl.edu/workforce/index.html>
Email: umslworkforce@umsl.edu

Diversity, Equity and Inclusion

152 JC Penney North
Phone: 314-516-5695
Fax: 314-516-5673
Website: <http://www.umsl.edu/services/odei/>

Student Financial Services

327 Millennium Student Center
Phone: 314-516-5151, 314-516-5526
Fax: 314-516-5302
Email: cashiers@umsl.edu, financialaid@umsl.edu
Website: <http://www.umsl.edu/sfs/>

Information Technology Services

451 Express Scripts Hall
Phone: 314-516-6000
Fax: 314-516-6007
Website: <http://www.umsl.edu/technology/index.html>

Institutional Safety (Police)

44 Campus Police Building
Phone: 314-516-5155
Fax: 314-516-6536
Website: <http://safety.umsl.edu/police/>

Parking and Transportation

44 Campus Police Building
Phone: 314-516-4190
Website: <http://www.umsl.edu/~transportation/>

University Libraries

The Thomas Jefferson Library

Phone: 314-516-5060
Website: <http://www.umsl.edu/services/library/index.html>

St. Louis Mercantile Library

Phone: 314-516-7240

Website: <http://www.umsl.edu/mercantile/>

University Archives

220 Thomas Jefferson Library

Phone: 314-516-5129

Website: <http://www.umsl.edu/services/library/university-archives/index.html>

Internship and Cooperative Education Positions

Internship/Cooperative Education Positions

Internships and Co-ops give students the opportunity to combine classroom studies with work experience in a field related to their education and career goals. These degree related positions offer students an excellent opportunity to gain professional job experience and earn money to help with expenses while in school. Through these opportunities, students begin to understand what career choices they might make, gain valuable contacts in their field, and, in many cases, get paid for their work. They graduate with a college degree and an impressive resume. Career Services and academic departments work with students and employers to ensure that positions are linked to curriculum and career development. These opportunities are available to UMSL students at all levels in all majors. Contact Career Services for more information at 314-516-5111, or visit 278 Millennium Center.

In addition to internships available through Career Services, internships and practica are available through many academic departments. Academic advisors can provide information about the requirements for these experiences, some of which are summarized below:

College of Arts and Sciences

Anthropology

ANTHRO 4325- ANTHRO 4329, Internship in Cultural Anthropology, Archaeology, Folklore, Museum Studies, Physical Anthropology - elective, for credit; placement with outside organizations; junior standing required. Positions available on competitive basis as lab and research assistants, teachers/facilitators, and interns/assistants - optional, noncredit.

The Human Origin and Cultural Diversity program offers internships in educational anthropology and diversity education.

Art

ART HS 3387, Professional Internship for Art History majors only elective, for credit.

Biology

BIOL 3699, Undergraduate Internship in Biotechnology - optional as part of certificate program, for credit or noncredit, enrollment in certificate program required.

BIOL 4299, Practicum in Conservation - required as part of certificate program, for credit, enrollment in certificate program required.

Chemistry and Biochemistry

Opportunities are available to pursue research with faculty members for credit during the academic year, normally while enrolled in CHEM 3905. Stipends may be available in some cases. Expanded opportunities are available in the summer through the Research Experience for Undergraduates Program, which is typically funded by the National Science Foundation and local industry. In some cases students may

conduct CHEM 3905 research at a local company through collaborative arrangement between a faculty members and an industrial chemist.

Communication

COMM 4920, Practicum in Applied Communication

COMM 4950, Internship in Applied Communication

Computer Science

CMP SCI 3990, Undergraduate Internship in Computer Science

Criminology and Criminal Justice

CRIMIN 3280, Internship in Criminology and Criminal Justice - elective, for credit.

Economics

ECON 4990, Internship in Applied Economics; not required; 3 hours maximum.

English

ENGL 4890, Independent Writing Project - internships offered in areas such as journalism, public relations, advertising, publishing, and technical writing; for credit, enrollment in Writing Certificate Program required.

History

HIST 4001, Special Readings - internships occasionally available with historical agencies; department chair and/or undergraduate coordinator must approve to obtain credit.

Mathematics

Career-related work arrangements for students majoring in math are primarily administered through Career Services located in 278 Millennium Student Center. These positions are paid and non-credit-bearing.

Music

PRACTM 4920, Internship – required, for credit, enrollment in bachelor of music business required. Department sponsored internships available for all majors at St. Louis area arts institutions.

Physics and Astronomy

The department funds research internships in the department in both physics and astronomy. The awards are competitive, and preference is given to students who have completed the PHYSICS 2111/ PHYSICS 2112 sequence.

Political Science

POL SCI 3940 Public Affairs Internship - required, for credit, for bachelor of science in public administration program. It may also count as an elective, for credit, within the bachelor of arts in political science program and is open to all majors. Placements include municipal, state, and federal governmental agencies, nonprofit organizations, courts, and political campaign offices.

Psychology

PSYCH 3390, Research Assistant.

Social Work

SOC WK 4800 and SOC WK 4850, Supervised Field Experience in Social Work I and II - required, for credit, admission to B.S.W. program and prior consent of instructor are required.

Sociology

SOC 4385 Internship in Sociology - elective, for credit.

College of Business Administration

Career Services works in partnership with the College of Business Administration to assist students in securing career-related work arrangements for students majoring in all areas of business. These positions can be paid or unpaid and credit bearing or non-credit bearing. Those students choosing to receive academic credit through one of the courses listed below must contact the College of Business Administration Internship Coordinator in Room 469 SSB, by phone at 314-516-6117, or by email.

| | | |
|---------------|--|-----|
| ACCTNG 3490 | Internship in Accounting | 1-3 |
| BUS AD 3090 | Internship in Business Administration | 1-3 |
| INTL BUS 3289 | Practicum in International Business | 3 |
| BUS AD 3990 | Internship in Business Law | 1-3 |
| FINANCE 3590 | Internship in Finance | 1-3 |
| INFSYS 3890 | Internship in Information Systems | 1-3 |
| MGMT 3690 | Internship in Management | 1-3 |
| MKTG 3790 | Internship in Marketing | 1-3 |
| SCMA 3390 | Internship in Supply Chain and Analytics | 1-3 |

College of Education

Internships (4989) are required for 3 hours credit for most undergraduate programs and Site Based Experience (4990 and 4991) is required for 12 hours credit in all teacher certification programs. For more information, contact the Teacher Certification and Advising Office at 314-516-6710.

Joint Engineering Program

UMSL/Washington University Joint Undergraduate Engineering Program career-related work arrangements for students majoring in all areas of engineering are administered through Career Services and the UMSL Engineering Advisor. These positions are paid and non-credit-bearing.

College of Nursing

Clinical courses are required in both the undergraduate and graduate programs. These experiences are limited to nursing majors only.

Pierre Laclede Honors College

Internships chosen by Honors College students, or arranged by their major departments, are valuable opportunities to broaden educational experience while also meeting the honors independent study requirement for graduation.

Academic Integrity

Academic integrity is fundamental to the mission of higher education and provides a foundation for responsible student conduct that transcends graduation (Center for Academic Integrity, 1999). Promoting academic integrity is at the heart of the mission statements of institutions of higher education. As such, the University of Missouri-St. Louis has established policies and procedures that require students to exhibit ethical and honest behavior as well as provides guidelines to faculty members who are required to report incidents when they occur.

Students at the University of Missouri-St. Louis are expected to adhere to the Student Standard of Conduct as well as to established University policies and procedures. The Office of Student Conduct & Academic Integrity is responsible for upholding the Student Standard of Conduct as well as in educating the campus community about information related to academic honesty/dishonesty.

Information regarding campus policies, including the academic integrity policy, can be found below:

Student Standard of Conduct

What is academic dishonesty at UMSL?

Academic Dishonesty is any form of cheating, plagiarism, unauthorized use of artificially generated content, or sabotage which results in students giving or receiving unauthorized assistance or receiving credit for work that is not their own.

Where can students find more information?

The Student Standard of Conduct 200.010.C.1 defines academic dishonesty for the University of Missouri system schools. You may also visit the UMSL Student Conduct and Academic Integrity website. You can contact the Office of Student Conduct & Academic Integrity at (314) 516-5211 for additional questions.

What steps do I take if I suspect a student of academic dishonesty?

Reports of alleged academic integrity violations should be reported using the Academic Integrity Reporting form. You can also contact the Division of Student Affairs to discuss or consult on particular situations by calling 314-516-5211 or email at umslstudenta@umsl.edu.

Student Conduct and Title IX Policies

By registering for a class at any University of Missouri campus, students agree to abide by the Standard Conduct below. For more information about student conduct contact the Office of Student Conduct and Academic Integrity in the Division of Student Affairs (314-516-5211 or umslstudenta@umsl.edu).

UM System Standard of Conduct

200.010 Standard of Conduct

Amended Bd. Min. 3-20-81; Bd. Min. 8-3-90, Bd. Min 5-19-94; Bd. Min. 5-24-01, Bd. Min. 7-

27-12; Bd. Min. 12-7-12; Bd. Min. 6-19-14; Revised 9-22-14 by Executive Order 41; Revised

11-3-15 by Executive Order 41; Amended 2-9-17; Bd. Min. 9-24-20; Bd. Min. 11-19-20;

Amended 6-29-23; Amended 9-7-2023

The Standard of Conduct exists to support the mission of the University of Missouri as an educational institution. The following expectations have been established in order to protect a specialized educational environment conducive to learning which fosters integrity, academic success, personal and professional growth, and responsible citizenship.

A student at the University assumes an obligation to behave in a manner compatible with the University's function as an educational institution and voluntarily enters into a community of high achieving scholars. A student organization recognized by the University of Missouri also assumes an obligation to behave in a manner compatible with the University's function as an educational institution. Consequently, students and student organizations must adhere to community standards in accordance with the University's mission and expectations. Students and student organizations are expected to demonstrate responsibility for their actions; respect the rights and property of others; and observe federal, state, and local laws, as well as University rules and policies.

The Standard of Conduct is implemented through Section 200.020 Rules of Procedures in Student or Student Organization Conduct Matters. It is to be implemented and interpreted in a manner that supports the University's mission as an educational institution and protects the University's educational environment.

A. Jurisdiction of the University of Missouri generally shall be limited to conduct which occurs on the University of Missouri premises or at University-sponsored or University-supervised functions. However, the University may take appropriate action, including, but not limited to the imposition of sanctions under Section 200.020 and Chapter 600 of the Collected Rules and Regulations against students and student organizations for conduct occurring in other settings, including off campus, for the following purposes: (1) in order to protect the health, safety, welfare, and well-being of students, employees, and other members of the University community, or (2) if there are effects of the conduct that materially interfere with or limit any person's or entity's ability to participate in or benefit from the University's educational programs, activities, or employment. Jurisdiction of conduct occurring in other settings, including off campus, may be exercised at the discretion of the University for these

stated purposes, but shall not be exercised in any way that would interfere with a student's protected constitutional rights.

B. A student organization is a recognized student organization which has received official approval in accordance with Section 250.010 of the Collected Rules and Regulations. Action against student organizations under the Standard of Conduct and Rules of Procedure may be separate from action taken against individual members. A student organization will be considered responsible for conduct outlined in Section 200.010.C only when there are circumstances indicating that the organization should bear collective responsibility for the conduct, and not solely because its individual members engaged in prohibited conduct. To determine whether a student organization is responsible for conduct outlined in Section 200.010.C and the extent to which it should be sanctioned, all relevant circumstances will be considered, including but not limited to the following:

1. Factors weighing in favor of organizational responsibility:
 - a. The student organization, through its officers or practices or customs, by any means approved, condoned, allowed, encouraged, assisted or promoted such prohibited conduct;
 - b. The prohibited conduct was committed, permitted, encouraged, aided, or assisted by one or more student organization executive officers or by one or more members while acting with authority on behalf of the student organization;
 - c. Student organization resources, such as funds, group communications, information technology resources, or organization property or venues, were used for the prohibited conduct;
 - d. The student organization, through its officers or advisers, materially interferes or interfered with any investigation or conduct proceedings related to the prohibited conduct;
 - e. A policy, protocol, or official practice of the student organization caused or materially contributed to the prohibited conduct; and/or
 - f. In the absence of any evidence of the factors listed in subdivisions 1. – 5. above, the prohibited conduct was committed, participated in, encouraged, aided, or assisted by twenty-five percent or more of the student organization's members;
2. Factors weighing against organizational responsibility:
 - a. The student organization had policies, protocols, or official practices in place to prevent or deter the prohibited conduct;
 - b. The student organization had provided guidance, education, or training to the individual members involved to prevent or deter the prohibited conduct;
 - c. The student organization took prompt and effective action to prevent or stop the prohibited conduct or mitigate its effects once the organization or its officers became aware or reasonably should have become aware of the prohibited conduct;
 - d. The student organization or its officers promptly reported the prohibited conduct to an appropriate University official and any other appropriate authorities; and/or
 - e. The student organization addressed any prohibited conduct of its members through an organizational sanction or punishment.

C. Prohibited Conduct for which students and student organizations, when applicable, are subject to sanctions falls into the following categories:

1. **Academic dishonesty**, including but not limited to cheating, plagiarism, unauthorized use of artificially generated content, or sabotage. The Board of Curators recognizes that academic honesty is essential for the intellectual life of the University. Faculty members

have a special obligation to expect high standards of academic honesty in all student work. Students have a special obligation to adhere to such standards. In all cases of academic dishonesty, the instructor shall make an academic judgment about the student's grade on that work and in that course, which shall not be considered a sanction for prohibited conduct under this rule. The instructor shall, consistent with other policies, report the alleged academic dishonesty to the Primary Administrative Officer.

a. The term **cheating** includes but is not limited to: (i) use of any unauthorized assistance in taking quizzes, tests, examinations or other assessments; (ii) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; (iii) acquisition or possession without permission of tests or other academic material belonging to a member of the University faculty or staff; or (iv) knowingly providing any unauthorized assistance to another student on quizzes, tests, examinations, or other assessments.

b. The term **plagiarism** includes, but is not limited to: (i) use by paraphrase or direct quotation of the published work of another source without properly crediting the author with footnotes, citations or bibliographical reference; (ii) unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials; or (iii) unacknowledged use of original work/material that has been produced through collaboration with others without release in writing from collaborators.

c. The term **unauthorized use of artificially generated content**, includes, but is not limited to (i) use of artificial intelligence tools or other tools that generate artificial content in taking quizzes, tests, examinations, or other assessments without permission from the instructor; (ii) submitting work for evaluation as one's own that was produced in material or substantial part through use of artificial intelligence tools or other tools that generate artificial content without permission from the instructor; (iii) using artificial intelligence tools or other tools that generate artificial content in a manner contrary to instructions from the instructor; or (iv) using artificial intelligence tools or other tools that generate artificial content in a manner that violates any other provision of these rules concerning academic dishonesty. Use of commonly available tools such as spelling or grammar checking software or features of software that propose anticipated words or phrases while text is being written will not be considered unauthorized use of artificially generated content unless such use is contrary to instructions from the instructor.

d. The term **sabotage** includes, but is not limited to, the unauthorized interference with, modification of, or destruction of the work or intellectual property of another member of the University community.

2. Forgery, alteration, or misuse of University documents, records or identification, or furnishing information to the University that the student or student organization knows or reasonably should know is false.

3. Physical abuse or other physical conduct which threatens or endangers the health or safety of any person.

4. Stalking another by engaging in a course of conduct directed at a specific person knowing or consciously disregarding a substantial and unjustifiable risk that the course of conduct would cause a reasonable

person to (A) fear for their safety or the safety of others; or (B) suffer substantial emotional distress.

5. Violation of the University's Equal Employment/Education Opportunity and Nondiscrimination Policy located at Section 600.010 of the Collected Rules and Regulations.

6. Violation of the University's Sexual Harassment under Title IX Policy located at Section 600.020 of the Collected Rules and Regulations.

7. Threats, defined as communication of a serious expression of intent to commit an act of unlawful violence against an individual or identifiable group, such that the individual or group would reasonably fear violence, regardless of whether the communicating individual actually intends to carry out the threat, and in which the person engaging in the communication knew or consciously disregarded a substantial and unjustifiable risk that it would have such an effect on the individual or identifiable group.

8. Participating in attempted or actual taking of, damage to, or possession without permission of property of the University or of a member of the University community or a campus visitor.

9. Unauthorized possession, duplication or use of keys or other means of access to any University facilities or unauthorized entry to or use of University facilities, property or resources.

10. Misuse of University or personal property in a manner that creates a safety hazard or unauthorized use of safety equipment.

11. Deliberately setting off a fire or other emergency alarm without justified reason or knowingly giving a false report of a crime or emergency.

12. Violation of the available written policies, rules or regulations of the University or any of its units applicable to the student under the circumstances or of material conduct standards identified in contracts or agreements the student has entered into with the University, including, but not limited to, those governing residence in the University-provided housing, or the use of University facilities, or student organizations, or the time, place or manner of public expression.

13. Violation of applicable federal, state, foreign or local law or ordinance, that directly impacts the University's activities, programs, property, students, employees, or volunteers or indicates that the individual poses a risk to the safety, welfare, or well-being of the University's students, employees, or volunteers.

14. Manufacture, use, possession, sale or distribution of alcoholic beverages or any controlled substance under state or federal law without proper prescription or required license or as expressly permitted by law or University regulations, including operating a vehicle on University property, or on streets or roadways adjacent to and abutting a campus, under the influence of alcohol or a controlled substance as prohibited by law of the state of Missouri. To the extent there is any inconsistency between state and federal law as to circumstances in which manufacture, use, possession, sale or distribution of a substance is expressly permitted, federal law will govern to the extent appropriate to facilitate the University's compliance with the Drug Free Schools and Communities Act and any other applicable federal law.

15. Substantially disrupting, or inciting others to substantially disrupt:

- a. University operations, functions or activities including, but not limited to classes or other teaching, research, study, lectures, performances, meetings, interviews, living or learning communities, administrative business, or ceremonies or other public events, regardless of whether such operations, functions or activities are conducted in-person or through information technology resources; or
- b. Authorized or permissible non-University activities that occur at a location owned or controlled by the University or through information technology resources provided by the University.

16. Failure to comply with lawful directions of University officials acting in the performance of their duties or failure to identify one's self to University officials acting in the performance of their duties when reasonably requested to do so and upon reasonable explanation of the reason for the request for identification.

17. Failure to comply with and complete all sanctions and remedial actions applied under Section 200.020 or Chapter 600 within the time frame specified.

18. The possession or use of firearms, explosives, other weapons, or hazardous chemicals that violates federal or state law or applicable foreign law or University rules.

19. Hazing, defined as an act that endangers the mental or physical health or safety of a student, or an act that is likely to cause physical or psychological harm to any person within the University community, or that destroys or removes, damages, defaces, or tampers with public or private property, for the purpose of initiation, admission into, affiliation with, or as a condition for continued membership in a group or organization. Participation or cooperation by the person(s) being hazed does not excuse the violation. Failure by a group's or organization's executive officers to intervene to prevent, discourage, and/or report hazing of which they are aware or reasonably should be aware also will be deemed a violation of this policy

20. Misuse of information technology resources in accordance with University policy, including but not limited to:

- a. Actual or attempted theft or other abuse;
- b. Unauthorized entry into a file to use, read, or change the contents, or for any other purpose;
- c. Unauthorized transfer of a file;
- d. Unauthorized use of another individual's identification and password;
- e. Use of information technology facilities to interfere with the work of another student, faculty member, or University official;
- f. Use of information technology facilities to interfere with normal operation of any University information technology system;
- g. Knowingly causing a virus, malware, or other means designed to disrupt, damage or gain unauthorized access to become installed in any information technology system or file; or
- h. Violation of Section 110.005 of the Collected Rules or Regulations or other University policy governing use of computing resources

21. Retaliation, False Reporting, Witness Intimidation or Harassment, and Interference.

a. Retaliation is any adverse action taken against a person because of that person's participation or refusal to participate in the process set forth in CRR 200.020, provided that the exercise of rights protected under the First Amendment does not constitute retaliation prohibited under this section. Any person who engages in such retaliation shall be subject to disciplinary action, up to and including expulsion or termination, in accordance with applicable procedures. Any person who believes they have been subjected to retaliation is encouraged to notify the Primary Administrative Officer. The University will promptly respond to all claims of retaliation in accordance with this policy.

b. False reporting is making an intentional false report or accusation in relation to this policy as opposed to a report or accusation, which, even if erroneous, is made in good faith. False reporting is prohibited.

c. No individual, directly or through others, may take any action which attempts to or actually intimidates any potential Party or witness in the student conduct process, or which may interfere with the student conduct process.

d. All University employees and students must be truthful and candid when making any statement or providing any information or evidence to the University throughout the student conduct process, and all documentary evidence must be genuine and accurate. The fact that a determination has been made that a student has or has not engaged in prohibited conduct is not sufficient grounds, by itself, to declare that a false statement or fraudulent evidence has been provided by a Party or witness.

e. Charging an individual with a policy violation for making a materially false statement in bad faith in the course of any proceedings under this policy does not constitute retaliation provided, however that a determination regarding responsibility, alone, is not sufficient to conclude that any Party made a materially false statement in bad faith.

22. Attempting to commit or intentionally and materially aiding or inciting others to commit any of the forms of prohibited conduct stated in this rule.

Student Disciplinary Matters

200.20 Rules of Procedures in Student Conduct Matters

200.020 Rules of Procedures in Student or Student Organization Conduct Matters

Bd. Min. 11-8-68, Amended Bd. Min. 3-20-81; Bd. Min. 12-8-89; Amended 5-19-94; Bd. Min. 5-24-01; Bd. Min. 7-27-12, 6-19-14; Revised 9-22-14 by Executive Order 41; Revised 11-3-15

by Executive Order 41; Amended 2-9-17; Bd. Min. 9-24-20; Amended 6-29-23.

A. Preamble. The following rules of procedure in student or student organization conduct matters are hereby adopted in order to ensure insofar as possible and practicable (a) that the requirements of procedural due process in student conduct proceedings will be fulfilled by the University, (b) that the immediate effectiveness of Section 10.030, which is Article VI of the Bylaws of the Board of Curators relating to student conduct and sanctions may be secured for all students in the University

of Missouri, and (c) that procedures shall be definite and determinable within the University of Missouri. Student or student organization conduct involving discrimination and harassment, including sexual harassment is governed by Section 600.030: *Resolution Process for Resolving Complaints of Sexual Harassment under Title IX*, and Section 600.040: *Equity Resolution Process for Resolving Complaints of Discrimination and Harassment against a Faculty Member or Student or Student Organization*.

The student conduct process, which is governed by these rules of procedure, is further intended to implement Section 200.010 Standard of Conduct in a manner that supports the University's mission as an educational institution and protects the University's educational environment. To the extent consistent with those goals, the student conduct process is intended to be a feature of an educational experience for the students involved, with a range of responses that may include educational responses, remedies or sanctions that will help students recognize the impact of their conduct for themselves and on the broader community and advance their academic and personal development.

The provisions of the Standard of Conduct, these Rules of Procedure, and any University policies concerning student conduct do not create any rights, expressly or by implication, in, for, or on behalf of any person or entity other than students and other members of the University community who are governed by such rules.

B. Definitions. As used in these rules, the following definitions shall apply:

1. **Primary Administrative Officers.** As used in these procedures, the Chief Student Affairs Administrator on each campus shall appoint the Primary Administrative Officer except in cases of academic dishonesty, where the Chief Academic Administrator is the Primary Administrative Officer. Each Primary Administrative Officer may appoint designee(s) who are responsible for the administration of these conduct procedures, provided all such appointments are made in writing and filed with the Chancellor of the campus and the Office of General Counsel. The Primary Administrator's Office will certify in writing that the given designee has been trained in the administration of student conduct matters.

2. **Student Panelist Pool.** The student panelist pool is a panel of students appointed by the Chief Student Affairs Administrator, who may participate on the Student Conduct Committee. Specifically, if requested by the accused student or student organization, the Chair of the Student Conduct Committee shall select not more than three students from the Student Panelist Pool to serve as members on the Student Conduct Committee, or not more than two students to serve as members on a Hearing Panel.

3. **Student.** A person having once been admitted to the University who has not completed a course of study and who intends to or does continue a course of study in or through one of the Universities of the University System. For the purpose of these rules, student status continues whether or not the University's academic programs are in session.

4. **Student Organization.** A recognized student organization which has received official approval in accordance with Section 250.010 of the Collected Rules and Regulations. Three members of the organization may represent the student organization in all proceedings. The registered faculty/staff adviser may be present, but may not act on behalf of the student organization. The organization may utilize an attorney in all proceedings as it chooses, subject to other provisions in this rule. Each student organization shall designate, and such designation shall be on file with the University, the individual who will receive all notices, findings,

determinations and decisions on behalf of the student organization. If the student organization fails to have a designation on file with the University, the President of the organization is the default designee. The registered faculty/staff adviser will also be sent a courtesy copy of all notices, findings, determinations and decisions.

5. **Student Conduct Committee.** As used in these procedures, "Student Conduct Committee," hereinafter referred to as the Committee, is that body on each campus which is authorized to conduct hearings and to make dispositions under these procedures or a Hearing Panel of such body as herein defined.

6. **Hearing Panel.** As used in these procedures, the term "hearing panel" refers to the part of the Student Conduct Committee described in Section 200.020.E.4 below.

7. **Party or Parties.** The term "Party" or "Parties" refers to accused students or student organization and the Primary Administrative Officer in the context of formal procedure and disposition.

C. Sanctions.

1. The following sanctions, when applicable, may be imposed upon any student or student organization found to have violated the Standard of Conduct. More than one of the sanctions may be imposed for any single violation. Sanctions include but are not limited to:
 - a. **Warning.** A notice in writing to the student or student organization that there is or has been a violation of the institutional regulations.
 - b. **Probation.** A written reprimand for violation of specified regulations. Probation is for a designated period of time and includes the probability of more severe sanctions if the student or student organization is found to be violating any institutional regulation(s) during the probationary period.
 - c. **Loss of Privileges.** Denial of specified privileges of the student or student organization for a designated period of time.
 - d. **Restitution.** Compensation by the student or student organization for loss, damage, or injury to the University or University property. This may take the form of appropriate service and/or monetary or material replacement.
 - e. **Discretionary Sanctions.** Work assignments, service to the University or community, or other related discretionary assignments, or completion of educational programming or counseling.
 - f. **University System Housing Suspension.** Separation of the student or student organization from University owned or operated housing for a definite period of time, after which the student or student organization is eligible to return. Conditions for readmission may be specified.
 - g. **University System Housing Expulsion.** Permanent separation of the student or student organization from University owned or operated housing.
 - h. **University System Dismissal.** An involuntary separation of the student from the University System for misconduct. It is less than permanent in nature and does not imply or state a minimum separation time.
 - i. **Campus Suspension.** A student is suspended from being allowed on a specific University campus for a definite period of time. Logistical modifications consistent with the sanction imposed, may be granted at the discretion of the Chief Student Affairs Administrator (or Designee) of that campus. Conditions for readmission may be specified.

- j. **University System Suspension.** Separation of the student from the University System for a definite period of time, after which the student is eligible to return. Logistical modifications consistent with the sanction imposed, may be granted at the discretion of the Chief Student Affairs Administrator (or Designee) of the campus where the modifications would apply. Conditions for readmission may be specified.
- k. **University System Expulsion.** Permanent separation of the student from the University System.
- l. **Withdrawal of Recognition.** Student organization loses its official approval as a recognized student organization. May be either temporary or permanent. Conditions for future approval may be specified.

2. The sanctions listed above shall be imposed in a manner that is reasonably proportionate to the violation in question, with consideration given to the severity of the violation, culpability of those involved, past dispositions in similar cases, and other factors as appropriate.

3. Temporary Action for a Student. The Chancellor or Designee may at any time temporarily suspend, deny readmission to, or place conditions on the attendance or participation of a student, effective immediately, pending formal procedures when the Chancellor or Designee finds and believes from available information that the student's continued attendance or participation would seriously disrupt the University operations or constitute a danger to the health, safety, or welfare of members of the University community. The Chancellor or Designee will give the student notice of such temporary action and the detailed reason for it in the same manner as for a Notice of Hearing described in these Rules of Procedure. Notice shall be deemed delivered in the same manner as a Notice of Hearing. Within five (5) business days of delivery of the notice, the student may submit a written response requesting reconsideration and/or modification of the temporary action. The time for submitting such written response may be extended upon written request at the discretion of the Chancellor or Designee for good cause. After due consideration of the response and all relevant circumstances, the Chancellor or Designee will sustain, remove, or modify the temporary action and notify the student of that decision. The appropriate procedure to determine the future status of the student will be initiated within seven (7) business days from the date the temporary action is taken.

4. Temporary Action for a Student Organization. The Chancellor or Designee may at any time temporarily suspend or place conditions on the student organization's University recognition, access to and use of the University campus/facilities/events and/or all other University activities or privileges for which the student organization might otherwise be eligible, effective immediately, pending formal procedures when the Chancellor or Designee finds and believes from available information that the student organization's continued recognition, access, or use would seriously disrupt the University or constitute a danger to the health, safety, or welfare of members of the University community. The Chancellor or Designee will give the student organization notice of such temporary action and the detailed reason for it in the same manner as for a Notice of Hearing described in these Rules of Procedure. Notice shall be deemed delivered in the same manner as a Notice of Hearing. Within five (5) business days of delivery of the notice, the student organization may submit a written response requesting reconsideration and/or modification of the temporary action. The time for submitting such written response may be extended upon written request at the discretion of the Chancellor or Designee for good cause. After due consideration of the response and all relevant circumstances, the Chancellor or Designee will sustain, remove, or modify the temporary action and notify the student organization

of that decision. The appropriate procedure to determine the future status of the student organization will be initiated within seven (7) business days from the date the temporary action is taken.

D. Records Retention. Student conduct records shall be maintained in accordance with applicable University rules and records retention policies.

E. Policy and Procedures.

1. General Policies and Rights.

a. **Standard of proof and presumption of non-responsibility.**

A student or student organization is presumed not responsible for any alleged violation of the Standard of Conduct until a determination regarding responsibility is made at the conclusion of the student conduct process. The standard of proof will be "preponderance of the evidence," defined as determining whether evidence shows it is more likely than not that a violation occurred. The burden of proof and the burden of gathering evidence sufficient to reach a determination regarding responsibility rests on the University.

b. Other proceedings. Students may potentially be held accountable through the University's student conduct process and other educational operations, as well as through other systems, such as the criminal justice system, civil litigation, or proceedings of various regulatory agencies or outside non-governmental organizations. The University's student conduct process is separate from other systems, and action under the University's student conduct process may occur before, during or after any proceedings through other systems. The University's student conduct process, including any hearing, is not a criminal or judicial proceeding and is designed to address student conduct in an educational context; therefore, alleged violations of the Standard of Conduct will be addressed independently of any outcome or proceedings in other non-University systems.

c. **General rights of students and student organizations involved in the student conduct process.**

1. To be treated with respect by university officials;
2. To be free from retaliation;
3. To have access to university support resources (such as counseling and mental health services and University health services);
4. To receive timely detailed written notice of any charges against them and the date, time, location, participants, and purpose of all hearings, investigative interviews, or other meetings;
5. To have an adviser of the student's or organization's choice, who may be, but is not required to be, an attorney, accompany the student or organization's representatives to all interviews, meetings, hearings and proceedings throughout the conduct process;
6. To refuse to have an allegation resolved through informal disposition without prejudice;
7. Not to present self-incriminating information;
8. To remain silent, with such silence not considered as evidence supporting a finding of a violation;
9. To receive written notice of any delay of the process or limited extension of time frames; and
10. Not to be subject to charges under these procedures if in a prior proceeding the student or student organization has

received a notice of proposed informal disposition or notice of hearing under these rules regarding the same incident of alleged misconduct.

d. Responsible action in emergencies. The University encourages students to take responsible action in emergency situations, even if prohibited conduct may have occurred in conjunction with such an emergency.

1. Examples of such responsible action include:
 - a. Immediately alerting appropriate officials (e.g., calling 911) of the emergency, including providing the student's own name and the location and description of the emergency;
 - b. Remaining at the scene of the emergency, so long as it is safe to do so; and
 - c. Cooperating with emergency officials.

2. Decision makers acting under these rules of procedure will favorably consider the positive impact of taking responsible action in an emergency situation when determining the appropriate response to any alleged prohibited conduct by a student or student organization that may have occurred in conjunction with the emergency situation. This may include implementing educational responses or remedies other than conduct proceedings or reduced sanctions. Further, the University will not use statements made by a student in the course of immediately reporting an emergency situation to appropriate authorities as evidence to support a finding of a violation of the Standard of Conduct by the reporting student or a student organization of which the student is a member.

3. Failure to take responsible actions in an emergency situation may be considered an aggravating factor in determining sanctions for prohibited conduct.

4. Students who are acting in capacities as student workers or student volunteers are encouraged to follow applicable policies or training they have received from the university in addressing any emergency situation.

e. Confidentiality. The University must keep confidential the identity of any student who has made a report of alleged prohibited conduct, any student or student organization that has been accused or is otherwise suspected of prohibited conduct, and any witness, except as may be permitted by the FERPA statute, 20 U.S.C. 1232g, or FERPA regulations, 34 CFR part 99, or as required by law, or to carry out the purposes of applicable law, including the conduct of any investigation, hearing, or judicial proceeding arising thereunder. The University will not prevent any review or copying of law enforcement records that is allowed by law.

f. Processing fee. As approved and modified by the Chancellor from time to time, each campus may adopt a processing fee not to exceed \$300 to be charged to any student or student organization found responsible for prohibited conduct to defray costs of the student conduct process. Such fee may be set at different levels for student organizations than for individual students, but shall not otherwise vary by organization or individual.

2. Preliminary Procedures. The Primary Administrative Officer or Designee (hereafter "Primary Administrative Officer") is responsible for application and interpretation of the Standard of Conduct and determining appropriate approaches to implement it. Upon receiving a report of or otherwise becoming aware of potential misconduct, the Primary

Administrative Officer will devise and implement an educational response on how to proceed based on relevant factors, including but not limited to the severity of the potential misconduct; health, safety, or welfare of the student and members of the University community; and impact on members of the University community and the educational environment.

a. Alternative resolutions. At any point in the process, the Primary Administrative Officer may work with students involved under the circumstances to explore alternative educational solutions or remedies or other alternative resolutions in lieu of formal conduct procedures, findings of responsibility or possible sanctions. Informal negotiated resolutions without necessity of a hearing are encouraged and statements made by a student or student organization or their adviser during such negotiations shall not be used against the student or student organization in later hearings. A student or student organization may refuse to participate in alternative educational solutions or remedies or other alternative resolutions and in the event of such refusal, the matter will be addressed under these Rules of Procedure.

b. Investigation; Consultations. The Primary Administrative Officer shall investigate any student or student organization misconduct before initiating formal conduct procedures and give the student or student organization the opportunity to present a personal or organizational version of the incident or occurrence. The Primary Administrative Officer shall utilize the preponderance of the evidence standard in deciding whether or not to initiate formal conduct procedures and in deciding whether or not to offer an informal disposition in accordance with Section 200.020.E.2 below. The Primary Administrative Officer may discuss with any student or student organization such alleged misconduct and the student or student organization shall attend such consultation as directed by the Primary Administrative Officer. If directing attendance at a consultation, the Primary Administrative Officer will inform the student or student organization of the right to have an adviser attend and participate. Parties involved in the student conduct process are not prohibited from discussing the allegations under investigation or from gathering and presenting relevant evidence. Parties may present witnesses and other inculpatory and exculpatory evidence so long as such evidence is relevant.

c. Use of Non-Binding Student Courts, Etc. The Primary Administrative Officer, in making an investigation and informal disposition, may choose to utilize student courts and boards and/or divisional deans to make non-binding recommendations to the Primary Administrative Officer. In that event, the Primary Administrative Officer shall notify the student or student organization of the identity and contact information of the student court, board, or divisional dean from which a recommendation is being sought. Such notification also shall inform the student or student organization that participation in any proceeding before the student court, board, or divisional dean is voluntary on the part of the student or student organization and that any resulting recommendation is non-binding. There will be no adverse consequence or inference from declining to participate in any proceeding before the student court, board, or divisional dean. Neither the choice to decline to participate nor the recommendation of the student court, board, or divisional dean will be shared with the Committee in connection with any subsequent hearing.

d. Departure from University During Process. Should a student decide to leave the University and not participate in the investigation or other steps of the student conduct process without signing a

Voluntary Permanent Separation and General Release Agreement and without the approval of the Primary Administrative Officer, the Primary Administrative Officer may place a hold up on the student's readmission and the student will not be permitted to return to the University System until the student conduct process is completed with respect to the potential prohibited conduct. Should a student organization decide to abandon recognition by the University and not participate in the investigation or other steps of the student conduct process, the Primary Administrative Officer may direct that the student organization may not be granted recognition in the future until the student conduct process is completed with respect to the potential prohibited conduct.

3. Informal Dispositions. The Primary Administrative Officer shall have the authority to propose an informal disposition consisting of a preliminary determination and proposed appropriate remedies and/or sanctions. The Primary Administrative officer shall provide written notice of the proposed informal disposition. The notice shall inform the student or student organization that the failure to reject the proposed informal disposition within ten (10) business days may be considered as acceptance. If the student or student organization fails to submit a rejection to the Primary Administrative Officer within ten (10) business days, the proposed informal disposition shall become final. The time for rejecting the informal disposition may be extended upon written request at the discretion of the Primary Administrative Officer for good cause. If the student or student organization rejects informal disposition it must be in writing and shall be forwarded to the Committee. The Primary Administrative Officer may refer cases to the Committee without first offering informal disposition.

4. Formal Procedure and Dispositions

a. Student Conduct Committee:

1. The Committee shall be appointed by the Chief Student Affairs Administrator and shall have the authority to impose appropriate sanctions upon any accused student or students or student organization appearing before it.
2. When deemed appropriate or convenient by the Chair of the Committee, the Chair may divide the Committee into Hearing Panels each consisting of no less than five (5) Committee members of which no more than two (2) shall be students. If the Chair creates such Hearing Panels, the Chair of the Committee shall designate a Hearing Panel Chair. A Hearing Panel has the authority of the whole Committee in those cases assigned to it. The Chair of the Committee or a Hearing Panel Chair shall count as one member of the Committee or Hearing Panel and have the same rights as other members.
3. The Chief Student Affairs Administrator shall appoint a panel of students, to be known as the Student Panelist Pool. Upon written request of an accused student or the student organization designee before the Committee made at least seventy-two (72) hours prior to the hearing, the Chair of the Committee shall appoint from the Student Panelist Pool not more than three students to sit with the Committee or the Hearing Panel Chair shall appoint two students to sit with the Hearing Panel for that particular case. When students from the Student Panelist Pool serve as members of the Committee or as members of the Hearing Panel, they shall have the same rights as other members of the Committee or Hearing Panel.

4. The Chief Student Affairs Administrator shall ensure that members of the Committee and Student Panelist Pool receive training on the Standard of Conduct and these Rules of Procedure. Members of the Committee and Student Panelist Pool will be removed if they fail to satisfy training requirements, as determined by the Chief Student Affairs Administrator.
5. Hearing Panel members, including the chair, or other Student Conduct Committee members who are to participate in the hearing of a case shall not have a conflict of interest with respect to or bias for or against accused students or student organizations generally, or for or against any Party, individual who reported alleged prohibited conduct, or Party affected by the alleged prohibited conduct. If such a member identifies a conflict of interest or bias, or otherwise cannot make an objective determination, the member must recuse from the proceedings in advance of the hearing.
6. The accused student or student organization will have been given the names of the Committee or Hearing Panel members and Chair who will hear the case in the Notice of Hearing. Should any accused student or student organization object to any member or chair, they must raise all objections, in writing, to the Chief Student Affairs Administrator no later than five (5) business days prior to the hearing unless, for good cause, the Chief Student Affairs Administrator allows objections to be raised later. Such objection shall be confidential and shall not be disclosed to the Committee or Hearing Panel. A member may be unseated by the Chief Student Affairs Administrator for good cause. Good cause may include, but is not limited to, bias that would preclude an impartial hearing or circumstances in which the member's or chair's involvement could impact the accused student's work or learning environment due to current or potential interactions with the member or chair (e.g., a panel member serving as an instructor or adviser to the accused student or student organization). If the Chief Student Affairs Administrator determines that a member or chair should be replaced, the Chief Student Affairs Administrator will select a replacement from the Student Conduct Committee. The Chief Student Affairs Administrator will provide a written response to all Parties addressing any objections to a member or chair.

b. General Statement of Procedures. A student or student organization accused of violating the Student Conduct Code is entitled to a written notice of the specific charges at issue and a formal hearing unless the matter is disposed of under the rules for informal disposition. Student conduct proceedings serve educational purposes identified in the Standard of Conduct and these Rules of Procedure and are not to be construed as judicial trials. Formal rules of evidence and civil procedure do not apply; but care shall be taken to comply as fully as possible with the spirit and intent of the procedural safeguards set forth in these Rules of Procedure. For formal hearing dispositions, decisions on responsibility for conduct violations must be based on relevant information submitted at the hearing, and any relevant information provided to the hearing panel in advance of the hearing with notice to the accused student or student organization and the Primary Administrative Office and the opportunity for the Parties to respond to such information. The Office of the General Counsel shall be legal adviser to the Committee and the Primary Administrative Officer, but the same attorney from the Office of the General Counsel shall not perform both roles with regard to the same case and attorneys from the Office of the General Counsel performing distinct roles on the same case will not discuss the merits of the case with one another.

c. Notice of Hearing. At least twenty (20) business days prior to the Student Conduct Committee Hearing, or as far in advance as is reasonably possible if an accelerated resolution process is scheduled with the consent of the accused student or student organization, the Primary Administrative Officer will send a letter to the accused student or student organization (or to the student or student organization's adviser if requested by the student or student organization) with the following information:

1. A detailed description of the alleged conduct at issue and applicable policies, rules, or regulations alleged to be violated;
2. A description of the applicable procedures, including right to have an adviser, who may be, but is not required to be, an attorney;
3. A statement of the potential sanctions/remedial actions that could result;
4. A statement notifying the student or student organization that they will be permitted to inspect, copy, and review any evidence obtained as part of the investigation that is directly related to the allegations to be addressed at the hearing, including the evidence upon which the University does not intend to rely in reaching a determination regarding responsibility and including inculpatory or exculpatory evidence;
5. A statement notifying the Parties that they must be truthful when making any statement or providing any information or evidence to the University throughout the student conduct process, and all documentary evidence must be genuine and accurate;
6. A statement that nothing in these procedures is intended to alter any rights the individual may have under applicable state or federal statutory laws or the U.S. Constitution;
7. The names of the Committee or Hearing Panel members and Chair who will hear the case, and information on how to raise an objection to any member or chair and the timeline in which to raise any objections; and
8. The time, date and location of the hearing. If any Party does not appear at the hearing, the hearing will be held in their absence.

This Notice of Hearing letter will be made in writing and will be delivered either: 1) in person, 2) by email only to the Party's University-issued email account if the Party has consented electronically or in writing to receipt of all notifications by email; or 3) mailed to the mailing address of the respective Party as indicated in the official University records and emailed to the Party's University-issued email account. If there is no local address on file, mail will be sent to the Party's permanent address. Notice also shall be mailed and emailed to the Party's adviser, if an adviser has been identified by the Party.

Notice is presumptively deemed delivered, when: 1) provided in person or 2) emailed to the Party (when prior consent - whether electronically or in writing - has been given to receipt of all notifications by email or 3) when mailed and emailed to the Party and the Party's adviser, if an adviser has been identified by the Party.

Any request to reschedule the hearing shall be made in writing to the Chair, who shall have the authority to reschedule the hearing if the request is timely and made for good cause. The Chair shall notify the Primary Administrative Officer and the accused student or student organization of the new date for the hearing. If the accused student or student organization fails to appear at the scheduled time, the Committee may hear and determine the matter.

5. Right to Petition for Review.

a. Except in cases where a right of appeal applies, the Primary Administrative Officer or the accused student or student organization may petition the Chancellor or Designee in writing for a review of the decision within ten (10) business days after written notification. A copy of the Petition for Review must also be served upon the non-appealing Party or Parties within such time. The Petition for Review must state the grounds for review in detail, and the non-appealing Party or Parties may answer the petition within ten (10) business days. Upon written request, the Chancellor or Designee may extend the time for petition or answer for good cause.

b. The Chancellor or Designee may review or refuse to review the decision. In all cases where the Petition for Review is refused, the action of the Committee shall be final. If review is granted, the Chancellor or Designee may affirm, reverse or modify the decision, or remand the case for further proceedings. The action of the Chancellor or Designee after review shall be final unless it is to remand the matter for further proceedings.

6. Right of Appeal (involving issues of University expulsion, University dismissal, University suspension or Withdrawal of Recognition only).

a. When an accused student is expelled, dismissed, or suspended from the University or when a student organization has its recognition withdrawn, either temporarily or permanently, by the Committee or when such sanctions have been expressly requested by the Primary Administrative Officer and refused by the Committee, the Primary Administrative Officer or the accused student or student organization may appeal such decision to the Chancellor by filing written notice of appeal stating the grounds for appeal in detail with the Chancellor within ten (10) business days after notification of the decision of the Committee. The appealing Party may file a written memorandum for consideration by the Chancellor with the Notice of Appeal. A copy of the Notice of Appeal and any memorandum must also be served upon the non-appealing Party or Parties within such time, and any other Party may submit a reply to such memorandum within ten (10) business days. Upon written request, the Chancellor or Designee may extend the time for appeal or reply for good cause.

b. The Chancellor shall review the record of the case and the appeal documents and may affirm, reverse or modify the decision, or remand the case for further proceedings. The Chancellor shall notify the accused student or student organization in writing of the decision on the appeal. The action of the Chancellor shall be final unless it is to remand the matter for further proceedings.

7. Grounds for Review or Appeal. Grounds for appeals are limited to the following:

a. A material deviation from established procedures that affected the outcome of the matter;

b. To consider new evidence that was not reasonably available at the time the decision was made that could affect the outcome of the matter;

c. The Committee members or Student Panelists demonstrated a conflict of interest or bias against students or student organizations generally or against the particular student or student organization that affected the outcome of the case; and/or

d. The sanctions fall outside the range typically imposed for this offense, or for the cumulative conduct record of the student or student organization.

Review or appeal is not intended to be a full rehearing of the case and is therefore deferential to the original findings. In most cases, appeals are confined to a review of the written documentation and Record of the Case, and relevant documentation regarding the grounds for review or appeal. A review or appeal granted based on new evidence should normally be remanded to the original decision-maker for reconsideration. The Chancellor or Designee will normally render a written decision, with an explanation of reasons, on the review or appeal to all Parties within ten (10) business days after receiving the answer or reply, or after the deadline for answer or reply has passed without a submission being made. In the event the Chancellor or Designee is unable to render a written decision within ten (10) business days, the Chancellor or Designee will promptly notify the Parties in writing of the delay. Once a review or appeal is decided, the outcome is final. Further appeals and grievances are not permitted.

8. Status During Appeal.

a. In cases of suspension, dismissal, or expulsion where a Notice of Appeal is filed within the required time, a student may petition the Chancellor in writing for permission to attend classes pending final determination of appeal. The Chancellor may permit a student to continue in school under such conditions as may be designated pending completion of appellate procedures, provided such continuance will not seriously disrupt the University or constitute a danger to the health, safety, or welfare of members of the University community. In such event, however, any final sanctions imposed shall be effective from the date of the action of the Committee.

b. In cases of withdrawal of recognition where a Notice of Appeal is filed within a required time, a student organization may petition the Chancellor in writing to stay the withdrawal of recognition while the appeal is pending. The Chancellor may stay the withdrawal of recognition under such conditions as may be designated pending completion of appellate procedures, provided such continuance will not seriously disrupt the University or constitute a danger to the health, safety, or welfare of members of the University community.

9. Student Honor System. Forums under the student honor systems established for investigating facts, holding hearings, and recommending and imposing sanctions are authorized when the student honor code or other regulations containing well defined jurisdictional statements and satisfying the requirements of Article VI of the Bylaws of the Board of Curators, Section 10.030, and notice thereof in writing has been furnished to students subject thereto. Though the student honor system has jurisdiction, together with procedures set forth therein, instead of the Primary Administrative Officer, the standard of conduct called for in any such student honor system shall be deemed to contain at a minimum the same standards set forth in Section 200.010, entitled Standards of Conduct. Procedures shall satisfy the requirements of Article VI of the Board of Curators' Bylaws, Section 10.030, and shall contain procedures herein before stated insofar as appropriate and adaptable to the particular situation. Before it can be implemented, a student honor system and any amendment to a student honor system must be approved as provided herein. A proposed student honor system or amendment must be approved by the applicable dean, then the Chancellor, and then the Office of the General Counsel. After such approvals, the proposed student honor

system or amendment must be submitted to the Board of Curators for approval. Students subject to student honor systems shall have the rights of appeal as set forth in Section 200.020.E.6.

F. Hearing Procedures.

1. Pre-Hearing Disclosures.

- a. **Primary Administrative Officer's Disclosure.** At least ten (10) business days prior to the hearing, the Primary Administrative Officer will provide the accused student or student organization, the student's or organization's adviser if an adviser has been identified by the student or organization, and the Chair:
 - i. An investigative report that fairly summarizes the relevant evidence in an electronic format or hard copy for their review and any written response as described below;
 - ii. A list of the names of the proposed witnesses to be called by the Primary Administrative Officer;
 - iii. Copies of all proposed documentary, photographic, video, or audio evidence;
 - iv. Notification that all of the evidence gathered in the course of the investigation that is directly related to the allegations to be addressed at the hearing is available to the student or student organization and instructions regarding how to request access to that information, which shall include evidence upon which the University does not intend to rely in reaching a determination regarding responsibility and including inculpatory or exculpatory evidence;

1. If any evidence that otherwise would have been subject to inclusion in the notice is received after the notice is issued, such evidence will be provided to the accused student or student organization as soon as practicable before the hearing date; and

- v. Notice that the Parties may request a virtual hearing and/or any necessary accommodations.

- b. **Student or Student Organization's Disclosure.** At least five (5) business days prior to the hearing, the accused student or student organization will provide to the Primary Administrative Officer and the Chair:

1. Any written response to the investigative report that the student or student organization may wish to submit;
2. A list of the names of proposed witnesses to be called by the student or student organization and the name of any adviser who will be attending; and
3. Copies of all proposed documentary, video, or audio evidence.

- c. **Rebuttal Disclosure.** If the Primary Administrative Officer identifies rebuttal witnesses or evidence to be called or submitted, the Primary Administrative Officer shall provide notice of such witnesses or evidence to the accused student or student organization at least two (2) business days before the hearing.

2. Request for Alternative Attendance or Questioning Mechanisms.

The Chair, in consultation with and by agreement of the Parties, may decide in advance of the hearing that certain witnesses do not need to be physically present if their testimony can be adequately summarized in the investigative report or during the hearing. All Parties will have ample opportunity to present facts and arguments in full and question and cross

examine all present witnesses during the hearing. All Parties shall have the right to have an adviser, who may be, but is not required to be, an attorney, participate in the hearing.

All hearings will be live (in person or virtually). However, at the request of either Party, or by the University's designation, the live hearing may occur with the Parties located in separate rooms with technology enabling the Committee, the Parties and their advisers to simultaneously see and hear the Party or the witness answering questions. Should any hearing take place in this manner, the Chief Student Affairs Administrator or Designee shall be in charge of the technology during the hearing. The University will make reasonable accommodations for the Parties in keeping with the principles of equity and fairness. Such witnesses, however, shall still be subject to cross-examination.

3. Conduct of Hearing. The Chair shall preside at the hearing, call the hearing to order, call the roll of the Committee in attendance, ascertain the presence or absence of the student or representatives of the student organization accused of misconduct, verify the receipt of notices of hearing by the student or student organization, report any continuances requested or granted, establish the presence of any adviser of the student or student organization (who may be, but is not required to be, an attorney) and the registered faculty/staff adviser of the student organization, and call to the attention of the accused student or student organization and the adviser any special or extraordinary procedures to be employed during the hearing and permit the student or student organization to make suggestions regarding or objections to any procedures for the Committee to consider.

a. Opening Statements.

1. The Primary Administrative Officer shall make opening remarks outlining the general nature of the case.
2. The accused student or student organization or adviser may make a statement to the Committee about the charge at this time or at the conclusion of the University's presentation.

b. University Evidence.

1. The Primary Administrative Officer may state any facts the investigation has revealed. University witnesses are to be called and identified or written reports of evidence introduced as appropriate. The Committee or Panel may not rely on information in a report provided by a witness whose identity has not been disclosed to the accused Party.
2. The Committee may question witnesses at any time.
3. The accused student or student organization or the adviser may question and cross examine witnesses or examine evidence at the conclusion of the University's presentation.

c. Accused Student or Student Organization Evidence.

1. If the accused student or student organization has not elected to make a statement earlier under a.(2) above, the accused student or student organization or adviser shall have the opportunity to make a statement to the Committee about the charge.
2. The accused student or student organization may present evidence through witnesses or in the form of written memoranda.

3. The Committee or Hearing Panel may question the accused student or representatives of the accused student organization or witnesses at any time. The Primary Administrative Officer may question the accused student or witnesses. Provided, however, that the accused student or student organization retains the right to remain silent and such silence shall not be considered as evidence supporting a finding of a violation.

d. Rebuttal Evidence. The Committee may permit the University or the accused student or student organization or adviser to offer a rebuttal of the others' presentation(s).

e. Rights of Student Conduct Committee. The Committee shall have the right to:

1. Hear together cases involving more than one student or more than one student organization which arise out of the same transaction or occurrence, but in that event shall make separate findings and determinations for each student or student organization;
2. Permit a stipulation of facts by the Primary Administrative Officer and the student or student organization involved;
3. Permit the incorporation in the record by reference of any documentation, produced and desired in the record by the University or the accused, provided the other Party has had an opportunity to review and respond to the documentation;
4. Question witnesses or challenge other evidence introduced by either the University or the student or student organization at any time;
5. Hear from the Primary Administrative Officer about dispositions made in similar cases and any dispositions offered to the accused student or student organization appearing before the Committee;
6. Call additional witnesses or require additional investigation;
7. Dismiss any action at any time or permit informal disposition as otherwise provided;
8. Permit or require at any time amendment of the Notice of Hearing to include new or additional matters which may come to the attention of the Committee before final determination of the case; provided, however, that in such event the Committee shall grant to the student or student organization or Primary Administrative Officer such time as the Committee may determine reasonable under the circumstances to answer or explain such additional matters;
9. Dismiss any person from the hearing who interferes with or obstructs the hearing or fails to abide by the rulings of the Chair of the Committee; and
10. Suspend summarily students from the University who, during the hearing, obstruct or interfere with the course of the hearing or persistently fail to abide by the ruling of the Chair of the Committee on any procedural question or request of the Chair for order.

f. Communications. The Committee shall avoid communication with either Party or their advisers regarding the merits of a pending case prior to the hearing without the other Party or its adviser included. Communications for purposes of scheduling are permitted.

4. Rights of Accused Upon Hearing. A student or student organization appearing before a Committee shall have the right to:

- a. Be present at the hearing, which right may be waived by either written notification to the Chair or by failure to appear;
- b. Have an adviser (who may be, but is not required to be, an attorney) present during the hearing, who may actively participate and assist the student as described herein;
- c. To testify at the hearing or refuse to testify at the hearing;
- d. Hear or examine evidence presented to the Committee;
- e. Question witnesses present and testifying;
- f. Present evidence by witnesses or affidavit;
- g. Make any statement to the Committee in mitigation or explanation of the conduct in question;
- h. Request that the hearing be held virtually, with technology enabling participants simultaneously to see and hear each other;
- i. Be informed in writing of the findings of the Committee and any sanctions it imposes; and
- j. Request review or appeal to the Chancellor or Designee as herein provided.

5. Rights of the Primary Administrative Officer Upon Hearing. The Primary Administrative Officer appearing before a Committee shall have the right to:

- a. Be present at the hearing;
- b. Have an attorney from the Office of the General Counsel present as legal adviser to the Primary Administrative Officer, who may actively participate and assist the Primary Administrative Officer as described herein;
- c. To state any facts the investigation has revealed;
- d. Hear or examine evidence presented to the Committee;
- e. Question witnesses present and testifying;
- f. Present evidence by witnesses or affidavit;
- g. Request that the hearing be held virtually, with technology enabling participants simultaneously to see and hear each other;
- h. Be informed in writing of the findings of the Committee and any sanctions it imposes; and
- i. Request review or appeal to the Chancellor or Designee as herein provided.

6. Determination by the Student Conduct Committee. The Committee shall make its findings and determinations based on the preponderance of the evidence in executive session out of the presence of the Primary Administrative Officer and the accused student or student organization. Separate findings are to be made:

- a. As to the conduct of the accused student or student organization, and
- b. On the sanctions, if any, to be imposed. No sanctions shall be imposed on the accused student or student organization unless a majority of the Committee present is convinced by the preponderance of the evidence that the student or student

organization has committed the violation charged. In determining what sanction, if any, is appropriate, the Committee may take into consideration the previous disciplinary history of the accused student or student organization.

7. Official Report of Findings and Determinations. The Committee shall promptly consider the case on the merits and make its findings and determination and transmit them to the Primary Administrative Officer/ Designee(s) and the accused student or student organization designee. The Committee's report shall detail the following:

- a. Identification of the allegations potentially constituting prohibited conduct and the determination of the Committee;
- b. A description of the procedural steps taken;
- c. Findings of fact supporting the determination and any information the Committee excluded from its consideration and why;
- d. Conclusions regarding the application of the University's Standard of Conduct to the facts;
- e. A statement of, and rationale for, the result as to each allegation, including a determination regarding responsibility;
- f. Any disciplinary sanctions to be imposed on the student or student organization; and
- g. The procedures and permissible bases for the Parties to seek review or appeal.

8. Evidentiary and Procedural Questions. The relevancy and admissibility of any evidence offered and procedural questions shall be determined by the Chair, whose ruling shall be final unless the Chair shall present the question to the Committee at the request of a member of the Committee, in which event the ruling of the Committee by majority vote shall be final. In considering evidentiary and procedural questions, the Chair will apply the following rules:

- a. The Chair has the discretion to determine the relevance of any witness or documentary evidence and may exclude any witness, document, or information that is irrelevant, immaterial, cumulative, or more prejudicial than informative.
- b. The Committee shall consider the trustworthiness of all oral or written statements and no oral or written statement shall be considered if the source of the statement has not been disclosed to the Committee and the Parties.
- c. Character evidence is information that does not directly relate to the facts at issue, but instead reflects upon the reputation, personality, or qualities of an individual, including honesty. Such evidence regarding a Party's character is of limited utility and shall not be admitted unless deemed relevant by the decision-maker.
- d. Incidents or behaviors of a Party not directly related to the possible violation(s) will not be considered unless they show a pattern of related misconduct. History of related misconduct by a Party that shows a pattern may be considered only if deemed relevant by the decision-maker.
- e. A student's records that are made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in the professional's or paraprofessional's capacity, or assisting in that capacity, and which are made or

maintained in connection with the provision of treatment to the student, may not be used without that student's express consent.

f. The Chair and Committee shall not require, allow, rely upon, or otherwise use questions or evidence that constitute, or seek disclosure of, information protected under a legally recognized privilege, unless the person holding such privilege has waived the privilege.

9. General Rules of Decorum. The following general rules of decorum shall be adhered to:

- a. All requests to address the Committee shall be addressed to the Chair.
- b. The Chair will rule on all requests and points of order and may consult with Committee's legal adviser prior to any ruling. The Chair's ruling shall be final and all participants shall abide thereby, unless the Chair shall present the question to the Committee at the request of a member of the Committee, in which event the ruling of the Committee by majority vote shall be final.
- c. The Chair or Committee may dismiss any person from the hearing who interferes with or obstructs the hearing or fails to abide by the rulings of the Chair or the Committee.
- d. Rules of common courtesy and decency shall be observed at all times.

10. Advisers / Attorneys. A student or student organization may have an adviser, who may be, but is not required to be, an attorney. Prior to the hearing, the adviser may communicate with the Chair on behalf of the student or student organization, including raising questions or objections or making requests regarding procedural matters.

At the hearing, the adviser may ask any witnesses all relevant questions and follow-up questions, including those challenging credibility, and conduct cross-examination and other questioning. An adviser may request clarification of a procedural matter or object on the basis of procedure at any time by addressing the Chair after recognition. An adviser may make presentations and speak on behalf of their Party and may consult with the student or representatives of the student organization quietly or in writing, or outside the hearing during breaks.

11. Record of Hearing. An audio, video, digital or stenographic record of the hearing shall be maintained. The notice, exhibits, hearing record and the findings and determination of the Committee shall become the "Record of the Case" and shall be filed in the Office of the Primary Administrative Officer and for the purpose of review or appeal be accessible at reasonable times and places to the University, and the accused student(s) or student organization designee.

12. Transcripts. Information regarding expulsions will be noted on transcripts and shared system-wide. The Primary Administrative Officer will inform the Registrar or designee, who will make

Diversity Equity and Inclusion Policies

The following diversity, equity and inclusion policies have been established by the University of Missouri Board of Curators to govern the academic and administrative functions of the four campuses and are available on the UM System website.

600.010 Equal Employment/Educational Opportunity and Nondiscrimination Policy

600.070 Policy Related to Students with Disabilities

330.070 Affirmative Action on Committee Appointments

Students may contact Student Affairs or the Title IX Office to lodge complaints or seek information about these procedures.

Equal Employment/Educational Opportunity

600.010 Equal Employment/Educational Opportunity and Nondiscrimination Policy

Bd. Min. 2-19-71; Reaffirmed Bd. Min. 10-14-77; Amended Bd. Min. 5-23-80; Amended Bd. Min. 10-15-82; Amended Bd. Min. 10-16-03; Amended Bd. Min. 6-19-14; Revised 9-22-14 by Executive Order 41. Revised 2-5-15; Amended 2-9-17 with an effective date of 3-1-17; Revised 7-28-20 with effective date of 8-14-20.

A. Equal Employment/Educational Opportunity Policy and Statement of Nondiscrimination. The Curators of the University of Missouri does hereby reaffirm and state the policy of the University of Missouri on Equal Employment/Educational Opportunity and Nondiscrimination.

1. Equal Opportunity is and shall be provided for all employees and applicants for employment on the basis of their demonstrated ability and competence without unlawful discrimination on the basis of their race, color, national origin, ancestry, religion, sex, pregnancy, sexual orientation, gender identity, gender expression, age, disability, protected veteran status, or any other status protected by applicable state or federal law. This policy shall not be interpreted in such a manner as to violate the legal rights of religious organizations or the recruiting rights of military organizations associated with the Armed Forces or the Department of Homeland Security of the United States of America.
2. Equal Opportunity is and shall be provided for all students and applicants for admission without unlawful discrimination on the basis of their race, color, national origin, ancestry, religion, sex, pregnancy, sexual orientation, gender identity, gender expression, age, disability, protected veteran status, or any other status protected by applicable state or federal law. This policy shall not be interpreted in such a manner as to violate the legal rights of religious organizations or the recruiting rights of military organizations associated with the Armed Forces of the Department of Homeland Security of the United States of America.
3. The University of Missouri does not discriminate on the basis of race, color, national origin, ancestry, religion, sex, pregnancy, sexual orientation, gender identity, gender expression, age, disability, protected veteran status, and any other status protected by applicable state or federal law. As used in this policy, the word "sex" is also inclusive of the term "gender."

The University's Nondiscrimination policies apply to any phase of its employment process, any phase of its admission or financial aid programs, other aspects of its educational programs or activities, and instances occurring in other settings, including off-campus, if there are effects of the conduct that interfere with or limit any person's ability to participate in or benefit from the University's educational programs, activities or employment. Notices of Nondiscrimination are posted online and in

physical locations for the UM System and each of the Universities in the System.

The President of the University shall establish affirmative action procedures to implement this policy.

B. Definition of Discrimination and Harassment. For purposes of determining whether a particular course of conduct constitutes prohibited discrimination or harassment under this policy, the following definitions will be used:

1. Conduct that constitutes sex discrimination (including discrimination on the basis of sex, pregnancy, gender identity, and gender expression), sexual harassment, sexual misconduct, stalking on the basis of sex, dating/intimate partner violence or sexual exploitation is defined in Section 600.020 – Sex Discrimination, Sexual Harassment and Sexual Misconduct in Employment/Education Policy.
2. Conduct that is based upon an individual's race, color, national origin, ancestry, religion, sexual orientation, age, disability, protected veteran status, or any other status protected by applicable state or federal law that:
 - a. Adversely affects a term or condition of employment, education, living environment or participation in a University activity; or
 - b. Creates a hostile environment by being sufficiently severe or pervasive and objectively offensive that it interferes with, limits, or denies the ability to participate in or benefit from the University's educational programs, activities, or employment.

C. Equity Officers. Duties and responsibilities of the University's Equity Officers include monitoring and oversight of overall implementation and compliance with the University's Equal Employment/Educational Opportunity and Nondiscrimination Policy, including coordination of training, education, communications and coordination with the equity resolution processes for faculty, staff, students and other members of the University community and investigation of complaints of discrimination, harassment, and retaliation.

Any person having inquiries concerning this policy should contact their respective UM System or campus Equity Officer. The following individuals serve as Equity Officers and are designated to handle inquiries regarding the Anti-Discrimination policies and to serve as the coordinators for purposes of compliance with those policies:

University of Missouri-St. Louis

Jessica Swederske
 Title IX Coordinator and Equity Officer
 240 JCPenney
 St. Louis MO 63121
Telephone: 314-516-5748
Email: swederskej@umsl.edu

NOTE: The above-listed contact information for Equity Officers may be updated as needed and without requiring the approval of the Board of Curators.

If the Complaint involves the University's Equity Officer, Complaints may be made to the System Equity Officer. If the Complaint involves the System Equity Officer, reports may be made to the System President. The contact information for the System President is:

Office of the President
 321 University Hall
 Columbia, MO 65211
Telephone: (573) 882-2011

Email: umpresident@umsystem.edu

D. Equity Resolution Processes. The University is committed to preventing and eliminating impermissible discrimination and harassment in its educational programs, activities and employment. To that end, the University maintains policies regarding reporting, investigation, and resolution of complaints of discrimination, harassment, or sexual misconduct. Specifically, please see:

1. Section 600.030 – Equity Resolution Process for Resolving Complaints of Discrimination, Harassment and Sexual Misconduct Against a Student or Student Organization
2. Section 600.040 – Equity Resolution Process for Resolving Complaints of Discrimination, Harassment and Sexual Misconduct Against a Faculty Member
3. Section 600.050 – Equity Resolution Process for Resolving Complaints of Discrimination, Harassment and Sexual Misconduct Against a Staff Member
4. Section 600.060 - Equity Resolution Process for Resolving Complaints of Discrimination and Harassment Against the University of Missouri

E. Retaliation. Retaliation is any adverse action taken against a person because of that person's participation in protected activity. The University strictly prohibits retaliation against any person for making any good faith report of discrimination, harassment, or sexual misconduct, or for filing, testifying, assisting, or participating in any investigation or proceeding involving allegations of discrimination, harassment or sexual misconduct. Any person who engages in such retaliation shall be subject to disciplinary action, up to and including expulsion or termination, in accordance with applicable procedures. Any person who believes they have been subjected to retaliation is encouraged to promptly notify the Equity Officer or Title IX Coordinator. The University will promptly investigate all claims of retaliation.

F. False Reporting. False reporting is making an intentional false report or accusation in relation to this policy as opposed to a report or accusation, which, even if erroneous, is made in good faith. False reporting is a serious offense subject to appropriate disciplinary action up to and including expulsion or termination.

G. Witness Intimidation or Harassment. No individual participating in an investigation relating to a report or Complaint that a violation of this policy has occurred should, directly or through others, take any action which may interfere with the investigation. The University prohibits attempts to or actual intimidation or harassment of any potential witness. Failure to adhere to these requirements may lead to disciplinary action ranging up to and including expulsion or termination.

H. U.S. Department of Education – Office for Civil Rights. Inquiries concerning discrimination in educational opportunities also may be referred to the United States Department of Education's Office of Civil Rights. For further information on notice of nondiscrimination and for the address and phone number of the U.S. Department of Education office which serves your area call 1-800-421-3481.

The State of Missouri regional Office for Civil Rights is located in Kansas City and is available to provide assistance.

Office for Civil Rights
 U.S. Department of Education
 One Petticoat Lane
 1010 Walnut, 3rd Floor, Suite 320
 Kansas City, MO 64106

Telephone: (816) 268-0550
 FAX: (816) 268-0599
 TDD: (800) 877-8339
 Email: OCR.KansasCity@ed.gov

600.030 Resolution Process for Resolving Complaints of Sexual Harassment under Title IX - for matters involving conduct alleged to have occurred on or after August 14, 2020

A. General. The University will promptly and appropriately respond to any report of violation of the University's Title IX policies.

B. Jurisdiction. Jurisdiction of the University of Missouri under the Title IX policies shall be limited to sexual harassment which occurs in an education program or activity of the University of Missouri against a person in the United States. For purposes of this policy, "education program or activity" includes locations, events, or circumstances over which the University exercised substantial control over both the Respondent and the context in which the conduct occurs, and includes any building owned or controlled by a student organization that is officially recognized by the University. This policy does not apply to sexual harassment which occurs outside of the United States, even when the conduct occurs in an education program or activity of the University.

If a Complainant alleges or the investigation suggests that another University policy violation occurred in concert with an alleged violation of the University's Title IX policies, the University shall have the authority to investigate and take appropriate action regarding the alleged violations of other University policies pursuant to this process. In conducting such investigations, the Title IX Coordinator(s), and/or their Investigator may consult with and/or seek guidance from the Equity Officer, Student Conduct Coordinator, or other University officials as appropriate. If the allegations in a Formal Complaint that fall under this policy are dismissed, the University may discontinue the process under this policy and proceed under the applicable University procedure for all remaining allegations in the Formal Complaint.

C. Definitions:

1. **Academic Medical Center.** University of Missouri Hospitals and Clinics, and other Academic Medical Centers as may be designated by the University in the future.
2. **Academic Medical Center Resolution Process.** Resolution of a Formal Complaint by a decision-maker making a finding on each of the alleged policy violations and a finding on sanctions.
3. **Administrative Resolution.** A voluntary informal resolution process where a decision-maker makes a finding on each of the alleged policy violations in a Formal Complaint and a finding on sanctions without a hearing.
4. **Advisors.** The individuals selected by the Complainant and the Respondent, or if a Party does not have their own Advisor, selected by the University, to conduct all cross-examination and other questioning on behalf of a Party at a hearing; an Advisor may, but is not required to, be an attorney.
5. **Alternate Methods of Notice:** Methods of providing Notice to a Party other than in person or by email to the Party's University email account; these include email to another email account specified by the Party, or a Party's designation of an address to which Notice may be mailed

via U.S. Mail; a Party seeking to designate an Alternate Method of Notice must provide such designation in writing to the Title IX Coordinator.

6. **Complainant.** "Complainant" means an individual who is alleged to be the victim of conduct that could constitute sexual harassment.
7. **Emergency Removal Appeal Individual/Committee:** An individual or committee of three (3) individuals appointed by the Chancellor (or Designee) to hear appeals of an Emergency Removal decision by the Title IX Coordinator.
8. **Equity Resolution Appellate Officer.** For Staff, Student(s) or Student Organization Respondents, a trained, senior-level administrator appointed by the Chancellor (or Designee) to hear all appeals stemming from the Title IX Resolution Process. For Faculty Respondents, the Chancellor (or Designee).
9. **Equity Resolution Hearing Panel ("Hearing Panel").** A group of two (2) trained Equity Resolution Hearing Panelist Pool members who, together with the Hearing Officer, serve as the Hearing Panel for a specific Formal Complaint. A good faith attempt will be made for the Hearing Panel to include at least one faculty member and one administrator or staff member. The Hearing Officer shall serve as the Chair of the Hearing Panel.
10. **Equity Resolution Hearing Panelists Pool ("Hearing Panelist Pool").** A group of at least five (5) faculty and five (5) administrators and/or staff selected by the Chancellor (or Designee) to serve as hearing panel members in the Hearing Panel Resolution process. The faculty hearing panel members selected by the Chancellor (or Designee) shall be selected from a list of no less than ten (10) faculty members proposed by the faculty council/senate. Selection of hearing panel pool members shall be made with an attempt to recognize the diversity of the University community. Hearing Panel members from one University may be asked to serve on a hearing panel involving another University.
11. **Formal Complaint.** Formal Complaint means a written document filed by a Complainant or signed by the Title IX Coordinator alleging sexual harassment against a Respondent and requesting that the University investigate the allegation of sexual harassment. The phrase "document filed by a Complainant" means a document or electronic submission (such as by electronic mail or an online portal provided for this purpose by the University) that contains the Complainant's physical or digital signature, or otherwise indicates that the Complainant is the person filing the Formal Complaint.
12. **Hearing Officer.** A trained individual appointed by the Chancellor (or Designee) to preside over a hearing and act as a member of the Hearing Panel, and to rule on objections and the relevancy of questions and evidence during the hearing.
13. **Hearing Panel Decision.** Resolution of a Formal Complaint by an Equity Resolution Hearing Panel recommending or making a finding on each of the alleged policy violations and sanctions, if applicable.
14. **Hearing Panelist Pool Chair ("Pool Chair").** The Hearing Panelist Pool Chair is selected by the Chancellor (or Designee). The Pool Chair randomly selects and

coordinates the hearing panel members to serve on the Hearing Panel for a specific Formal Complaint. The Pool Chair may serve as a panel member for a specific Formal Complaint.

15. **Informal Resolution.** A voluntary resolution process using alternative dispute resolution mechanisms such as mediation, facilitated dialogue, administrative resolution, or restorative justice.
16. **Investigators.** Investigators are trained individuals appointed by the Title IX Coordinator (or designee) to conduct investigations of the alleged violations of the University's Title IX Policies.
17. **Parties.** The Complainant and the Respondent are collectively referred to as the Parties.
18. **Record of the Case.** The Record of the Case in the Section 600.030 Process includes, when applicable: All Notices to the Parties; investigative report; recordings of Party and witness interviews; exhibits used at a hearing or at the Academic Medical Center (AMC) Meeting; recordings of meetings between the AMC decision-maker and Parties and witnesses, if any; the hearing record (an audio or audiovisual record of the hearing); any determination of dismissal of all or part of a Formal Complaint; the determination on each of the alleged policy violations and sanctions by either the Hearing Panel or decision-maker; and the decision on the appeal, if any, including the request for appeal, any additional evidence submitted for the appeal, and written arguments of the Parties.
19. **Report.** Any verbal or written communication or notice of an alleged violation of the University's Title IX Policies.
20. **Respondent.** Respondent means an individual who has been reported to be the perpetrator of conduct that could constitute sexual harassment.
21. **Rules of Decorum.** Hearing process rules to which Parties and their Advisors must adhere during any Hearing under this policy.
22. **Student.** A person having once been admitted to the University who has not completed a course of study and who intends to or does continue a course of study in or through one of the Universities of the University System. For the purpose of these rules, student status continues whether or not the University's academic programs are in session.
23. **Student Organization.** A recognized student organization which has received Official Approval in accordance with Section 250.010 of the Collected Rules and Regulations. Three members of the organization may represent the student organization as the Party.
24. **Support Person.** An individual selected by a Party to accompany the Party to all meetings and interviews to provide support for the Party throughout the Title IX Process. A Support Person may not attend a hearing under the Title IX process unless also serving as a Party's Advisor.
25. **Title IX Coordinator.** The Title IX Coordinator is a trained administrator designated by the Chancellor (or Designee) to respond to reports of sexual harassment; and to receive and assist with the Title IX process for Formal Complaints alleging violation of the University's Sexual Harassment

in Employment/Education Policy. All references to "Title IX Coordinator" throughout this policy refer to the Title IX Coordinator or the Title IX Coordinator's designee.

26. **University's Title IX Policies.** The University's Title IX Policies include this Policy and the Sexual Harassment in Employment/Education Policy located at Section 600.020 of the Collected Rules and Regulations (CRR).

D. Making a Report. Any person (whether or not the person reporting is the Complainant) may report sexual harassment to the Title IX Coordinator. Such Reports may be made in person, or at any time (including during non-business hours) by mail, by telephone, or by electronic mail, using the contact information listed for the Title IX Coordinator, by an online portal set up by the University for this purpose, or by any other means that results in the Title IX Coordinator receiving the person's verbal or written report. Individuals may also contact University police if the alleged offense may also constitute a crime. In order to foster reporting and participation, the University may provide amnesty to Parties and witnesses accused of minor student conduct violations ancillary to the incident.

E. Preliminary Contact. Upon receiving a Report, the Title IX Coordinator shall promptly contact the Complainant to discuss the availability of Supportive Measures as defined herein, consider the Complainant's wishes with respect to Supportive Measures, inform the Complainant of the availability of Supportive Measures with or without the filing of a Formal Complaint, and explain to the Complainant the process for filing a Formal Complaint. If the identity of the Complainant is unknown, the Title IX Coordinator may conduct a limited investigation sufficient to identify the Complainant to the extent possible.

F. Filing of a Formal Complaint. A Complainant may file a Formal Complaint with the Title IX Coordinator in person, by mail, or by electronic mail, by using the contact information set forth in CRR 600.020, or through an online portal provided for this purpose by the University. At the time of filing a Formal Complaint, the Complainant must be participating in or attempting to participate in an education program or activity of the University.

The Title IX Coordinator may sign a Formal Complaint when they believe that with or without the Complainant's desire to participate in this process, a non-deliberately indifferent response to the allegations requires an investigation. Where the Title IX Coordinator signs a Formal Complaint, the Title IX Coordinator is not a Complainant or otherwise a Party under this policy.

If the Respondent files a Formal Complaint against the Complainant within ten (10) business days of the date of the Notice of Allegations where the allegations of sexual harassment in both Formal Complaints arise out of the same facts or circumstances, the University will consolidate the Formal Complaints for purposes of investigation and resolution in accordance with this policy.

The University may consolidate Formal Complaints as to allegations of sexual harassment against more than one Respondent, or by more than one Complainant against one or more Respondents, or by one Party against the other Party where the allegations of sexual harassment arise out of the same facts or circumstances. If the Respondent files a Formal Complaint against the Complainant more than ten (10) business days after the date of the Notice of Allegations where the allegations of sexual harassment in both Formal Complaints arise out of the same facts or circumstances, the University may consolidate the Formal Complaints for purposes of investigation and resolution in accordance with this policy.

Where this process involves more than one Complainant or more than one Respondent, each Complainant and each Respondent shall be entitled and subject to all of the rights and obligations set forth herein.

G. Notice of Allegations:

1. Upon receipt of a Formal Complaint, the Title IX Coordinator will provide a written notice to the known Parties that includes the following:
 - a. A description of the University's Title IX Process, including Informal Resolution;
 - b. Notice of the allegations of sexual harassment, including sufficient details known at the time. Sufficient details include the identities of the Parties involved in the incident, if known; the conduct allegedly constituting the sexual harassment; and the date and location of the alleged incident.
 - c. A statement that the Respondent is presumed not responsible for the alleged conduct and that a determination regarding responsibility is made at the conclusion of the Title IX process.
 - d. A statement reminding the Respondent that they have the right to file a report or Formal Complaint with the Title IX Coordinator; however, both Parties are advised that retaliation against any Party is prohibited.
 - e. A statement notifying the Parties of the availability of Supportive Measures.
 - f. A statement notifying the Parties of their right to have an Advisor of their choice, who may be, but is not required to be, an attorney. The Parties will be advised that if they do not have an Advisor to conduct cross-examination at a hearing on their behalf, the University will appoint such an Advisor; this Advisor may be, but is not required to be, an attorney. (This provision does not apply to matters proceeding under the process for Academic Medical Centers set forth in Section R).
 - g. A statement notifying the Parties that they may have a Support Person selected by a Party accompany the Party to all meetings and interviews to provide support for the Party throughout the Title IX Process. A Support Person may not attend a hearing under the Title IX process unless also serving as a Party's Advisor.
 - h. A statement notifying the Parties that they will be permitted to inspect and review any evidence obtained as part of the investigation that is directly related to the allegations raised in the Formal Complaint, including the evidence upon which the University does not intend to rely in reaching a determination regarding responsibility, and including inculpatory and exculpatory evidence whether obtained from a Party or other source.
 - i. A statement notifying the Parties that they must be truthful when making any statement or providing any information or evidence to the University throughout the Title IX process, and all documentary evidence must be genuine and accurate. False statements and fraudulent evidence by an employee may be the basis for personnel action pursuant to CRR 370.010 or HR 601, or other applicable University policies, or for disciplinary action pursuant to CRR 200.010 for students.
 - j. A statement that nothing in the Title IX process is intended to supersede nor expand any rights the individual may have

under applicable state or federal statutory laws or the U.S. Constitution.

- k. A statement informing a Party that all notices hereafter will be sent via their University-issued email account, unless they provide to the Title IX Coordinator an alternate method of notification. If a Party does not have a University-issued email account, all notices will be via U.S. Mail unless they provide the Title IX Coordinator with a preferred method of notification.
2. The Notice of Allegations will be made in writing to the Parties by email to the Party's University-issued email account, with a read-receipt. If a read-receipt is not returned within one (1) business day or the Party does not have a University-issued email account, the Notice of Allegations shall be sent via U.S. Mail postage pre-paid to the last known address of the Party. Notice also may be provided in person to either Party. Notice is presumptively deemed delivered, when: 1) provided in person, 2) emailed to the individual, or 3) when mailed.

H. Supportive Measures. Supportive measures are non-disciplinary, non-punitive individualized services offered as appropriate, as reasonably available, and without fee or charge to the Complainant or the Respondent before or after the filing of a Formal Complaint or where no Formal Complaint has been filed. These measures are designed to restore or preserve equal access to the University's education program or activity without unreasonably burdening the other Party, including measures designed to protect the safety of all Parties or the University's education environment, or deter sexual harassment. The University will maintain as confidential any Supportive Measures provided to the Complainant or Respondent, to the extent that maintaining such confidentiality would not impair the ability of the University to provide the Supportive Measures. The Title IX Coordinator is responsible for the effective implementation of Supportive Measures. Supportive Measures may include:

1. Referral and facilitating contact for the Complainant or Respondent for counseling or other support services.
2. Mutual restrictions on contact between the Parties.
3. Providing campus escort services to the Parties.
4. Increased security and monitoring of certain areas of the campus.
5. Adjusting the extracurricular activities, work schedules, work assignments, supervisory responsibilities, or work arrangements of the Complainant and/or the Respondent, as appropriate.
6. If either Party is a student:
 - a. Referral of that Party to academic support services and any other services that may be beneficial to the Party.
 - b. Adjusting the courses, assignments, and/or exam schedules of the Party.
 - c. Altering the on-campus housing assignments, dining arrangements, or other campus services for the Party.
7. Providing limited transportation accommodations for the Parties.
8. Informing the Parties of the right to notify law enforcement authorities of the alleged incident and offering to help facilitate such a report.
9. Implementing an Emergency Removal of a Respondent from the University's education program or activity on an emergency basis, if the Title IX Coordinator, after conducting an individualized safety and risk analysis, determines that an immediate threat to the physical health or safety of any

student or other individual arising from the allegations of sexual harassment, justifies removal.

- a. In all cases in which an Emergency Removal is imposed, the Respondent will immediately be given notice and an opportunity to challenge the decision of the Title IX Coordinator either prior to such Removal being imposed, or as soon thereafter as reasonably possible but no later than five (5) business days, to show cause why the removal should not be implemented. Any such challenge shall be made in writing and directed to the Title IX Coordinator who will forward such challenge to the Emergency Removal Appeal Individual/Committee, which will make a final decision on removal within three (3) business days.
 - b. Violation of an Emergency Removal under this policy may be grounds for discipline.
10. Suspending, on an interim basis, a Respondent Student Organization's operations, University recognition, access to and use of the University campus/facilities/events and/or all other University activities or privileges for which the Respondent Student Organization might otherwise be eligible, pending the completion of the Title IX Process when the Title IX Coordinator finds and believes from available information that the presence of the student organization on campus would seriously disrupt the University or constitute a danger to the health, safety, or welfare of members of the University community. The appropriate procedure to determine the future status of the student organization will be initiated within seven (7) business days.
 11. Implementing an administrative leave for an employee in accordance with University Human Resources Policies. Administrative leave for an employee is not an Emergency Removal under this policy.

I. Employees and Students Participating in the Title IX Process. All University employees and students must be truthful when making any statement or providing any information or evidence to the University throughout the process, including but not limited to the Investigator, Title IX Coordinator, the Hearing Panel and/or the Equity Resolution Appellate Officer, and all documentary evidence must be genuine and accurate. False statements or fraudulent evidence provided in this process, including but not limited to the Investigator, Title IX Coordinator, Hearing Panel and/or the Equity Resolution Appellate Officer, by an employee may be the basis for personnel action pursuant to CRR 370.010 or HR 601, or other applicable University policies, or if by a student may be the basis for disciplinary action pursuant to the provisions of CRR 200.010. However, this obligation does not supersede nor expand any rights the individual may have under applicable state or federal statutory law or the U.S. Constitution. Nothing in this provision is intended to require a Party or witness to participate in the process. The fact that a determination has been made that a Respondent has or has not violated any policy is not sufficient grounds, by itself, to declare that a false statement or fraudulent evidence has been provided by a Party or witness.

No employee or student, directly or through others, should take any action which may interfere with the investigation. Employees and students are prohibited from attempting to or actually intimidating or harassing any potential witness. Failure to adhere to these requirements may lead to disciplinary action, up to and including expulsion or termination.

J. Rights of the Parties in the Title IX Process

1. To be treated with respect by University officials.
2. To be free from retaliation.
3. To have access to University support resources (such as counseling and mental health services and University health services).
4. To request a no contact directive between the Parties.
5. To have a Support Person of the Party's choice accompany the party to all interviews and meetings (excluding hearings) throughout the Title IX Process.
6. To refuse to have an allegation resolved through the Informal Resolution Processes.
7. To receive prior to a hearing or other time of determination regarding responsibility, an investigative report that fairly summarizes the relevant evidence in an electronic format or hard copy for their review and written response.
8. To have an opportunity to present a list of potential witnesses and provide evidence to the Investigator.
9. To have Formal Complaints heard in substantial accordance with these procedures.
10. To receive written notice of any delay of this process or limited extension of time frames for good cause which may include considerations such as the absence of a Party, a Party's Advisor or a witness; concurrent law enforcement activity; or the need for language assistance or accommodation of disabilities.
11. To be informed of the finding, rationale, sanctions and remedial actions.
12. To report the matter to law enforcement (if applicable) and to have assistance in making that report.
13. To have an opportunity to appeal the dismissal of all or a portion of a Formal Complaint, and appeal the determination of a Hearing Panel or other decision-maker.
14. Additional Rights for Students as a Party:
 - a. To request reasonable housing, living and other accommodations and remedies consistent with Section 600.030.H.
 - b. To receive amnesty for minor student misconduct that is ancillary to the incident, at the discretion of the Title IX Coordinator.
15. Additional Rights for Hearing Panel Resolution:
 - a. To receive notice of a hearing.
 - b. To have the names of witnesses who may participate in the hearing and copies of all documentary evidence gathered in the course of the investigation and any investigative report prior to the hearing.
 - c. To be present at the hearing, which right may be waived by either written notification to the Hearing Officer or by failure to appear.
 - d. To have present an Advisor during the hearing and to consult with such Advisor during the hearing, and have the Advisor conduct cross-examination and other questioning on behalf of the Party at the hearing.
 - e. To have an Advisor of the University's selection appointed for a Party where the Party does not have an Advisor of their own choice at a hearing.
 - f. To testify at the hearing or refuse to testify at the hearing; however, if a Party or witness fails to submit to cross-examination at the hearing, the Hearing Panel shall not rely on any statement of that Party or witness in reaching

a determination regarding responsibility. The Hearing Panel shall not draw any inference about the determination regarding responsibility based solely on a Party's or witness's failure to submit to cross-examination.

- g. To have an equal opportunity to present and question witnesses, including fact and expert witnesses, and present relevant evidence.
 - h. To request that the hearing be held virtually, with technology enabling participants simultaneously to see and hear each other.
16. Additional Rights for Academic Medical Center Process:
- a. To receive notice of the meeting with the decision-maker.
 - b. To submit written, relevant questions that a Party wants asked of any Party or witness and to be provided with the answers to such questions.
 - c. To be allowed additional, limited follow-up questions.

K. Role of Support Persons and Advisors.

1. **Support Persons.** Each Complainant and Respondent is allowed to have one Support Person of their choice present with them for all Title IX Process interviews and meetings. The Parties may select whomever they wish to serve as their Support Person, including an attorney or parent. The Support Person may also act as the Party's Advisor.
If requested by a student Party, the Title IX Coordinator may assign a Trained Support Person to explain the Title IX process and attend interviews and meetings with a Party. University Trained Support Person(s) are administrators, faculty, or staff at the University trained on the Title IX Process. A Trained Support Person cannot be called upon as a witness by a Party in a hearing to testify about matters learned while that individual was acting in their capacity as a Trained Support Person.
2. **Advisors.** Each Party may have an Advisor of their choice present at the hearing to conduct cross-examination and other questioning for that Party. A Party may not directly question any other Party or any witness; all cross-examination and other questioning on behalf of a Party must be conducted by their Advisor. The Advisor may be, but is not required to be, an attorney. If a Party does not have an Advisor of their choice present at the hearing, the University will provide, without fee or charge to that Party, an Advisor of the University's choice to conduct cross-examination and other questioning on behalf of that Party. The Parties may not require that the assigned Advisor have specific qualifications such as being an attorney.
At the hearing, a Party's Advisor may ask the other Party and any witnesses all relevant questions and follow-up questions, including those challenging credibility. An Advisor may conduct cross-examination and other questioning for a Party, and object to questions on limited grounds as specified in the Rules of Decorum. The Advisor may not make a presentation or otherwise represent the Complainant or the Respondent during the hearing. The Advisor may consult with the Party quietly or in writing, or outside the hearing during breaks, but may not speak on behalf of the Party, other than to conduct cross-examination or other questioning for the Party. Advisors who do not follow the Rules of Decorum will be warned or dismissed from the hearing at the discretion of the Hearing Officer.

L. Investigation. If a Formal Complaint is filed, then the Title IX Coordinator will promptly appoint a trained Investigator or a team of trained Investigators to investigate.

The burden of proof and the burden of gathering evidence sufficient to reach a determination regarding responsibility rests on the University.

For purposes of the Investigation, the University cannot access, consider, disclose, or otherwise use a Party's records that are made or maintained by a physician, psychiatrist, or other recognized professional or paraprofessional acting in the professional's or paraprofessional's capacity, or assisting in that capacity, and which are made and maintained in connection with the provision of treatment to the Party, unless the University obtains that Party's voluntary, written consent to do so for use in the Title IX process.

The Parties are not prohibited from discussing the allegations under investigation or from gathering and presenting relevant evidence. The Parties may present witnesses, including fact and expert witnesses, and other inculpatory and exculpatory evidence; all such evidence must be relevant.

A Party whose participation is expected or invited at a hearing, interview or other meeting, shall receive written notice of the date, time, location, participants, and purpose of all hearings, investigative interviews, or other meetings, with sufficient time for the Party to prepare to participate.

The Parties may be accompanied to any related meeting or interview by a Support Person of their choice, who may be, but is not required to be, an attorney; however, the Support Person may only participate in the proceedings as set forth in this policy.

The Parties shall be permitted to inspect and review any evidence obtained as part of the investigation that is directly related to the allegations raised in the Formal Complaint, including the evidence upon which the University does not intend to rely in reaching any determination regarding responsibility, and inculpatory or exculpatory evidence whether obtained from a Party or other source and copies of recordings of all interviews conducted during the investigation, in sufficient time for the Parties to meaningfully respond to the evidence prior to the conclusion of the investigation.

Prior to completion of the investigative report, the University will make available to each Party and the Party's Advisor, if any, the evidence subject to inspection and review in an electronic format or a hard copy, and the Parties will have ten (10) business days to submit a written response to the Investigator, which the Investigator will consider prior to completion of the investigative report.

The final investigative report will fairly summarize the relevant evidence, and prior to a hearing or other time of determination regarding responsibility, the investigator will send to each Party and the Party's Advisor, if any, the final investigative report in an electronic format or a hard copy, for their review and written response. If a written response is received from either Party, that response will be shared with the other Party and their Advisor, if any.

All investigations will be thorough, reliable and impartial. All interviews shall be recorded. In the event that recording is not possible due to technological issues, the investigator shall take thorough notes and such notes shall be provided to the Parties in lieu of recordings. The investigator shall document the reason the recording was not possible and such documentation shall become part of the Record of the Case.

The investigation of reported sexual harassment should be completed expeditiously, normally within thirty (30) business days of the filing of the Formal Complaint. Investigation of a Formal Complaint may take longer based on the nature and circumstances of the Formal Complaint.

M. Impact of Optional Report to Law Enforcement. A delay may also occur when criminal charges on the basis of the same behaviors that invoke this process are being investigated, to allow for evidence collection by the law enforcement agency. However, University action will not typically be altered or precluded on the grounds that civil cases or criminal charges involving the same incident have been filed or that such charges have been dismissed or reduced.

The Title IX Coordinator will not wait for the conclusion of a criminal investigation or criminal proceeding to begin the Title IX process. However, a Title IX investigation and resolution process may be temporarily delayed for good cause, which can include concurrent law enforcement activity. In such instances, written notice of the delay or extension with reasons for the action will be sent to each Party.

If delayed, the Title IX Coordinator will promptly resume the Title IX investigation as soon as notified by the law enforcement agency that it has completed the evidence-gathering process. The Title IX Coordinator will implement appropriate supportive measures during the law enforcement agency's investigation period to provide for the safety of all Parties, the University community and the avoidance of retaliation or sexual harassment.

N. Dismissal of a Formal Complaint. During or upon the completion of the investigation, the Title IX Coordinator will review the Formal Complaint and the investigative report, if available, to determine if the Formal Complaint is subject to dismissal. A Formal Complaint shall be dismissed: (1) if the conduct alleged in the Formal Complaint would not constitute sexual harassment, as defined in CRR 600.020 even if proved; (2) the conduct alleged in the Formal Complaint did not occur in the University's education program or activity, or (3) the conduct alleged in the Formal Complaint did not occur against a person in the United States. A dismissal under this provision does not preclude action under other applicable University processes.

A Formal Complaint or any allegations therein, may be dismissed at any time during the investigation or hearing if (1) the Complainant notifies the Title IX Coordinator in writing that the Complainant would like to withdraw the Formal Complaint or any allegations therein; (2) the Respondent is no longer enrolled or employed by the University; or (3) specific circumstances prevent the University from gathering evidence sufficient to reach a determination as to the Formal Complaint or the allegations therein.

Upon a dismissal required or permitted under this provision, the University will promptly send written notice of the dismissal and reason(s) therefor simultaneously to the Parties. Either Party may appeal a dismissal as set forth in Section U herein.

If the Title IX Coordinator determines there is a sufficient basis to proceed with the Formal Complaint, then the Title IX Coordinator will direct the process to continue. The Formal Complaint will then be resolved through Informal Resolution or Hearing Panel Resolution, or the Academic Medical Center (AMC) Process, if applicable.

O. Informal Resolution. Upon the filing of a Formal Complaint, the Parties may choose to engage in Informal Resolution. The decision of the Parties to engage in Informal Resolution must be voluntary, informed, and in writing. The Parties are not required to engage in Informal Resolution

as a condition of enrollment or continuing enrollment, or employment or continuing employment, or enjoyment of any other right. The Parties are not required to waive their right to an investigation of a Formal Complaint or a right to a hearing process, or AMC Process, if applicable. At any time prior to agreeing to (or in Administrative Resolution, rendering of) a final resolution, any Party has the right to withdraw from the Informal Resolution process and the matter will be referred back for further investigation and/or hearing as may be applicable.

Informal Resolution is never available to resolve allegations that an employee sexually harassed a student.

In Informal Resolution, which includes mediation or facilitated dialogue, a neutral facilitator will foster a dialogue with the Parties to an effective resolution, if possible. The Complainant's and the Respondent's Support Persons may attend the Informal Resolution meeting. The Parties will abide by the terms of the agreed-upon resolution. Failure to abide by the terms of the agreed-upon resolution may be referred to the Title IX Coordinator for review and referral to the appropriate University Process for discipline or sanctions. The Title IX Coordinator will keep records of any Informal Resolution that is reached.

In the event the Parties are unable to reach a mutually agreeable resolution, the matter will be referred back for further investigation and/or hearing as may be applicable. The content of the Parties' discussions during the Informal Resolution Process will be kept confidential in the event the matter proceeds to the hearing process. The Parties' agreement to participate, refusal to participate in, or termination of participation in Informal Resolution shall not be factors in any subsequent decisions regarding whether a policy violation occurred.

Among the resolutions which may be reached at this stage, the Respondent may voluntarily request to permanently separate from the University of Missouri System. If the Title IX Coordinator accepts the Respondent's proposal, the Respondent must sign a Voluntary Permanent Separation and General Release agreement to effectuate their separation and terminate the Title IX Process.

P. Procedural Details for Administrative Resolution. The Parties may mutually choose to participate in a type of Informal Resolution called Administrative Resolution. The Administrative Resolution process is not available where a student has alleged that an employee sexually harassed the student. The Administrative Resolution process is not available to Academic Medical Centers (AMC).

The Administrative Resolution process is a process whereby the decision-maker will meet separately with the Parties and their Support Person, if any, and consider the evidence provided by the investigator, including the investigative report, and evidence provided by the Parties, and will make a determination of responsibility that is binding on both Parties.

The decision of the Parties to participate in Administrative Resolution must be voluntary, informed and in writing provided to the investigator, and must include a knowing written waiver of their right to a hearing under the Title IX process. However, either Party may choose to leave the process and opt for a hearing at any time before a final determination has been rendered. In addition, the following will apply to the Administrative Resolution process:

1. The standard of proof will be "preponderance of the evidence," defined as determining whether the evidence shows it is more likely than not that a policy violation occurred.

2. The decision-maker has the discretion to determine the relevance of any witness or documentary evidence and may exclude information that is irrelevant, immaterial, cumulative, or more prejudicial than informative. In addition, the following rules shall apply to the introduction of evidence:
 - a. Questions and evidence about the Complainant's pre-disposition or prior sexual behavior are not relevant, unless such questions and evidence about the Complainant's prior sexual behavior are offered to prove that someone other than the Respondent committed conduct alleged by the Complainant, or if the questions and evidence concern specific incidents of the Complainant's prior sexual behavior with respect to the Respondent and are offered to prove consent.
 - b. Character evidence is information that does not directly relate to the facts at issue, but instead reflects upon the reputation, personality, or qualities of an individual, including honesty. Such evidence regarding either Party's character is of limited utility and shall not be admitted unless deemed relevant by the decision-maker.
 - c. Incidents or behaviors of the Respondent not directly related to the possible violation(s) will not be considered unless they show a pattern of related misconduct. History of related misconduct by the Respondent that shows a pattern may be considered only if deemed relevant by the decision-maker.
 - d. A Party's records that are made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in the professional's or paraprofessional's capacity, or assisting in that capacity, and which are made or maintained in connection with the provision of treatment to the Party, may not be used without that Party's express consent.
 - e. The decision-maker shall not require, allow, rely upon, or otherwise use questions or evidence that constitute, or seek disclosure of, information protected under a legally recognized privilege, unless the person holding such privilege has waived the privilege.
3. In the Administrative Resolution Process, the Respondent and the Complainant may provide a list of questions for the decision-maker to ask the other Party. If those questions are deemed appropriate and relevant, they may be asked on behalf of the requesting Party; answers to such questions will be shared with the requesting Party.
4. At any time prior to a final determination being rendered, the Complainant and/or the Respondent may request that the Formal Complaint shift from the Administrative Resolution Process to the Hearing Panel Resolution Process. Upon receipt of such timely request from either Party, the Formal Complaint will shift to the Hearing Panel Resolution Process.
5. The Administrative Resolution process will normally be completed within sixty (60) business days of the decision-maker's receipt of the Formal Complaint. Deviations from this timeframe will be promptly communicated to both Parties.
6. For good cause, the decision-maker in the Administrative Resolution Process may, in their discretion, grant reasonable extensions to the time frames and limits provided.
7. The Administration Resolution process consists of:
 - a. A prompt, thorough and impartial investigation;
 - b. A separate meeting with each Party and their Support Person, if any, and the decision-maker;
 - c. A written finding by the decision-maker on each of the alleged policy violations;
 - d. A written finding by the decision-maker on sanctions and remedial actions for findings of responsibility; and
 - e. The decision-maker shall be as follows:
 - (1) For Student or Student Organization Respondents and Staff Respondents, the decision-maker will be the Title IX Coordinator;
 - (2) For Faculty Respondents, the decision-maker will be as follows:
 - (a) The Title IX Coordinator will act as decision-maker and make recommendation(s) on findings of responsibility and sanctions and remedial actions, if applicable, to the Provost who will be the final decision-maker.
 - (b) The Title IX Coordinator has the option to request that a designee from the Provost's office act as decision-maker in Administrative Resolution and make recommendation(s) regarding findings of responsibility and sanctions and remedial actions, if applicable, to the Provost who will be the final decision-maker.
8. At least fifteen (15) business days prior to meeting with the decision-maker or if no meeting is requested, at least fifteen (15) business days prior to the decision-maker rendering a finding(s), the Title IX Coordinator or Provost's designee, if applicable, will send a letter (Notice of Administrative Resolution) to the Parties with the following information:
 - a. A description of the alleged violation(s) and applicable policy or policies that are alleged to have been violated.
 - b. The name of the decision-maker.
 - c. Reference to or attachment of the applicable procedures.
 - d. A copy of the final investigative report.
 - e. The option and deadline of ten (10) business days from the date of the notice to request a meeting with the decision-maker.
 - f. An indication that the Parties may have the assistance of a Support Person of their choosing at the meeting, though the Support Person's attendance at the meeting is the responsibility of the respective Parties.
9. The sanctions of expulsion and termination are not available sanctions under the Administrative Resolution process in this Policy. Further, any suspension of a student under this Administrative Resolution process shall not exceed two (2) years. Any suspension of an employee

under this Administrative Resolution process may be without pay, but may not exceed ten (10) business days.

10. The decision-maker can, but is not required to, meet with and question the Investigator and any identified witnesses. The decision-maker may request that the Investigator conduct additional interviews and/or gather additional information. The decision-maker will meet separately with the Complainant and the Respondent, and their Support Person, if any, to review the alleged policy violations and the investigative report. The Respondent may choose to admit responsibility for all or part of the alleged policy violations at any point in the process. If the Respondent admits responsibility, in whole or in part, the decision-maker will render a finding that the individual is in violation of University policy for the admitted conduct. For any disputed violations, the decision-maker will render a finding using the preponderance of the evidence standard. The decision-maker will also determine appropriate sanctions or remedial actions.
11. The decision-maker will inform the Respondent and the Complainant simultaneously of the finding on each of the alleged policy violations and the finding of sanctions, if applicable, in writing by email to the Party's University-issued email account, or by the method of notification previously designated in writing by the Party. Notice is presumptively deemed delivered, when: 1) provided in person, 2) emailed to the individual to their University-issued email account, or 3) when sent via the alternate method of notification specified by the Party.
12. Either Party may appeal a decision under Administrative Resolution in accordance with Section U of this policy.

Q. Hearing Panel Resolution. This process is not available for Academic Medical Centers. See Section R.

1. **Equity Resolution Hearing Panelist Pool.** Each University will create and annually train a pool of not less than five (5) faculty and five (5) administrators and/or staff to serve as hearing panel members in the Hearing Panel Resolution Process. The faculty hearing panel pool members selected by the Chancellor (or Designee) shall be selected from a list of no less than ten (10) faculty members proposed by the faculty council/senate. Pool members are selected by the Chancellor (or Designee) and serve a renewable one-year term. Selection of hearing panel pool members shall be made with an attempt to recognize the diversity of the University community. Hearing Panel members from one University may be asked to serve on a hearing panel involving another University. The Chancellor (or Designee) will select a Hearing Panelist Pool Chair ("Pool Chair"). The Pool Chair randomly selects and coordinates the hearing panel members to serve on the Hearing Panel for a specific Formal Complaint. The Pool Chair may serve as a panel member for a specific Formal Complaint.

Administrators, faculty, and staff will be removed from the Hearing Panelist Pool if they fail to satisfy the annual training requirements, as determined by the Title IX Coordinator. Under such circumstances, the Title IX Coordinator will notify the Chancellor (or Designee), who will inform the administrator, faculty, or staff member of the discontinuation of their term.

2. **Title IX Hearing Panel ("Hearing Panel").** When a Formal Complaint is not resolved through an Informal Resolution process, the Hearing Panelist Pool Chair will randomly select two (2) members from the Hearing Panelist Pool to serve on the specific Hearing Panel together with the Hearing Officer. A good faith attempt will be made for the Hearing Panel to include at least one faculty member and one administrator or staff member. Up to two (2) alternates may be designated to sit in throughout the process as needed. The University reserves the right to have its attorney present during the hearing and during deliberations to advise the Hearing Panel.
3. **Notice of Hearing.**
 - a. At least twenty (20) business days prior to the hearing, the Title IX Coordinator will send a letter (Notice of Hearing) to the Parties with the following information:
 - (1) A description of the alleged violation(s) and applicable policy or policies that are alleged to have been violated.
 - (2) A description of the applicable procedures.
 - (3) A statement that the Parties may have the assistance of an Advisor of their choosing, at the hearing; that the Party's Advisor will conduct all cross-examination and other questioning of the other Party and all witnesses on behalf of the Party they are advising; that if the Party does not have an Advisor, an Advisor will be provided by the University for the purpose of conducting cross-examination and other questioning for that Party; and the Advisor may be, but is not required to be, an attorney.
 - (4) The time, date and location of the hearing.
 - (5) A list of the names of each of the Hearing Panel members, including the Hearing Officer, and alternates, and information on how to raise an objection to any member of the Hearing Panel and the timeline in which to raise any objections.
 - (6) A copy of the final investigative report and exhibits.
 - (7) Notification to the Parties that all of the evidence gathered in the course of the investigation that is directly related to the allegations including inculpatory and exculpatory evidence, is available to the Parties and instructions regarding how to request access to that evidence.
 - (8) Notice that if a Party or witness does not submit to cross-examination at the hearing, the decision-maker(s) must not rely on any statement of that Party or witness in reaching a determination regarding responsibility, but no inference can be drawn from the fact that a Party or witness failed to submit to cross-examination.
 - (9) Notice that the Parties may request a virtual hearing and/or any necessary accommodations.
 - b. The Notice of Hearing letter will be sent to each Party by email to their University-issued email account, or by the method of notification previously designated in writing by the Party. Notice is presumptively deemed delivered, when:
 - 1) provided in person, 2) emailed to the individual to their University-issued email account, or 3) when sent via the alternate method of notification specified by the Party.
4. **Pre-Hearing Witness List and Documentary Evidence.**
 - a. At least fifteen (15) business days prior to the hearing, the Complainant and Respondent will provide to the Investigator a list of the names of the proposed witnesses and copies of

all proposed documentary evidence that a Party intends to call or use at the hearing.

- b. At least ten (10) business days prior to the hearing, the Investigator will provide to each Party the names of proposed witnesses and proposed documentary evidence that the other Party intends to call or use at the hearing.
- c. No employee or student, directly or through others, should take any action which may interfere with the investigation or hearing procedures. Employees and students are prohibited from attempted or actual intimidation or harassment of any potential witness. Failure to adhere to these requirements may lead to disciplinary action, up to and including expulsion or termination.

5. Objection to or Recusal of Hearing Panel Member.

- a. Hearing Panel members, including the Hearing Officer, shall not have a conflict of interest or bias for or against Complainants or Respondents generally or an individual Complainant or Respondent. If a Hearing Panel member or Hearing Officer feels that they have a conflict of interest or bias, or cannot make an objective determination, they must recuse themselves from the proceedings in advance of the hearing.
- b. The Parties will have been given the names of the Hearing Panel members, including the Hearing Officer, in the Notice of Hearing. Should any Complainant or Respondent object to any panelist, they must raise all objections, in writing, to the Title IX Coordinator at least fifteen (15) business days prior to the hearing.
- c. Hearing Panel members will only be unseated and replaced if the Title IX Coordinator concludes that good cause exists for the removal of a panel member. Good cause may include, but is not limited to, bias that would preclude an impartial hearing or circumstances in which the Hearing Panel member's involvement could impact the Party's work or learning environment due to current or potential interactions with the Hearing Panel member (e.g., a panel member being in the same department as either Party). If the Title IX Coordinator determines that a Hearing Panel member, other than the Hearing Officer, should be unseated and replaced, then Title IX Coordinator will ask the Hearing Panel Pool Chair to randomly select another member from the pool to serve on the Hearing Panel. The Title IX Coordinator will select an alternate Hearing Officer if they determine that the Hearing Officer should be replaced. The Title IX Coordinator will provide a written response to all Parties addressing any objections to the Hearing Panel members, including the Hearing Officer.

- 6. Alternative Attendance or Questioning Mechanisms.** All hearings will be live. However, at the request of either Party or by the University's designation, the live hearing may occur with the Parties located in separate rooms with technology enabling the Hearing Panel, including the Hearing Officer, and their legal advisor, if any, the Parties and their Advisors, and the Investigator, to simultaneously see and hear the Party or the witness answering questions. Should any hearing take place in this manner, the Title IX Coordinator (or Designee) shall be in charge of the technology during the hearing. The University will make reasonable accommodations for the Parties in keeping with the principles of equity and fairness.

- 7. Requests to Reschedule the Hearing Date.** For good cause, the Title IX Coordinator may grant requests to reschedule the hearing date.

8. Pre-Hearing Matters.

- a. At least ten (10) business days prior to the hearing date, a Party shall inform the Title IX Coordinator whether the Party intends to bring an Advisor of their choice to the hearing.
- b. At least ten (10) business days prior to the hearing date, a Party shall inform the Title IX Coordinator whether the Party is requesting accommodations for the hearing.
- c. At least five (5) business days prior to the hearing date, the final investigative report and all exhibits will be provided to the Hearing Panel members.

- 9. Pre-Hearing Meeting.** Unless otherwise agreed by the Parties and the Hearing Officer, a pre-hearing meeting may be scheduled one hour prior to the start of the hearing between the Hearing Officer and Parties' Advisors. Parties may, but are not required to, be in attendance at this meeting.

- 10. Conduct of Hearing.** The Hearing Officer shall participate on the Hearing Panel and preside at the hearing, call the hearing to order, call the roll of the Hearing Panel and alternates in attendance, ascertain the presence or absence of the Investigator, the Complainant and the Respondent, confirm receipt of the Notice of Allegations and Notice of Hearing by the Parties, report any extensions requested or granted and establish the presence of any Advisors.

- a. **Order of Evidence.** The order of evidence shall generally be the following:

(1) The Complainant will proceed first and may give a verbal statement of their allegations of sexual harassment against the Respondent. The Hearing Panel may next ask questions of the Complainant. The Complainant will then be subject to cross-examination by the Advisor of the Respondent. The Complainant may also call witnesses who will be subject to questioning by the Advisor of the Complainant, questioning by the Hearing Panel, and cross-examination by the Advisor of the Respondent. The Complainant may also submit documentary evidence.

(2) The Respondent will proceed next and may give a verbal statement in response to the allegations of sexual harassment made by the Complainant. The Hearing Panel may next ask questions of the Respondent. The Respondent will be subject to cross-examination by the Advisor of the Complainant. The Respondent may also call witnesses who will be subject to questioning by the Advisor of the Respondent, questioning by the Hearing Panel, and cross-examination by the Advisor of the Complainant. The Respondent may also submit documentary evidence.

(3) The Investigator will then be available to answer questions of the Hearing Panel. The Investigator will next be subject to cross-examination by the Advisors of the Complainant and the Respondent. The Investigator may also call witnesses who will be subject to questioning by the Hearing Panel, and cross-examination by the Advisors of the Complainant and Respondent. The Investigator may also submit documentary evidence.

(4) The Hearing Panel may ask questions of the Parties or any witnesses including the Investigator at any time during the hearing.

- b. **Record of Hearing.** The Title IX Coordinator shall arrange for an audio or audiovisual recording of the hearing. The recording of the hearing will become part of the Record of the Case.

11. Hearing Process Rules.

- a. The formal rules of evidence shall not apply to any live hearing.
- b. Questions and evidence about the Complainant's pre-disposition or prior sexual behavior are not relevant, unless such questions and evidence about the Complainant's prior sexual behavior are offered to prove that someone other than the Respondent committed conduct alleged by the Complainant, or if the questions and evidence concern specific incidents of the Complainant's prior sexual behavior with respect to the Respondent and are offered to prove consent.
- c. Character evidence is information that does not directly relate to the facts at issue, but instead reflects upon the reputation, personality, or qualities of an individual, including honesty. Such evidence regarding either Party's character is of limited utility and shall not be admitted unless deemed relevant by the Hearing Officer.
- d. Incidents or behaviors of a Party not directly related to the possible violation(s) will not be considered unless they show a pattern of related misconduct. History of related misconduct by a Party that shows a pattern may be considered only if deemed relevant by the Hearing Officer.
- e. A Party's records that are made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in the professional's or paraprofessional's capacity, or assisting in that capacity, and which are made or maintained in connection with the provision of treatment to the Party, may not be used without that Party's express consent.
- f. The Hearing Officer shall not require, allow, rely upon, or otherwise use questions or evidence that constitute, or seek disclosure of, information protected under a legally recognized privilege, unless the person holding such privilege has waived the privilege.
- g. The relevancy and admissibility of any evidence offered at the hearing shall be determined by the Hearing Officer, whose ruling shall be final.
- h. A Party's Advisor will be permitted to ask the other Party and any witnesses relevant questions and follow-up questions, including those challenging credibility. Before a Complainant, Respondent or witness answers a cross-examination or other question, the Hearing Officer must first determine whether the question is relevant and explain any decision to exclude a question as not relevant. Where the Hearing Officer permits a question to be answered, a presumption shall be made that the Hearing Officer determined that the question was relevant.
- i. If a Party or witness does not submit to cross-examination at a hearing, the Hearing Panel must not rely on any statement of that Party or witness in reaching a determination regarding responsibility, but no inference can be drawn from the fact that a Party or witness failed to submit to cross-examination.
- j. The Party's Advisors may object to questions on limited grounds as specified in the Rules of Decorum. The Hearing

Officer will rule on such objections and that ruling shall be final.

- k. The Hearing Officer may dismiss any person from the hearing who interferes with or obstructs the hearing, fails to adhere to the Rules of Decorum, or fails to abide by the rulings of the Hearing Officer.

- l. Procedural questions which arise during the hearing and which are not covered by these general rules shall be determined by the Hearing Officer, whose ruling shall be final.

12. Findings of the Hearing Panel.

- a. The Hearing Panel will deliberate with no others present, except any legal advisor to the Hearing Panel, to find whether the Respondent is responsible or not responsible for the policy violation(s) in question. The Hearing Panel will base its finding on a preponderance of the evidence (i.e., whether it is more likely than not that the Respondent committed each alleged violation). If a Respondent is found responsible by a majority of the Hearing Panel, the Hearing Panel will determine appropriate sanctions and remedial actions by a majority vote.
- b. The Hearing Officer will prepare a written determination reflecting the decision of the Hearing Panel regarding responsibility, sanctions and remedial actions, if any ("Hearing Panel Decision"), and deliver it to the Title IX Coordinator detailing the following:
 - (1) Identification of the allegations potentially constituting sexual harassment as defined in CRR 600.020;
 - (2) A description of the procedural steps taken from the receipt of the Formal Complaint through the determination, including any notifications to the Parties, interviews with Parties and witnesses, site visits, methods used to gather other evidence and hearings held;
 - (3) Findings of fact supporting the determination;
 - (4) Conclusions regarding the application of the University's Title IX Policies to the facts;
 - (5) A statement of, and rationale for, the result as to each allegation, including a determination regarding responsibility, any disciplinary sanctions to be imposed on the Respondent, and whether remedies designed to restore or preserve equal access to the University's education programs or activities will be provided by the University to the Complainant; and
 - (6) The procedures and permissible bases for the Complainant and the Respondent to appeal.
- c. The Hearing Panel Decision should be submitted to the Title IX Coordinator within five (5) business days of the end of deliberations. Deviations from the five-day period will be communicated by the Hearing Officer to the Parties and the Title IX Coordinator, along with an expected time for completion. The Hearing Panel Decision will be provided to the Title IX Coordinator who will provide it to the Parties simultaneously within five (5) business days of receipt of the decision.
- d. The Hearing Panel Decision will be sent to each Party by email to their University-issued email account, or by the method of notification previously designated in writing by the Party. Notice is presumptively deemed delivered, when:
 - 1) provided in person, 2) emailed to the individual to their University-issued email account, or 3) when sent via the alternate method of notification specified by the Party.

- e. The Hearing Panel Decision will become final either on the date that the Parties are provided with the written determination of the result of the appeal, if an appeal is filed, or if an appeal is not filed, the date on which an appeal would no longer be considered timely.
- f. The Title IX Coordinator is responsible for effective implementation of any remedies.

R. Process for Academic Medical Centers (AMC)

1. Academic Medical Centers at the University of Missouri are not required to provide for a live hearing, but rather must adhere to the following process for resolving Formal Complaints alleging Title IX violations.
2. The decision-maker(s) for the Title IX Process for Academic Medical Centers shall be a neutral, impartial, and unbiased decision-maker designated by the Executive Vice Chancellor for Health Affairs.
3. **Notice of AMC Meeting.** The decision-maker will meet separately with each Party. At least fifteen (15) business days prior to the initial meeting with the decision-maker, the Title IX Coordinator will send a letter (Notice of AMC Meeting) to the Parties with the following information:
 - a. A description of the alleged violation(s) and applicable policy or policies that are alleged to have been violated.
 - b. A description of the applicable procedures.
 - c. A statement that the Parties may be accompanied by a Support Person of their choosing at the AMC Meeting.
 - d. The time, date and location of the AMC Meeting.
 - e. The name of the decision-maker, and information on how to raise an objection to the decision-maker and the timeline in which to raise any objections.
 - f. A copy of the investigative report and exhibits.
 - g. Notification to the Parties that all of the evidence gathered in the course of the investigation that is directly related to the allegations, including inculpatory and exculpatory evidence, is available to the Parties and how to request access to that evidence.
4. The Notice of AMC Meeting letter will be sent to each Party by email to their University-issued email account, or by the method of notification previously designated in writing by the Party. Notice is presumptively deemed delivered, when:
 - 1) provided in person, 2) emailed to the individual to their University-issued email account, or 3) when sent via the alternate method of notification specified by the Party.
5. At least fifteen (15) business days prior to the initial AMC Meeting, the Investigator will provide to the Parties access to all evidence gathered in the investigation which is directly related to the allegations in the Formal Complaint, including any evidence upon which the Investigator does not intend to rely, and inculpatory and exculpatory evidence whether obtained from a Party or other source, copies of recordings of all interviews conducted during the investigation, and a copy of any investigative report.
6. At least ten (10) business days prior to the initial AMC Meeting, the Complainant and Respondent may provide the decision-maker with written, relevant questions the Party wants asked of any Party or witness. At least five (5) business days prior to the initial AMC Meeting, the decision-maker will provide each Party with the answers,

and allow for additional, limited follow-up questions from each Party. The decision-maker must explain to the Party proposing the questions any decision to exclude a question as not relevant. The Parties may also provide the decision-maker with documentary evidence.

7. No employee or student, directly or through others, should take any action which may interfere with the investigation or the AMC process. Employees and students are prohibited from attempted or actual intimidation or harassment of any potential witness. Failure to adhere to these requirements may lead to disciplinary action, up to and including expulsion or termination.
8. The decision-maker shall not have a conflict of interest or bias for or against Complainants or Respondents generally or an individual Complainant or Respondent. If a decision-maker feels that they have a conflict of interest or bias, or cannot make an objective determination, they must recuse themselves from the proceedings in advance of the AMC meeting.
9. At least ten (10) business days prior to the initial AMC Meeting, the Parties shall provide to the Title IX Coordinator all objections in writing to the decision-maker identified in the Notice of AMC Meeting. If the Title IX Coordinator determines that the decision-maker should be replaced, the Title IX Coordinator will select an alternate decision-maker. The Title IX Coordinator will provide a written response to all Parties addressing the objections.
10. Questions and evidence about the Complainant's pre-disposition or prior sexual behavior are not relevant, unless such questions and evidence about the Complainant's prior sexual behavior are offered to prove that someone other than the Respondent committed conduct alleged by the Complainant, or if the questions and evidence concern specific incidents of the Complainant's prior sexual behavior with respect to the Respondent and are offered to prove consent.
11. Character evidence is information that does not directly relate to the facts at issue, but instead reflects upon the reputation, personality, or qualities of an individual, including honesty. Such evidence regarding either Party's character is of limited utility and shall not be admitted unless deemed relevant by the Hearing Officer.
12. Incidents or behaviors of a Party not directly related to the possible violation(s) will not be considered unless they show a pattern of related misconduct. History of related misconduct by a Party that shows a pattern may be considered only if deemed relevant by the Hearing Officer.
13. A Party's records that are made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in the professional's or paraprofessional's capacity, or assisting in that capacity, and which are made or maintained in connection with the provision of treatment to the Party, may not be used without that Party's express consent.
14. The decision-maker shall not require, allow, rely upon, or otherwise use questions or evidence that constitute, or seek disclosure of, information protected under a legally recognized privilege, unless the person holding such privilege has waived the privilege.

15. All meetings between the decision-maker and Parties and/or witnesses shall be recorded.
16. Within ten (10) business days of the last meeting with any Party or witness, the decision-maker must issue a written determination regarding responsibility, applying the preponderance of the evidence standard of evidence. The written determination must include:
 - a. Identification of the allegations potentially constituting sexual harassment as defined in CRR 600.020.
 - b. A description of the procedural steps taken from the receipt of the Formal Complaint through the determination, including any notifications to the parties, interviews with parties and witnesses, site visits, methods used to gather other evidence and meetings held;
 - c. Findings of fact supporting the determination;
 - d. Conclusions regarding the application of the Title IX policies to the facts;
 - e. A statement of, and rationale for, the result as to each allegation, including a determination regarding responsibility, any disciplinary sanctions to be imposed on the Respondent, and whether any remedies designed to restore or preserve equal access to the University's education program or activity will be provided by the University to the Complainant; and
 - f. The University's procedures and permissible bases for the Complainant and Respondent to appeal as set forth in Section U.
17. The written determination will be provided to the Title IX Coordinator, who will provide it to the Parties simultaneously within five (5) business days of receipt of the determination. Notification will be made in writing and sent to each Party by email to their University-issued email account, or by the method of notification previously designated in writing by the Party. Notice is presumptively deemed delivered, when: 1) provided in person, 2) emailed to the individual to their University-issued email account, or 3) when sent via the alternate method of notification specified by the Party.
18. The determination becomes final either on the date that the University provides the Parties with the written determination of the result of the appeal, if any appeal is filed, or if any appeal is not filed, the date on which an appeal would no longer be considered timely.
19. The Title IX Coordinator is responsible for effective implementation of any remedies.
 - (2) The disciplinary history of the Respondent;
 - (3) The need for sanctions/remedial actions to bring an end to the conduct;
 - (4) The need for sanctions/remedial actions to prevent the future recurrence of the conduct; and
 - (5) The need to remedy the effects of the conduct on the Complainant and the University community.

2. **Types of Sanctions.** The following sanctions may be imposed upon any Respondent found to have violated the University's Title IX Policies. Multiple sanctions may be imposed for any single violation. Sanctions include but are not limited to the following:

a. **For Respondents who are Student(s) or Student Organization(s):**

- (1) **Warning.** A notice in writing to the Respondent that there is or has been a violation of institutional regulations, and cautioning that if there are further violations, the existence of the Warning may result in more severe sanctions in the future.
- (2) **Probation.** A written reprimand for violation of specified regulations. Probation is for a designated period of time and includes the probability of more severe sanctions if the Respondent is found to be violating any institutional regulation(s) during the probationary period.
- (3) **Loss of Privileges.** Denial of specified privileges for a designated period of time.
- (4) **Restitution.** Compensating the University for loss, damage, or injury to University property. This may take the form of appropriate service and/or monetary or material replacement.
- (5) **Discretionary Sanctions.** Work assignments, service to the University, or other related discretionary assignments, or completion of educational programming.
- (6) **Residence Hall Suspension.** Separation of the Respondent from the residence halls for a definite period of time, after which the Respondent is eligible to return. Conditions for readmission may be specified.
- (7) **Residence Hall Expulsion.** Permanent separation of the Respondent from the residence halls.
- (8) **Campus Suspension.** Respondent is suspended from being allowed on a specific University campus for a definite period of time. Logistical modifications consistent with the sanction imposed, may be granted at the discretion of the Chief Student Affairs Officer (or Designee).
- (9) **University System Suspension.** Separation of the Respondent from the University System for a definite period of time, after which the Respondent is eligible to return. Conditions for readmission may be specified.
- (10) **Withdrawal of Recognition.** Respondent Student Organization loses its Official Approval as a recognized student organization. May be either temporary or permanent.
- (11) **University System Expulsion.** Permanent and complete separation (i.e., not eligible for online courses either) of the Respondent from the University System.

b. **For Respondents who are Employee(s):**

- (1) Warning – verbal or written;

S. Sanctions and Remedial Actions.

1. If the Respondent is found responsible for a violation of the University's Title IX Policies, the Hearing Panel, or the decision-maker in the Administrative Resolution Process or Academic Medical Center Process, will determine sanctions and remedial actions. The Title IX Coordinator will apply and enforce the sanctions and remedial actions and may also add other remedial actions as deemed appropriate.
 - a. **Factors Considered When Finding Sanctions/Remedial Actions** include but are not limited to:
 - (1) The nature, severity of, and circumstances surrounding the violation;

- (2) Performance improvement plan;
- (3) Required counseling;
- (4) Required training or education;
- (5) Loss of annual pay increase;
- (6) Loss of supervisory responsibility;
- (7) Recommendation of discipline in a training program, including recommendation of termination, suspension or other corrective or remedial actions;
- (8) For Non-Regular Faculty, immediate termination of term contract and employment;
- (9) For Regular, Untenured Faculty, immediate termination of term contract and employment. Notice of not reappointing would not be required;
- (10) Suspension without pay;
- (11) Non-renewal of appointment;
- (12) For Regular, Tenured Faculty, suspension without pay, removal from campus and referral to the Chancellor to initiate dismissal for cause as detailed in Section 310.060 of the Collected Rules and Regulations;
- (13) For Staff, Demotion;
- (14) For Staff, Termination.

- c. **Remedial Actions.** The following remedial actions may also be imposed to address the effects of the violation(s) of the University's Title IX Policies on the Complainant. Such remedial actions will vary depending on the circumstances of the policy violation(s), but may include:

- (1) Where the Complainant is a student:
 - (a) Permitting the student to retake courses;
 - (b) Providing tuition reimbursement;
 - (c) Providing additional academic support;
 - (d) Removal of a disciplinary action; and
 - (e) Providing educational and/or on-campus housing accommodations.
- (2) Where the Complainant is an employee:
 - (a) Removal of a disciplinary action;
 - (b) Modification of a performance review;
 - (c) Adjustment in pay;
 - (d) Changes to the employee's reporting relationships; and
 - (e) Workplace accommodations.

In addition, the University may offer or require training and/or monitoring as appropriate to address the effects of the violation(s) of the University's Title IX Policies.

- d. **When Implemented.** Sanctions will be imposed once the written determination regarding responsibility becomes final; the determination regarding responsibility is final either on the date that the Parties are provided with the written determination of the result of the appeal, if an appeal is filed, or if an appeal is not filed, the date on which an appeal would no longer be considered timely.

of the Title IX Coordinator, the Formal Complaint may be dismissed, or the Title IX Coordinator may determine that the process will nonetheless proceed in the Respondent's absence to a reasonable resolution and, if the Respondent is found responsible, the Respondent will not be permitted to return to the University unless all sanctions have been satisfied.

U. Appeal.

1. **Grounds for Appeal.** Both Complainant and Respondent are allowed to appeal the dismissal of a Formal Complaint or any of the allegations therein, or the findings of the Administrative Resolution Process, the Hearing Panel Resolution Process, or the Academic Medical Center process. Appeals are limited to the following:
 - a. A procedural irregularity that affected the outcome of the matter (e.g., material deviation from established procedures, etc.);
 - b. To consider new evidence that was not reasonably available at the time the determination regarding responsibility or dismissal was made, that could affect the outcome of the matter;
 - c. The Title IX Coordinator, Investigator(s), or decision-maker(s) had a conflict of interest or bias for or against Complainants or Respondents generally or the individual Complainant or Respondent that affected the outcome of the matter; or
 - d. The sanctions fall outside the range typically imposed for this offense, or for the cumulative conduct record of the Respondent.
2. **Requests for Appeal.** Both the Complainant and the Respondent may appeal a dismissal of a Formal Complaint or any allegations therein, or a determination regarding responsibility to the Equity Resolution Appellate Officer. The Equity Resolution Appellate Officer must not have a conflict of interest or bias for or against Complainants or Respondents generally or an individual Complainant or Respondent; if the Equity Resolution Appellate Officer does not believe that they can make an objective decision about an appeal, they should recuse themselves and the Chancellor (or Designee) shall appoint an alternate Equity Resolution Appellate Officer to hear the pending appeal. All requests for appeal must be submitted in writing to the Equity Resolution Appellate Officer within five (5) business days of the delivery of the notice of dismissal or Administrative Resolution Decision, Hearing Panel Decision, or AMC Determination. When any Party requests an appeal, the other Party will be notified and receive a copy of the request for appeal.
3. **Response to Request for Appeal.** Within five (5) business days of the delivery of the notice and copy of the request for appeal, the non-appealing Party may file a response to the request for appeal. The response can address that sufficient grounds for appeal have not been met and/or the merits of the appeal.
4. **Review of the Request to Appeal.** The Equity Resolution Appellate Officer will make an initial review of the appeal request(s) to determine whether:
 - a. The request is timely, and
 - b. The appeal is on the basis of any of the articulated grounds listed above,

T. Withdrawal While Charges Pending. Should a Respondent decide to resign employment, or withdraw from the University and not participate in the investigation and/or hearing without signing a Voluntary Permanent Separation and General Release Agreement and without the approval

- c. When viewed in the light most favorable to the appealing Party, the appeal states grounds that could result in an adjusted finding or sanction.

The Equity Resolution Appellate Officer will reject the request for appeal if any of the above requirements are not met. The decision to reject the request for appeal is final and further appeals and grievances are not permitted. The Equity Resolution Appellate Officer will render a written decision whether the request for appeal is accepted or rejected within fifteen (15) business days from receipt of the request for appeal. If no written decision is provided to the Parties within fifteen (15) business days from receipt of the request, the appeal will be deemed accepted.

5. Review of the Appeal. If all three (3) requirements for appeal listed in paragraph 4 above are met, the Equity Resolution Appellate Officer will accept the request for appeal and proceed with rendering a decision on the appeal applying the following additional principles:

- a. Appeals are not intended to be full re-hearings of the Formal Complaint and are therefore deferential to the original findings. In most cases, appeals are confined to a review of the written documentation and Record of the Case, and relevant documentation regarding the grounds for appeal. Appeals granted based on new evidence should normally be remanded to the original decision-maker for reconsideration.
- b. The Equity Resolution Appellate Officer will render a written decision on the appeal to all Parties within ten (10) business days from accepting the request for appeal. In the event the Equity Resolution Appellate Officer is unable to render a written decision within ten (10) business days from accepting the request for appeal, the Equity Resolution Appellate Officer will promptly notify the Parties in writing of the delay.
- c. Once an appeal is decided, the outcome is final. Further appeals are not permitted.

6. Extensions of Time. For good cause, the Equity Resolution Appellate Officer may grant reasonable extensions of time (e.g.: 7-10 business days) to the deadlines in the appeal process. The Equity Resolution Appellate Officer will notify the Parties in writing if such extensions are granted.

V. Failure to Complete Sanctions/Comply with Interim and Long-term Remedial Actions. All Respondents are expected to comply with all sanctions and remedial actions within the timeframe specified. Failure to follow through on these sanctions and remedial actions by the date specified, whether by refusal, neglect or any other reason, may result in additional sanctions and remedial actions and/or suspension, expulsion, termination, referral to Dismissal for Cause process, or withdrawal of recognition from the University. Suspension will only be lifted when compliance is achieved to the satisfaction of the Title IX Coordinator.

W. Dismissal for Cause Referral. If the recommended sanction for a Regular, Tenured Faculty member is referral to the Chancellor to initiate Dismissal for Cause, the Record of the Case will be forwarded to the appropriate Faculty Committee on Tenure. Because the Dismissal for Cause proceeding is not a re-hearing of the Complaint, the Record of the Case will be included as evidence and the findings will be adopted for proceeding as detailed in Section 310.060: Procedures in Case of Dismissal for Cause in the Collected Rules and Regulations.

X. Records. In implementing this policy, records of all Formal Complaints, the Hearing Process or Academic Medical Center Process, and resolutions (including Informal resolution and result therefrom), will be kept by the Title IX Coordinator. For the purpose of review or appeal, the Record of the Case will be accessible at reasonable times and places to the Respondent and the Complainant. The Record of the Case will be kept for seven (7) years following final resolution.

In addition, a record of the response to all complaints of sexual harassment, must be maintained for a period of seven (7) years, including records of any actions, including Supportive Measures, taken in response to a report or Formal Complaint of sexual harassment. In each instance, the University must document the basis for its conclusion that its response was not deliberately indifferent, and document that it has taken measures designed to restore or preserve equal access to the University's education programs or activities. If the University did not provide a Complainant with Supportive Measures, the University must document the reasons why such a response was not clearly unreasonable in light of the known circumstances.

Each Title IX Coordinator, including the Title IX Coordinator for the academic medical center, shall maintain statistical, de-identified data on the race, gender and age of each Party to a Formal Complaint for that university/ academic medical center, and will report such data on an annual basis to the President of the University of Missouri. Additionally, statistical data relating to each university in the University of Missouri System shall be reported on an annual basis to that university's Chancellor and chief officers for human resources, student affairs, and diversity, equity and inclusion; the academic medical center shall report such statistical data for the academic medical center on an annual basis to the Executive Vice-Chancellor for Health Affairs. Data relating to the University of Missouri System shall be reported on an annual basis to the University of Missouri System's chief officers for human resources, student affairs, and diversity, equity and inclusion.

Y. Retaliation. No person may intimidate, threaten, coerce, or discriminate against any individual for the purpose of interfering with any right or privilege secured by Title IX, or because the individual has made a report or complaint, testified, assisted, or participated or refused to participate in any manner in an investigation, proceeding, or hearing under this policy. Intimidation, threats, coercion, or discrimination, including charges against an individual for policy violations that do not involve sex discrimination or sexual harassment, but arise out of the same facts or circumstances as a report or complaint of sex discrimination, or a report or Formal Complaint of sexual harassment, for the purpose of interfering with any right or privilege secured by Title IX, constitutes retaliation.

The University must keep confidential the identity of any individual who has made a report or complaint of sex discrimination, including any individual who has made a report or filed a Formal Complaint of sexual harassment, any Complainant, any individual who has been reported to be the perpetrator of sex discrimination, any Respondent, and any witness, except as may be permitted by the FERPA statute, 20 U.S.C. 1232g, or FERPA regulations, 34 CFR part 99, or as required by law, or to carry out the purposes of Title IX, including the conduct of any investigation, hearing, or judicial proceeding arising thereunder. Complaints alleging retaliation may be filed with the Equity Officer in accordance with CRRs 600.010, 600.040, and 600.050.

The exercise of rights protected under the First Amendment does not constitute retaliation prohibited under this section.

Charging an individual with a policy violation for making a materially false statement in bad faith in the course of the any proceedings under this policy does not constitute retaliation provided, however that a determination regarding responsibility, alone, is not sufficient to conclude that any Party made a materially false statement in bad faith.

600.020 Sex Harrassment under Title IX - for matters involving conduct alleged to have occurred on or after August 14, 2020

Executive Order 40, 4-8-14; Revised 6-19-14; Revised 9-22-14 by Executive Order 41. Revised 2-9-17 with an effective date of 3-1-17.

A. Sex Discrimination, Sexual Harassment and Sexual Misconduct in Education. The University is committed to affording equal employment and education opportunities to its employees and students, and to creating an environment free from discrimination (see Section 600.010 of the Collected Rules and Regulations). In furtherance of these commitments, both University policy and applicable state and federal law, prohibit all students, employees, volunteers and visitors at the University from engaging in discrimination on the basis of any protected characteristic, including sex, pregnancy, gender identity, and gender expression. In addition, University policy and the law prohibit sexual misconduct, sexual harassment, stalking on the basis of sex, dating/intimate partner violence, and sexual exploitation, as defined in Section 600.020.B. As used in this policy, the word "sex" is also inclusive of the term "gender." This policy applies to any phase of its employment process, any phase of its admission or financial aid programs, and all other aspects of its educational programs or activities. Additionally, this policy applies to allegations of sexual misconduct or allegations of other forms of sex discrimination, as defined in Section 600.020.B., occurring in other settings, including off-campus, if there are effects of the conduct that interfere with or limit any person's ability to participate in or benefit from the University's educational programs, activities or employment. Notices of nondiscrimination are posted online and in physical locations for the UM System and each of the campuses.

B. Definitions

C. Title IX Coordinators. Duties and responsibilities of the University's Title IX Coordinators include monitoring and oversight of overall implementation of Title IX compliance at the University, including coordination of training, education, communications and coordination with the Equity Resolution Processes for faculty, staff, students and other members of the University community and investigation of complaints of sex discrimination. The University may designate Deputy Coordinators as needed to assist in fulfillment of the Coordinator's duties and responsibilities.

NOTE: All references to "Title IX Coordinator" throughout this policy refer to the Title IX Coordinator or the Coordinator's designee.

Any person having inquiries concerning the application of Title IX should contact their respective UM System or campus Title IX Coordinator.

The following individuals serve as Title IX Coordinators and are designated to handle inquiries regarding the Anti-Discrimination policies and to serve as coordinators for purposes of Title IX compliance:

University of Missouri-St. Louis

Jessica Swederske
Title IX Coordinator and Chief Equity Officer
240 JCPenney
St. Louis, MO 63121
Telephone: 314-516-5748

Email: swederskej@umsl.edu
<http://www.umsl.edu/title-ix>

If the Complaint involves the University's Title IX Coordinator, Complaints may be made to the System Title IX Coordinator. If the Complaint involves the System Title IX Coordinator, reports may be made to the System President. The contact information for the System President is:

Office of the President
321 University Hall
Columbia, MO 65211
Telephone: 573-882-2011
Email: umpresident@umsystem.edu

NOTE: The above-listed contact information for Title IX Coordinators may be updated as needed and without requiring the approval of the Board of Curators.

D. Reporting Sex Discrimination, Including Sexual Harassment and Sexual Misconduct

E. Requests for Confidentiality or Not to Pursue an Investigation

F. Impact of Optional Report to Law Enforcement. In accordance with federal law, the Title IX Coordinator will not wait for the conclusion of a criminal investigation or criminal proceeding to begin the Title IX preliminary investigation. It may be necessary to delay temporarily the fact-finding portion of a Title IX preliminary investigation while the police are gathering evidence. The Title IX Coordinator will promptly resume the preliminary Title IX investigation as soon as notified by the law enforcement agency that it has completed the evidence-gathering process. The Title IX Coordinator will implement appropriate interim steps during the law enforcement agency's investigation period to provide for the safety of the Complainant and the campus community and the avoidance of retaliation.

G. Non-compliance. Failure to comply with this policy can result in disciplinary action. Employees also are cautioned that non-compliance with this policy may increase their risk of personal liability. Further, an individual who fails to report as required under this policy may be determined to be ineligible for defense or protection under Section 490.010 for any associated claims, causes of action, liabilities or damages.

H. Retaliation. Retaliation is any adverse action taken against a person because of that person's participation in protected activity. The University strictly prohibits retaliation against any person for making any good faith report to a Title IX Coordinator or for filing, testifying, assisting, or participating in any investigation or proceeding involving allegations of sex discrimination, sexual harassment or sexual misconduct. Any person who engages in such retaliation shall be subject to disciplinary action, up to and including expulsion or termination, in accordance with applicable procedures. Any person who believes they have been subjected to retaliation is encouraged to promptly notify the Equity Officer or Title IX Coordinator. The University will promptly investigate all claims of retaliation.

Examples of prohibited retaliation include, but are not limited to, giving a lesser grade than the student's academic work warrants because the student filed a Complaint of sexual harassment; giving lower than justified performance appraisals because a person was a witness in an investigation of alleged sexual harassment; and threatening to spread false information about a person for filing a Complaint of sexual harassment.

I. False Reporting. False reporting is making an intentional false report or accusation in relation to this policy as opposed to a report or accusation, which, even if erroneous, is made in good faith. False reporting is a serious offense subject to appropriate disciplinary action ranging up to and including expulsion or termination.

J. Witness Intimidation or Harassment. No individual participating in an investigation relating to a report or Complaint that a violation of this policy has occurred should, directly or through others, take any action which may interfere with the investigation. The University prohibits attempts to or actual intimidation or harassment of any potential witness. Failure to adhere to these requirements may lead to disciplinary action, up to and including expulsion or termination.

K. U.S. Department of Education—Office for Civil Rights. Inquiries concerning the application of Title IX also may be referred to the United States Department of Education's Office for Civil Rights. For further information on notice of nondiscrimination, visit <http://wdcrocolp01.ed.gov/CFAPPS/OCR/contactus.cfm> and for the address and phone number of the U.S. Department of Education office which serves your area, or call 1-800-421-3481.

The State of Missouri regional Office for Civil Rights is located in Kansas City and is available to provide assistance.

Office for Civil Rights
U.S. Department of Education
One Petticoat Lane
1010 Walnut, 3rd Floor, Suite 320
Kansas City, MO 64106
Telephone: 816-268-0550
FAX: 816-268-0599
TDD: 800-877-8339
Email: OCR.KansasCity@ed.gov

600.040 Equity Resolution Process for Resolving Complaints of Discrimination, Harassment, and Sexual Misconduct against a Faculty Member

600.050 Equity Resolution Process for Resolving Complaints of Discrimination, Harassment, and Sexual Misconduct against a Staff Member

600.060 Equity Resolution Process for Resolving Complaints of Discrimination and Harassment against the University of Missouri

1. Section 600.030 – Equity Resolution Process for Resolving Complaints of Discrimination, Harassment and Sexual Misconduct Against a Student or Student Organization
2. Section 600.040 – Equity Resolution Process for Resolving Complaints of Discrimination, Harassment and Sexual Misconduct Against a Faculty Member
3. Section 600.050 – Equity Resolution Process for Resolving Complaints of Discrimination, Harassment and Sexual Misconduct Against a Staff Member
4. Section 600.060 - Equity Resolution Process for Resolving Complaints of Discrimination and Harassment Against the University of Missouri
 - a. **Academic Medical Center.** University of Missouri Hospitals and Clinics, and other Academic Medical Centers as may be designated by the University in the future.

- b. **Academic Medical Center Resolution Process.** Resolution of a Formal Complaint by a decision-maker making a finding on each of the alleged policy violations and a finding on sanctions.
- c. **Administrative Resolution.** A voluntary informal resolution process where a decision-maker makes a finding on each of the alleged policy violations in a Formal Complaint and a finding on sanctions without a hearing.
- d. **Advisors.** The individuals selected by the Complainant and the Respondent, or if a Party does not have their own Advisor, selected by the University, to conduct all cross-examination and other questioning on behalf of a Party at a hearing; an Advisor may, but is not required to, be an attorney.
- e. **Alternate Methods of Notice:** Methods of providing Notice to a Party other than in person or by email to the Party's University email account; these include email to another email account specified by the Party, or a Party's designation of an address to which Notice may be mailed via U.S. Mail; a Party seeking to designate an Alternate Method of Notice must provide such designation in writing to the Title IX Coordinator.
- f. **Complainant.** "Complainant" means an individual who is alleged to be the victim of conduct that could constitute sexual harassment.
- g. **Emergency Removal Appeal Individual/Committee:** An individual or committee of three (3) individuals appointed by the Chancellor (or Designee) to hear appeals of an Emergency Removal decision by the Title IX Coordinator.
- h. **Equity Resolution Appellate Officer.** For Staff, Student(s) or Student Organization Respondents, a trained, senior-level administrator appointed by the Chancellor (or Designee) to hear all appeals stemming from the Title IX Resolution Process. For Faculty Respondents, the Chancellor (or Designee).
- i. **Equity Resolution Hearing Panel ("Hearing Panel").** A group of two (2) trained Equity Resolution Hearing Panelist Pool members who, together with the Hearing Officer, serve as the Hearing Panel for a specific Formal Complaint. A good faith attempt will be made for the Hearing Panel to include at least one faculty member and one administrator or staff member. The Hearing Officer shall serve as the Chair of the Hearing Panel.
- j. **Equity Resolution Hearing Panelists Pool ("Hearing Panelist Pool").** A group of at least five (5) faculty and five (5) administrators and/or staff selected by the Chancellor (or Designee) to serve as hearing panel members in the Hearing Panel Resolution process. The faculty hearing panel members selected by the Chancellor (or Designee) shall be selected from a list of no less than ten (10) faculty members proposed by the faculty council/senate. Selection of hearing panel pool members shall be made with an attempt to recognize the diversity of the University community. Hearing Panel members from one University may be asked to serve on a hearing panel involving another University.
- k. **Formal Complaint.** Formal Complaint means a written document filed by a Complainant or signed by the Title IX Coordinator alleging sexual harassment against a Respondent and requesting that the University investigate the allegation of sexual harassment. The phrase "document

filed by a Complainant” means a document or electronic submission (such as by electronic mail or an online portal provided for this purpose by the University) that contains the Complainant’s physical or digital signature, or otherwise indicates that the Complainant is the person filing the Formal Complaint.

- l. **Hearing Officer.** A trained individual appointed by the Chancellor (or Designee) to preside over a hearing and act as a member of the Hearing Panel, and to rule on objections and the relevancy of questions and evidence during the hearing.
- m. **Hearing Panel Decision.** Resolution of a Formal Complaint by an Equity Resolution Hearing Panel recommending or making a finding on each of the alleged policy violations and sanctions, if applicable.
- n. **Hearing Panelist Pool Chair (“Pool Chair”).** The Hearing Panelist Pool Chair is selected by the Chancellor (or Designee). The Pool Chair randomly selects and coordinates the hearing panel members to serve on the Hearing Panel for a specific Formal Complaint. The Pool Chair may serve as a panel member for a specific Formal Complaint.
- o. **Informal Resolution.** A voluntary resolution process using alternative dispute resolution mechanisms such as mediation, facilitated dialogue, administrative resolution, or restorative justice.
- p. **Investigators.** Investigators are trained individuals appointed by the Title IX Coordinator (or designee) to conduct investigations of the alleged violations of the University’s Title IX Policies.
- q. **Parties.** The Complainant and the Respondent are collectively referred to as the Parties.
- r. **Record of the Case.** The Record of the Case in the Section 600.030 Process includes, when applicable: All Notices to the Parties; investigative report; recordings of Party and witness interviews; exhibits used at a hearing or at the Academic Medical Center (AMC) Meeting; recordings of meetings between the AMC decision-maker and Parties and witnesses, if any; the hearing record (an audio or audiovisual record of the hearing); any determination of dismissal of all or part of a Formal Complaint; the determination on each of the alleged policy violations and sanctions by either the Hearing Panel or decision-maker; and the decision on the appeal, if any, including the request for appeal, any additional evidence submitted for the appeal, and written arguments of the Parties.
- s. **Report.** Any verbal or written communication or notice of an alleged violation of the University’s Title IX Policies.
- t. **Respondent.** Respondent means an individual who has been reported to be the perpetrator of conduct that could constitute sexual harassment.
- u. **Rules of Decorum.** Hearing process rules to which Parties and their Advisors must adhere during any Hearing under this policy.
- v. **Student.** A person having once been admitted to the University who has not completed a course of study and who intends to or does continue a course of study in or through one of the Universities of the University System. For the purpose of these rules, student status continues whether or not the University’s academic programs are in session.
- w. **Student Organization.** A recognized student organization which has received Official Approval in accordance with Section 250.010 of the Collected Rules and Regulations. Three members of the organization may represent the student organization as the Party.
- x. **Support Person.** An individual selected by a Party to accompany the Party to all meetings and interviews to provide support for the Party throughout the Title IX Process. A Support Person may not attend a hearing under the Title IX process unless also serving as a Party’s Advisor.
- y. **Title IX Coordinator.** The Title IX Coordinator is a trained administrator designated by the Chancellor (or Designee) to respond to reports of sexual harassment; and to receive and assist with the Title IX process for Formal Complaints alleging violation of the University’s Sexual Harassment in Employment/Education Policy. All references to “Title IX Coordinator” throughout this policy refer to the Title IX Coordinator or the Title IX Coordinator’s designee.
- z. **University’s Title IX Policies.** The University’s Title IX Policies include this Policy and the Sexual Harassment in Employment/Education Policy located at Section 600.020 of the Collected Rules and Regulations (CRR).
- a. Upon receipt of a Formal Complaint, the Title IX Coordinator will provide a written notice to the known Parties that includes the following:
 - i. A description of the University’s Title IX Process, including Informal Resolution;
 - ii. Notice of the allegations of sexual harassment, including sufficient details known at the time. Sufficient details include the identities of the Parties involved in the incident, if known; the conduct allegedly constituting the sexual harassment; and the date and location of the alleged incident.
 - iii. A statement that the Respondent is presumed not responsible for the alleged conduct and that a determination regarding responsibility is made at the conclusion of the Title IX process.
 - iv. A statement reminding the Respondent that they have the right to file a report or Formal Complaint with the Title IX Coordinator; however, both Parties are advised that retaliation against any Party is prohibited.
 - v. A statement notifying the Parties of the availability of Supportive Measures.
 - vi. A statement notifying the Parties of their right to have an Advisor of their choice, who may be, but is not required to be, an attorney. The Parties will be advised that if they do not have an Advisor to conduct cross-examination at a hearing on their behalf, the University will appoint such an Advisor; this Advisor may be, but is not required to be, an attorney. (This provision does not apply to matters proceeding under the process for Academic Medical Centers set forth in Section R).
 - vii. A statement notifying the Parties that they may have a Support Person selected by a Party accompany the Party to all meetings and interviews to provide support for the Party throughout the Title IX Process. A Support Person may not attend a hearing under the Title IX process unless also serving as a Party’s Advisor.
 - viii. A statement notifying the Parties that they will be permitted to inspect and review any evidence obtained

- as part of the investigation that is directly related to the allegations raised in the Formal Complaint, including the evidence upon which the University does not intend to rely in reaching a determination regarding responsibility, and including inculpatory and exculpatory evidence whether obtained from a Party or other source.
- ix. A statement notifying the Parties that they must be truthful when making any statement or providing any information or evidence to the University throughout the Title IX process, and all documentary evidence must be genuine and accurate. False statements and fraudulent evidence by an employee may be the basis for personnel action pursuant to CRR 370.010 or HR 601, or other applicable University policies, or for disciplinary action pursuant to CRR 200.010 for students.
 - x. A statement that nothing in the Title IX process is intended to supersede nor expand any rights the individual may have under applicable state or federal statutory laws or the U.S. Constitution.
 - xi. A statement informing a Party that all notices hereafter will be sent via their University-issued email account, unless they provide to the Title IX Coordinator an alternate method of notification. If a Party does not have a University-issued email account, all notices will be via U.S. Mail unless they provide the Title IX Coordinator with a preferred method of notification.
- b. The Notice of Allegations will be made in writing to the Parties by email to the Party's University-issued email account, with a read-receipt. If a read-receipt is not returned within one (1) business day or the Party does not have a University-issued email account, the Notice of Allegations shall be sent via U.S. Mail postage pre-paid to the last known address of the Party. Notice also may be provided in person to either Party. Notice is presumptively deemed delivered, when: 1) provided in person, 2) emailed to the individual, or 3) when mailed.
 - a. Referral and facilitating contact for the Complainant or Respondent for counseling or other support services.
 - b. Mutual restrictions on contact between the Parties.
 - c. Providing campus escort services to the Parties.
 - d. Increased security and monitoring of certain areas of the campus.
 - e. Adjusting the extracurricular activities, work schedules, work assignments, supervisory responsibilities, or work arrangements of the Complainant and/or the Respondent, as appropriate.
 - f. If either Party is a student:
 - i. Referral of that Party to academic support services and any other services that may be beneficial to the Party.
 - ii. Adjusting the courses, assignments, and/or exam schedules of the Party.
 - iii. Altering the on-campus housing assignments, dining arrangements, or other campus services for the Party.
 - g. Providing limited transportation accommodations for the Parties.
 - h. Informing the Parties of the right to notify law enforcement authorities of the alleged incident and offering to help facilitate such a report.
 - i. Implementing an Emergency Removal of a Respondent from the University's education program or activity on an emergency basis, if the Title IX Coordinator, after conducting an individualized safety and risk analysis, determines that an immediate threat to the physical health or safety of any student or other individual arising from the allegations of sexual harassment, justifies removal.
 - i. In all cases in which an Emergency Removal is imposed, the Respondent will immediately be given notice and an opportunity to challenge the decision of the Title IX Coordinator either prior to such Removal being imposed, or as soon thereafter as reasonably possible but no later than five (5) business days, to show cause why the removal should not be implemented. Any such challenge shall be made in writing and directed to the Title IX Coordinator who will forward such challenge to the Emergency Removal Appeal Individual/Committee, which will make a final decision on removal within three (3) business days.
 - ii. Violation of an Emergency Removal under this policy may be grounds for discipline.
 - j. Suspending, on an interim basis, a Respondent Student Organization's operations, University recognition, access to and use of the University campus/facilities/events and/or all other University activities or privileges for which the Respondent Student Organization might otherwise be eligible, pending the completion of the Title IX Process when the Title IX Coordinator finds and believes from available information that the presence of the student organization on campus would seriously disrupt the University or constitute a danger to the health, safety, or welfare of members of the University community. The appropriate procedure to determine the future status of the student organization will be initiated within seven (7) business days.
 - k. Implementing an administrative leave for an employee in accordance with University Human Resources Policies. Administrative leave for an employee is not an Emergency Removal under this policy.
 - a. To be treated with respect by University officials.
 - b. To be free from retaliation.
 - c. To have access to University support resources (such as counseling and mental health services and University health services).
 - d. To request a no contact directive between the Parties.
 - e. To have a Support Person of the Party's choice accompany the party to all interviews and meetings (excluding hearings) throughout the Title IX Process.
 - f. To refuse to have an allegation resolved through the Informal Resolution Processes.
 - g. To receive prior to a hearing or other time of determination regarding responsibility, an investigative report that fairly summarizes the relevant evidence in an electronic format or hard copy for their review and written response.
 - h. To have an opportunity to present a list of potential witnesses and provide evidence to the Investigator.

- i. To have Formal Complaints heard in substantial accordance with these procedures.
- j. To receive written notice of any delay of this process or limited extension of time frames for good cause which may include considerations such as the absence of a Party, a Party's Advisor or a witness; concurrent law enforcement activity; or the need for language assistance or accommodation of disabilities.
- k. To be informed of the finding, rationale, sanctions and remedial actions.
- l. To report the matter to law enforcement (if applicable) and to have assistance in making that report.
- m. To have an opportunity to appeal the dismissal of all or a portion of a Formal Complaint, and appeal the determination of a Hearing Panel or other decision-maker.
- n. Additional Rights for Students as a Party:
 - i. To request reasonable housing, living and other accommodations and remedies consistent with Section 600.030.H.
 - ii. To receive amnesty for minor student misconduct that is ancillary to the incident, at the discretion of the Title IX Coordinator.
- o. Additional Rights for Hearing Panel Resolution:
 - i. To receive notice of a hearing.
 - ii. To have the names of witnesses who may participate in the hearing and copies of all documentary evidence gathered in the course of the investigation and any investigative report prior to the hearing.
 - iii. To be present at the hearing, which right may be waived by either written notification to the Hearing Officer or by failure to appear.
 - iv. To have present an Advisor during the hearing and to consult with such Advisor during the hearing, and have the Advisor conduct cross-examination and other questioning on behalf of the Party at the hearing.
 - v. To have an Advisor of the University's selection appointed for a Party where the Party does not have an Advisor of their own choice at a hearing.
 - vi. To testify at the hearing or refuse to testify at the hearing; however, if a Party or witness fails to submit to cross-examination at the hearing, the Hearing Panel shall not rely on any statement of that Party or witness in reaching a determination regarding responsibility. The Hearing Panel shall not draw any inference about the determination regarding responsibility based solely on a Party's or witness's failure to submit to cross-examination.
 - vii. To have an equal opportunity to present and question witnesses, including fact and expert witnesses, and present relevant evidence.
 - viii. To request that the hearing be held virtually, with technology enabling participants simultaneously to see and hear each other.
- p. Additional Rights for Academic Medical Center Process:
 - i. To receive notice of the meeting with the decision-maker.
 - ii. To submit written, relevant questions that a Party wants asked of any Party or witness and to be provided with the answers to such questions.
 - iii. To be allowed additional, limited follow-up questions.
- a. **Support Persons.** Each Complainant and Respondent is allowed to have one Support Person of their choice present with them for all Title IX Process interviews and meetings. The Parties may select whomever they wish to serve as their Support Person, including an attorney or parent. The Support Person may also act as the Party's Advisor. If requested by a student Party, the Title IX Coordinator may assign a Trained Support Person to explain the Title IX process and attend interviews and meetings with a Party. University Trained Support Person(s) are administrators, faculty, or staff at the University trained on the Title IX Process. A Trained Support Person cannot be called upon as a witness by a Party in a hearing to testify about matters learned while that individual was acting in their capacity as a Trained Support Person.
- b. **Advisors.** Each Party may have an Advisor of their choice present at the hearing to conduct cross-examination and other questioning for that Party. A Party may not directly question any other Party or any witness; all cross-examination and other questioning on behalf of a Party must be conducted by their Advisor. The Advisor may be, but is not required to be, an attorney. If a Party does not have an Advisor of their choice present at the hearing, the University will provide, without fee or charge to that Party, an Advisor of the University's choice to conduct cross-examination and other questioning on behalf of that Party. The Parties may not require that the assigned Advisor have specific qualifications such as being an attorney. At the hearing, a Party's Advisor may ask the other Party and any witnesses all relevant questions and follow-up questions, including those challenging credibility. An Advisor may conduct cross-examination and other questioning for a Party, and object to questions on limited grounds as specified in the Rules of Decorum. The Advisor may not make a presentation or otherwise represent the Complainant or the Respondent during the hearing. The Advisor may consult with the Party quietly or in writing, or outside the hearing during breaks, but may not speak on behalf of the Party, other than to conduct cross-examination or other questioning for the Party. Advisors who do not follow the Rules of Decorum will be warned or dismissed from the hearing at the discretion of the Hearing Officer.
- c. **Investigation.** If a Formal Complaint is filed, then the Title IX Coordinator will promptly appoint a trained Investigator or a team of trained Investigators to investigate. The burden of proof and the burden of gathering evidence sufficient to reach a determination regarding responsibility rests on the University. For purposes of the Investigation, the University cannot access, consider, disclose, or otherwise use a Party's records that are made or maintained by a physician, psychiatrist, or other recognized professional or paraprofessional acting in the professional's or paraprofessional's capacity, or assisting in that capacity,

and which are made and maintained in connection with the provision of treatment to the Party, unless the University obtains that Party's voluntary, written consent to do so for use in the Title IX process.

The Parties are not prohibited from discussing the allegations under investigation or from gathering and presenting relevant evidence. The Parties may present witnesses, including fact and expert witnesses, and other inculpatory and exculpatory evidence; all such evidence must be relevant.

A Party whose participation is expected or invited at a hearing, interview or other meeting, shall receive written notice of the date, time, location, participants, and purpose of all hearings, investigative interviews, or other meetings, with sufficient time for the Party to prepare to participate.

The Parties may be accompanied to any related meeting or interview by a Support Person of their choice, who may be, but is not required to be, an attorney; however, the Support Person may only participate in the proceedings as set forth in this policy.

The Parties shall be permitted to inspect and review any evidence obtained as part of the investigation that is directly related to the allegations raised in the Formal Complaint, including the evidence upon which the University does not intend to rely in reaching any determination regarding responsibility, and inculpatory or exculpatory evidence whether obtained from a Party or other source and copies of recordings of all interviews conducted during the investigation, in sufficient time for the Parties to meaningfully respond to the evidence prior to the conclusion of the investigation.

Prior to completion of the investigative report, the University will make available to each Party and the Party's Advisor, if any, the evidence subject to inspection and review in an electronic format or a hard copy, and the Parties will have ten (10) business days to submit a written response to the Investigator, which the Investigator will consider prior to completion of the investigative report.

The final investigative report will fairly summarize the relevant evidence, and prior to a hearing or other time of determination regarding responsibility, the investigator will send to each Party and the Party's Advisor, if any, the final investigative report in an electronic format or a hard copy, for their review and written response. If a written response is received from either Party, that response will be shared with the other Party and their Advisor, if any.

All investigations will be thorough, reliable and impartial. All interviews shall be recorded. In the event that recording is not possible due to technological issues, the investigator shall take thorough notes and such notes shall be provided to the Parties in lieu of recordings. The investigator shall document the reason the recording was not possible and such documentation shall become part of the Record of the Case.

The investigation of reported sexual harassment should be completed expeditiously, normally within thirty (30) business

days of the filing of the Formal Complaint. Investigation of a Formal Complaint may take longer based on the nature and circumstances of the Formal Complaint.

- a. The standard of proof will be "preponderance of the evidence," defined as determining whether the evidence shows it is more likely than not that a policy violation occurred.
- b. The decision-maker has the discretion to determine the relevance of any witness or documentary evidence and may exclude information that is irrelevant, immaterial, cumulative, or more prejudicial than informative. In addition, the following rules shall apply to the introduction of evidence:
 - i. Questions and evidence about the Complainant's pre-disposition or prior sexual behavior are not relevant, unless such questions and evidence about the Complainant's prior sexual behavior are offered to prove that someone other than the Respondent committed conduct alleged by the Complainant, or if the questions and evidence concern specific incidents of the Complainant's prior sexual behavior with respect to the Respondent and are offered to prove consent.
 - ii. Character evidence is information that does not directly relate to the facts at issue, but instead reflects upon the reputation, personality, or qualities of an individual, including honesty. Such evidence regarding either Party's character is of limited utility and shall not be admitted unless deemed relevant by the decision-maker.
 - iii. Incidents or behaviors of the Respondent not directly related to the possible violation(s) will not be considered unless they show a pattern of related misconduct. History of related misconduct by the Respondent that shows a pattern may be considered only if deemed relevant by the decision-maker.
 - iv. A Party's records that are made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in the professional's or paraprofessional's capacity, or assisting in that capacity, and which are made or maintained in connection with the provision of treatment to the Party, may not be used without that Party's express consent.
 - v. The decision-maker shall not require, allow, rely upon, or otherwise use questions or evidence that constitute, or seek disclosure of, information protected under a legally recognized privilege, unless the person holding such privilege has waived the privilege.
- c. In the Administrative Resolution Process, the Respondent and the Complainant may provide a list of questions for the decision-maker to ask the other Party. If those questions are deemed appropriate and relevant, they may be asked on behalf of the requesting Party; answers to such questions will be shared with the requesting Party.
- d. At any time prior to a final determination being rendered, the Complainant and/or the Respondent may request that the Formal Complaint shift from the Administrative Resolution Process to the Hearing Panel Resolution Process. Upon

- receipt of such timely request from either Party, the Formal Complaint will shift to the Hearing Panel Resolution Process.
- e. The Administrative Resolution process will normally be completed within sixty (60) business days of the decision-maker's receipt of the Formal Complaint. Deviations from this timeframe will be promptly communicated to both Parties.
 - f. For good cause, the decision-maker in the Administrative Resolution Process may, in their discretion, grant reasonable extensions to the time frames and limits provided.
 - g. The Administration Resolution process consists of:
 - i. A prompt, thorough and impartial investigation;
 - ii. A separate meeting with each Party and their Support Person, if any, and the decision-maker;
 - iii. A written finding by the decision-maker on each of the alleged policy violations;
 - iv. A written finding by the decision-maker on sanctions and remedial actions for findings of responsibility; and
 - v. The decision-maker shall be as follows:
 - a. **Equity Resolution Hearing Panelist Pool.** Each University will create and annually train a pool of not less than five (5) faculty and five (5) administrators and/or staff to serve as hearing panel members in the Hearing Panel Resolution Process. The faculty hearing panel pool members selected by the Chancellor (or Designee) shall be selected from a list of no less than ten (10) faculty members proposed by the faculty council/senate. Pool members are selected by the Chancellor (or Designee) and serve a renewable one-year term. Selection of hearing panel pool members shall be made with an attempt to recognize the diversity of the University community. Hearing Panel members from one University may be asked to serve on a hearing panel involving another University.
 - a. Academic Medical Centers at the University of Missouri are not required to provide for a live hearing, but rather must adhere to the following process for resolving Formal Complaints alleging Title IX violations.
 - b. The decision-maker(s) for the Title IX Process for Academic Medical Centers shall be a neutral, impartial, and unbiased decision-maker designated by the Executive Vice Chancellor for Health Affairs.
 - c. **Notice of AMC Meeting.** The decision-maker will meet separately with each Party. At least fifteen (15) business days prior to the initial meeting with the decision-maker, the Title IX Coordinator will send a letter (Notice of AMC Meeting) to the Parties with the following information:
 - i. A description of the alleged violation(s) and applicable policy or policies that are alleged to have been violated.
 - ii. A description of the applicable procedures.
 - iii. A statement that the Parties may be accompanied by a Support Person of their choosing at the AMC Meeting.
 - iv. The time, date and location of the AMC Meeting.
 - v. The name of the decision-maker, and information on how to raise an objection to the decision-maker and the timeline in which to raise any objections.
 - vi. A copy of the investigative report and exhibits.
 - vii. Notification to the Parties that all of the evidence gathered in the course of the investigation that is directly related to the allegations, including inculpatory and exculpatory evidence, is available to the Parties and how to request access to that evidence.
 - d. The Notice of AMC Meeting letter will be sent to each Party by email to their University-issued email account, or by the method of notification previously designated in writing by the Party. Notice is presumptively deemed delivered, when: 1) provided in person, 2) emailed to the individual to their University-issued email account, or 3) when sent via the alternate method of notification specified by the Party.
 - e. At least fifteen (15) business days prior to the initial AMC Meeting, the Investigator will provide to the Parties access to all evidence gathered in the investigation which is directly related to the allegations in the Formal Complaint, including any evidence upon which the Investigator does not intend to rely, and inculpatory and exculpatory evidence whether obtained from a Party or other source, copies of recordings of all interviews conducted during the investigation, and a copy of any investigative report.
 - f. At least ten (10) business days prior to the initial AMC Meeting, the Complainant and Respondent may provide the decision-maker with written, relevant questions the Party wants asked of any Party or witness. At least five (5) business days prior to the initial AMC Meeting, the decision-maker will provide each Party with the answers, and allow for additional, limited follow-up questions from each Party. The decision-maker must explain to the Party proposing the questions any decision to exclude a question as not relevant. The Parties may also provide the decision-maker with documentary evidence.
 - g. No employee or student, directly or through others, should take any action which may interfere with the investigation or the AMC process. Employees and students are prohibited from attempted or actual intimidation or harassment of any potential witness. Failure to adhere to these requirements may lead to disciplinary action, up to and including expulsion or termination.
 - h. The decision-maker shall not have a conflict of interest or bias for or against Complainants or Respondents generally or an individual Complainant or Respondent. If a decision-maker feels that they have a conflict of interest or bias, or cannot make an objective determination, they must recuse themselves from the proceedings in advance of the AMC meeting.
 - i. At least ten (10) business days prior to the initial AMC Meeting, the Parties shall provide to the Title IX Coordinator all objections in writing to the decision-maker identified in the Notice of AMC Meeting. If the Title IX Coordinator determines that the decision-maker should be replaced, the Title IX Coordinator will select an alternate decision-maker. The Title IX Coordinator will provide a written response to all Parties addressing the objections.
 - j. Questions and evidence about the Complainant's pre-disposition or prior sexual behavior are not relevant, unless such questions and evidence about the Complainant's prior sexual behavior are offered to prove that someone other than the Respondent committed conduct alleged by the

Complainant, or if the questions and evidence concern specific incidents of the Complainant's prior sexual behavior with respect to the Respondent and are offered to prove consent.

- k. Character evidence is information that does not directly relate to the facts at issue, but instead reflects upon the reputation, personality, or qualities of an individual, including honesty. Such evidence regarding either Party's character is of limited utility and shall not be admitted unless deemed relevant by the Hearing Officer.
 - l. Incidents or behaviors of a Party not directly related to the possible violation(s) will not be considered unless they show a pattern of related misconduct. History of related misconduct by a Party that shows a pattern may be considered only if deemed relevant by the Hearing Officer.
 - m. A Party's records that are made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in the professional's or paraprofessional's capacity, or assisting in that capacity, and which are made or maintained in connection with the provision of treatment to the Party, may not be used without that Party's express consent.
 - n. The decision-maker shall not require, allow, rely upon, or otherwise use questions or evidence that constitute, or seek disclosure of, information protected under a legally recognized privilege, unless the person holding such privilege has waived the privilege.
 - o. All meetings between the decision-maker and Parties and/or witnesses shall be recorded.
 - p. Within ten (10) business days of the last meeting with any Party or witness, the decision-maker must issue a written determination regarding responsibility, applying the preponderance of the evidence standard of evidence. The written determination must include:
 - i. Identification of the allegations potentially constituting sexual harassment as defined in CRR 600.020.
 - ii. A description of the procedural steps taken from the receipt of the Formal Complaint through the determination, including any notifications to the parties, interviews with parties and witnesses, site visits, methods used to gather other evidence and meetings held;
 - iii. Findings of fact supporting the determination;
 - iv. Conclusions regarding the application of the Title IX policies to the facts;
 - v. A statement of, and rationale for, the result as to each allegation, including a determination regarding responsibility, any disciplinary sanctions to be imposed on the Respondent, and whether any remedies designed to restore or preserve equal access to the University's education program or activity will be provided by the University to the Complainant; and
 - vi. The University's procedures and permissible bases for the Complainant and Respondent to appeal as set forth in Section U.
 - q. The written determination will be provided to the Title IX Coordinator, who will provide it to the Parties simultaneously within five (5) business days of receipt of the determination.
- Notification will be made in writing and sent to each Party by email to their University-issued email account, or by the method of notification previously designated in writing by the Party. Notice is presumptively deemed delivered, when:
- 1) provided in person, 2) emailed to the individual to their University-issued email account, or 3) when sent via the alternate method of notification specified by the Party.
- r. The determination becomes final either on the date that the University provides the Parties with the written determination of the result of the appeal, if any appeal is filed, or if any appeal is not filed, the date on which an appeal would no longer be considered timely.
 - s. The Title IX Coordinator is responsible for effective implementation of any remedies.
 - a. If the Respondent is found responsible for a violation of the University's Title IX Policies, the Hearing Panel, or the decision-maker in the Administrative Resolution Process or Academic Medical Center Process, will determine sanctions and remedial actions. The Title IX Coordinator will apply and enforce the sanctions and remedial actions and may also add other remedial actions as deemed appropriate.
 - i. Factors Considered When Finding Sanctions/Remedial Actions include but are not limited to:
 - a. **Grounds for Appeal.** Both Complainant and Respondent are allowed to appeal the dismissal of a Formal Complaint or any of the allegations therein, or the findings of the Administrative Resolution Process, the Hearing Panel Resolution Process, or the Academic Medical Center process. Appeals are limited to the following:
 - i. A procedural irregularity that affected the outcome of the matter (e.g., material deviation from established procedures, etc.);
 - ii. To consider new evidence that was not reasonably available at the time the determination regarding responsibility or dismissal was made, that could affect the outcome of the matter;
 - iii. The Title IX Coordinator, Investigator(s), or decision-maker(s) had a conflict of interest or bias for or against Complainants or Respondents generally or the individual Complainant or Respondent that affected the outcome of the matter; or
 - iv. The sanctions fall outside the range typically imposed for this offense, or for the cumulative conduct record of the Respondent.
 - b. **Requests for Appeal.** Both the Complainant and the Respondent may appeal a dismissal of a Formal Complaint or any allegations therein, or a determination regarding responsibility to the Equity Resolution Appellate Officer. The Equity Resolution Appellate Officer must not have a conflict of interest or bias for or against Complainants or Respondents generally or an individual Complainant or Respondent; if the Equity Resolution Appellate Officer does not believe that they can make an objective decision about an appeal, they should recuse themselves and the Chancellor (or Designee) shall appoint an alternate Equity Resolution Appellate Officer to hear the pending appeal. All requests for appeal must be submitted in writing to the Equity Resolution Appellate Officer within five (5) business days of the delivery of the notice of dismissal or Administrative Resolution Decision, Hearing Panel Decision, or AMC Determination. When any Party requests an appeal, the

other Party will be notified and receive a copy of the request for appeal.

- c. **Response to Request for Appeal.** Within five (5) business days of the delivery of the notice and copy of the request for appeal, the non-appealing Party may file a response to the request for appeal. The response can address that sufficient grounds for appeal have not been met and/or the merits of the appeal.

- d. **Review of the Request to Appeal.** The Equity Resolution Appellate Officer will make an initial review of the appeal request(s) to determine whether:
The Equity Resolution Appellate Officer will reject the request for appeal if any of the above requirements are not met. The decision to reject the request for appeal is final and further appeals and grievances are not permitted. The Equity Resolution Appellate Officer will render a written decision whether the request for appeal is accepted or rejected within fifteen (15) business days from receipt of the request for appeal. If no written decision is provided to the Parties within fifteen (15) business days from receipt of the request, the appeal will be deemed accepted.

- i. The request is timely, and
- ii. The appeal is on the basis of any of the articulated grounds listed above, and
- iii. When viewed in the light most favorable to the appealing Party, the appeal states grounds that could result in an adjusted finding or sanction.

- e. **Review of the Appeal.** If all three (3) requirements for appeal listed in paragraph 4 above are met, the Equity Resolution Appellate Officer will accept the request for appeal and proceed with rendering a decision on the appeal applying the following additional principles:

- i. Appeals are not intended to be full re-hearings of the Formal Complaint and are therefore deferential to the original findings. In most cases, appeals are confined to a review of the written documentation and Record of the Case, and relevant documentation regarding the grounds for appeal. Appeals granted based on new evidence should normally be remanded to the original decision-maker for reconsideration.
- ii. The Equity Resolution Appellate Officer will render a written decision on the appeal to all Parties within ten (10) business days from accepting the request for appeal. In the event the Equity Resolution Appellate Officer is unable to render a written decision within ten (10) business days from accepting the request for appeal, the Equity Resolution Appellate Officer will promptly notify the Parties in writing of the delay.
- iii. Once an appeal is decided, the outcome is final. Further appeals are not permitted.

- f. **Extensions of Time.** For good cause, the Equity Resolution Appellate Officer may grant reasonable extensions of time (e.g.: 7-10 business days) to the deadlines in the appeal process. The Equity Resolution Appellate Officer will notify the Parties in writing if such extensions are granted.

- a. **Sex Discrimination.** Sex discrimination is conduct that is based upon an individual's sex, pregnancy, gender identity, or gender expression that adversely affects a term or condition of

an individual's employment, education, living environment, or participation in a University activity.

In addition, sexual harassment, sexual misconduct, sexual exploitation, stalking on the basis of sex and dating/intimate partner violence, as further defined below, are forms of sex discrimination which are prohibited under this policy.

- b. **Sexual Harassment.** Sexual harassment is defined as:

- i. Unwelcome sexual advances or requests for sexual activity by a person or persons in a position of power or authority to another person; or
- ii. Other unwelcome verbal or physical conduct of a sexual nature or because of sex, pregnancy, gender identity, or gender expression when:
 1. Submission to or rejection of such conduct is used explicitly or implicitly as a condition for academic or employment decisions; or
 2. Such conduct creates a hostile environment by being sufficiently severe or pervasive or objectively offensive that it interferes with, limits or denies the ability to participate in or benefit from the University's educational programs, activities, or employment.

- c. **Sexual Misconduct.** Sexual misconduct includes: 1)

Nonconsensual sexual intercourse; 2) Nonconsensual sexual contact involving the sexual touching of a body part (i.e., the lips, genitals, breast, anus, groin, or buttocks of another person) or the nonconsensual sexual touching of another with one's own genitals whether directly or through the clothing; 3) Exposing one's genitals to another under circumstances in which one should reasonably know that the conduct is likely to cause affront or alarm; or 4) Sexual exploitation.

- d. **Stalking on the Basis of Sex.** Stalking on the basis of sex is following or engaging in a course of conduct on the basis of sex with no legitimate purpose that makes another person reasonably concerned for their safety or would cause a reasonable person under the circumstances to be frightened, intimidated or emotionally distressed.

- e. **Dating/Intimate Partner Violence.** Violence, threats of violence, intimidation and acts of coercion committed by a person who is or has been in a social relationship of a romantic or intimate nature with the recipient of the violent behavior.

- f. **Sexual Exploitation.** Sexual exploitation occurs when one person takes nonconsensual or abusive sexual advantage of another person for one's own advantage or benefit or for the advantage or benefit of anyone other than the person being exploited and which behavior does not constitute any other form of sexual misconduct. Examples of sexual exploitation include, but are not limited to, the following activities done without the consent of all participants:

- i. Invasion of sexual privacy;
- ii. Prostituting another person;
- iii. Taping or recording of sexual activity;
- iv. Going beyond the boundaries of consent to sexual activity (e.g., letting your friends hide to watch you engaging in sexual activity);
- v. Engaging in voyeurism;
- vi. Knowingly transmitting an STI, STD, venereal disease or HIV to another person;
- vii. Inducing another to expose their genitals;

- viii. Nonconsensual distribution of intimate images;
- ix. Use or distribution of drugs or alcohol with intent to facilitate sexual contact without consent (i.e., predatory drugs or alcohol).
- g. **Consent to Sexual Activity.** Consent to sexual activity is knowing and voluntary. Consent to sexual activity requires of all involved persons a conscious and voluntary agreement to engage in sexual activity. Each person engaged in the sexual activity must have met the legal age of consent. It is the responsibility of each person to ensure they have the consent of all others engaged in the sexual activity. Consent must be obtained at the time of the specific activity and can be withdrawn at any time. Consent, lack of consent or withdrawal of consent may be communicated by words or non-verbal acts.

Someone who is incapacitated cannot consent. Silence or absence of resistance does not establish consent. The existence of a dating relationship or past sexual relations between the Parties involved should never by itself be assumed to be an indicator of consent. Further, consent to one form of sexual activity does not imply consent to other forms of sexual activity. Consent to engage in sexual activity with one person does not imply consent to engage in sexual activity with another. Coercion and force, or threat of either, invalidates consent.

- h. **Incapacitated or incapacitation.** A state in which rational decision-making or the ability to consent is rendered impossible because of a person's temporary or permanent physical or mental impairment, including but not limited to physical or mental impairment resulting from drugs or alcohol, disability, sleep, unconsciousness or illness. Consent does not exist when the Respondent knew or should have known of the other individual's incapacitation. Incapacitation is determined based on the totality of the circumstances. Incapacitation is more than intoxication but intoxication can cause incapacitation.

Factors to consider in determining incapacity include, but are not limited to, the following:

- Lack of awareness of circumstances or surroundings (e.g., an inability to understand, either temporarily or permanently, the who, what, where, how and/or why of the circumstances; blackout state)
 - Inability to physically or verbally communicate coherently, particularly with regard to consent (e.g., slurred or incoherent speech)
 - Lack of full control over physical movements (e.g., difficulty walking or standing without stumbling or assistance)
 - Physical symptoms (e.g., vomiting or incontinence).
- a. **Students, Employees, Volunteers, Visitors, and Patients.** Students, employees, volunteers, visitors, and patients of the University who have experienced any form of sex discrimination, sexual harassment or sexual misconduct, are encouraged to report the incident promptly to the appropriate Title IX Coordinator listed in Section 600.020.C. above. In addition, students, volunteers, visitors, and patients of the University who have witnessed such conduct are encouraged to report the incident promptly to the appropriate Title IX Coordinator. The University will investigate and appropriately resolve all such reports pursuant to one of its Equity Resolution Processes (see Sections 600.030, 600.040, 600.050, 600.060). For questions regarding

confidentiality or requests that the Complaint not be pursued, see Section 600.020.E. below. In order to foster reporting and participation, the University may provide amnesty to Complainants and witnesses for minor student conduct violations ancillary to the incident.

- b. **Mandated Reporters.** Any employee of the University, except as noted below, who becomes aware of sex discrimination as defined in this policy (including sexual harassment, sexual misconduct, stalking on the basis of sex, dating/intimate partner violence or sexual exploitation) is a Mandated Reporter, regardless of whether the recipient of the behavior is a student, employee, volunteer or visitor of the University.
- c. **Employees with a Legal Obligation or Privilege of Confidentiality.** Employees with a legal obligation or privilege of confidentiality (including health care providers, counselors, lawyers, and their associated staff) are not considered Mandated Reporters and are not required to report when the information is learned in the course of a confidential communication. This also means that the employee seeking the exemption is employed by the University for that specific purpose and was acting in that capacity when the confidential disclosure was made. If the information is not learned in the course of confidential communication (for example, behavior is observed in class) then the employee has the same obligation as a Mandated Reporter.
- d. **Designated Confidential Employees.** Consistent with the law and upon approval from the Office of the General Counsel, campuses may also designate non-professional counselors or advocates as confidential for purposes of this policy and, therefore, excluded from the definition of Mandated Reporters. However, these individuals are required once per month to report to the Title IX Coordinator aggregate, non-personally identifiable information regarding incidents of sex discrimination reported to them. The aggregate data report should contain general information about individual incidents of sexual violence such as the nature, date, time, and general location of the incident. Confidentiality in this context is not the same as privilege under the law.
- e. **Required Reporting and Disclosure.** A mandated Reporter is required to promptly report the information to the appropriate Title IX Coordinator. The Mandated Report must be made regardless of whether the person reporting the information to the Mandated Reporter requests confidentiality and regardless of how the Mandated Reporter becomes aware of the offensive behavior (personal observation, direct information from the subject of the behavior, indirect information from a third party, etc.). If the Complainant requests confidentiality or that the charges not be pursued, the Mandated Reporter should warn the Complainant that, at this stage in the process, the Mandated Reporter must report all known information to the Title IX Coordinator.
- f. **Content of Mandated Report to Title IX Coordinator.** Mandated Reporters must report all details that they possess. This includes names of the Parties, if known, and all other information in the Mandated Reporter's possession.
- a. The Title IX Coordinator or other appropriate official should inform and obtain the consent from the Complainant before beginning an investigation. If the Complainant requests confidentiality or asks that the Complaint not be pursued, the Title IX Coordinator should take all reasonable steps to investigate and respond to the Complaint consistent with the request for confidentiality or request not to pursue an investigation. If a Complainant requests confidentiality or insist that identifiable information, such as the

Complainant's name, not be disclosed to the Respondent, the Title IX Coordinator should inform the Complainant that the institution's ability to respond may be limited. The Title IX Coordinator should evaluate the Complainant's request in the context of providing a safe and nondiscriminatory environment for the University community.

- b. If, after due deliberation and based on the nature and severity of the Complaint, the Title IX Coordinator determines there is a sufficient basis to proceed with the Complaint, the Title IX Coordinator may initiate an investigation notwithstanding a Complainant's request that the Complaint not be pursued. Such a decision should be well-reasoned and documented. Documentation of the decision will be maintained by the Title IX Coordinator. In such cases, the Title IX Coordinator will inform the Complainant of the decision to commence an investigation.

Alternatively, if after due deliberation and based on the nature and severity of the Complaint, the Title IX Coordinator determines there is not a sufficient basis to proceed with the Complaint, the Title IX Coordinator may decide not to initiate an investigation and/or may also refer the Complaint to the appropriate procedural process. Such a decision should be well-reasoned and documented. Documentation of the decision will be maintained by the Title IX Coordinator. If, after due deliberation, the Title IX Coordinator decides the University cannot or should not take disciplinary action with respect to the Respondent, the Title IX Coordinator should consider other steps to limit the effects of the alleged harassment and prevent its recurrence, and remedy its effects on the victim and the University community.

Confidentiality Policies

These statements are set forth as guidelines and procedures to implement the University of Missouri policy on student records developed from the federal Family Educational Rights and Privacy Act of 1974.

The University of Missouri--St. Louis, as charged in the act, will annually inform its eligible students by including in the Student Planner and the UMSL Bulletin the following information:

1. "Education Records" are those records, files, documents, and other materials that contain information directly related to a student and are maintained by the university. Those records, made available for review to the student under The Family Educational Rights and Privacy Act of 1974, are student financial aid, the student's cumulative advisement file, student health records, disciplinary records, admissions file, and academic record. Confidential letters and statements of recommendation that were placed in student credential folders at the Office of Career Placement Services after January 1, 1975, are also made available, if the student has not waived the right to view these recommendations.

The University of Missouri--St. Louis "Education Records" do not include:

Records of instructional, supervisor, and administrative personnel and educational personnel ancillary thereto which are in the sole possession of the maker thereof and which are not accessible or revealed to any other person except a substitute.

Records of the University of Missouri Police Department created for a law enforcement purpose and maintained by the police department.

In the case of persons who are employed by the university but who are not in attendance at the university, records made and maintained in the normal course of business that related exclusively to such persons and that person's capacity as an employee where the records are not available for any other purpose.

All records on any university student that are created and maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in his professional or paraprofessional capacity, or assisting in that capacity, and created, maintained, or used only in connection with the provision of treatment to the student, and are not available to anyone other than persons providing such treatment, provided, however, that such records can be personally reviewed by a physician or other appropriate professional of the student's choice.

Directory Information:

1. The University of Missouri-St. Louis recognizes "Directory Information/ Public Information" to mean a student's name, address, telephone listing, e-mail, enrollment status, current level, major field of study, participation in officially recognized activities and sports, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. All students must inform the Office of the Registrar if the information designated as directory information should not be released without the student's prior consent. Students may change their privacy settings by logging in to MyView.
2. University of Missouri-St. Louis students have access to the educational records identified in Paragraph 1 above. In accordance

with Public Law 93380 as amended, the University of Missouri--St. Louis will not make available to students the following materials:

Financial records of the parents of students or any information contained therein.

Confidential letters and statements of recommendation placed in the education records prior to January 1, 1975, if such letters or statements are not used for the purpose other than those for which they were specifically intended.

Confidential recommendations respecting admission to the university, application for employment and receipt of honor, or honorary recognition, where the student has signed a waiver of the student's rights of access as provided in 6.0404, the University Policy on Student Records.

1. The Director of Financial Aid, the appropriate academic dean, Assistant Vice Provost for Student Affairs: Health, Wellness, & Counseling Services, the Vice Provost for Student Affairs, the Director of Career Placement Services, the Director of Admissions, and the Registrar are the officials responsible for the maintenance of each type of record listed in Paragraph 1.
2. Any student may, upon request, review his or her records and, if inaccurate information is included, may request the expunging of such information from the file. Such inaccurate information will then be expunged upon authorization of the official responsible for the file.
3. Students desiring to challenge the content of their record may request an opportunity for a hearing to challenge the content of the educational record in order to ensure that the record is not inaccurate, misleading, or otherwise in violation of the privacy or other rights of the student, to provide an opportunity for the correction or deletion of any such inaccurate, misleading, or otherwise inappropriate data contained therein, and to insert into such records a written explanation respecting the content of such records.
4. The university official charged with custody of the records will attempt to settle informally any disputes with any student regarding the content of the university's educational records through informal meetings and discussions with the student.
5. Upon request of the student or the university official charged with custody of the records of the student, a formal hearing shall be conducted as follows:
 - a. The request for a hearing shall be submitted in writing to the chancellor, who will appoint a hearing officer or a hearing committee to conduct the hearing.
 - b. The hearing shall be conducted and decided within a reasonable period of time following the request for a hearing. The parties will be entitled to written notice 10 days prior to the time and place of the hearing.
 - c. The hearing shall be conducted and the decision rendered by an appointed hearing official or officials who shall not have a direct interest in the outcome of the hearing.
 - d. The student shall be afforded a full and fair opportunity to present evidence relevant to the hearing.
 - e. The decision shall be rendered in writing within a reasonable period of time after the conclusion of the hearing.

Either party may appeal the decision of the hearing official or officials to the campus chancellor. Appeal of the chancellor's decision is to the president. Appeal of the president's decision is to the Board of Curators.

1. The University of Missouri-St. Louis will not provide grade reports to parents unless the student has granted access to academic information via their self-service student center.
2. The University of Missouri--St. Louis may permit access to or release of the educational records without the written consent of the student to the parents of a dependent student as defined in Section 152 of the Internal Revenue Code of 1954.
3. If any material or document in the educational record of a student includes information on more than one student, the student may inspect and review only such part of such material or document as relates to him or her or to be informed of the specific information contained in such part of such material.

Tuition and Payments

Fee Assessment

Fees for coursework vary due to the student's residency, undergraduate, graduate or post-graduate status, credit hours, and the applicability of any course fees charged to specific courses or programs. Detailed information on tuition and fee rates and residency can be found on the Student Financial Services website.

Financial Responsibility

A Statement of Financial Responsibility will be presented to all students at least once per academic year. The agreement explains the billing methods, payment options, and all policies related to student accounts. It is the responsibility of the student that fees and other financial obligations are paid as they become due regardless of who is making the payments. Students who need assistance in meeting financial obligations to the University should contact the Student Financial Services Office in a timely manner. Students are expected to adhere to important dates and policies that impact fees. Due dates and fee reassessment dates are posted on the Student Financial Services website and through links on the eBill website. The non-payment of any financial obligation may result in additional collection fees, the inability to register, and the withholding of student records.

Billing

The Student Financial Services Office bills you by posting a monthly student account billing statement on eBill around the 17th of any month in which there is a new charge or credit on your account. The Student Financial Services Office will send you and your authorized payer (if any) a billing notification email reminder to check your statement and pay any balance due. The mail.umsl.edu email address will be used for students and the authorized payers email address will be used for authorized payers.

Payment of Fees

Payments are due on the 10th day of each month. The minimum payment can be found at the top of the monthly billing statement or by checking the percentage due as shown in the billing schedules on the Student Financial Services website. If a student chooses to make the minimum payment or a partial payment, a finance charge of 1% will be assessed on the unpaid billed balance. The monthly 1% finance charge can be avoided by paying the balance in full. A \$25 late payment fee will be charged to student accounts in which the billed minimum or payment in full is not paid by the due date.

All fees, fines, bookstore charges, etc. must be paid by the last day of the term. After the term ends, unpaid accounts will be turned over to an outside collection agency. The University will pursue any and all collection efforts and practices including referring accounts to collection agencies and reporting to the credit bureaus. Accounts may be assessed additional collection charges of 25% of the unpaid principal balance when it is referred to a collection agency. Your Missouri state income tax refund may also be intercepted to partially or fully satisfy a past due debt to the University. Educational and related fees are generally non-dischargeable in bankruptcy and will survive after the bankruptcy has closed. Except in certain limited situations, this means that a student will still owe the debt to the University after the bankruptcy.

Payment Options

Online – Log on to the Touchnet student system to make payment using a personal checking or savings account with no additional fee or all major credit cards with a 2.95% service fee (minimum \$3 fee).

Mail – Send your check or money order to the Student Financial Services Office at: University of Missouri - St. Louis, 327 Millennium Student Center, One University Blvd., St. Louis, MO 63121-4400. Include student name and student number on the check or money order.

In person – Visit the Student Financial Services Office on the third floor of the Millennium Student Center in Room 327. Payment in cash, check, money order or pin-based debit are accepted. Credit card payments cannot be processed at the Student Financial Services Office, but are accepted online at <http://ebill.umsl.edu>.

Payment Drop Box – A secure payment drop box is located outside the Student Financial Services Office, Room 327 of the Millennium Student Center. Only check or money order payments, please.

Any communications concerning disputed debts, including instruments tendered as full satisfaction of debt, must be sent to Account Disputes, One University Blvd., 349 Millennium Student Center, St. Louis, MO 63121-4400.

Any check presented to the University for payment that is not honored by your bank will be assessed a \$20.00 returned check fee in addition to any fees that the bank may charge.

ERDPP – Employer Reimbursement Deferred Payment Program. Many companies offer tuition reimbursement to their employees. While the student is ultimately responsible for the payment of their tuition and fees, the Student Financial Services Office offers the ERDPP program to allow a student to take advantage of this employer benefit by deferring payment of all, or a portion, of their tuition and related costs. There is a non-refundable \$50.00 application fee each semester. A \$100 late fee will be assessed if student does not make payment in full by the semester's deadline.

Financial Aid – If you have applied for financial aid in advance and have received an award letter, your letter describes how much of your award will be paid towards your student fees. If your financial aid does not cover all the fees, then you must pay the remainder of your student fees yourself by the due date. Financial aid that has not yet been disbursed will appear on your monthly billing statement as "Anticipated Aid". Your statement will reflect Anticipated Aid as being deducted from your Account Balance giving you an Adjusted Amount Due. Your Minimum Payment is a percentage of the Adjusted Amount Due. Students should pay either the Adjusted Amount Due or the full Minimum Payment by the due date to avoid a late payment fee.

Third Party Sponsor – When an organization makes a commitment to pay your educational expenses, they are considered a Third Party Sponsor. If you are expecting a third party sponsor to pay your tuition and fees, you will need to have your sponsor submit a letter of authorization to the Student Financial Services Office. Once the sponsor's letter is received, a credit for the amount the sponsor has indicated will be applied to your student account. An invoice for this amount will then be sent to your sponsor. You are responsible for paying any charges not covered by your sponsor on time, to avoid finance and late charges or other penalties. If your sponsor does not pay for the charges they authorized, the responsibility of paying those charges defaults back to you.

UMSL Compliance with the Veteran Access, Choice and Accountability Act of 2014, Section 702

UMSL is compliant with the requirements of PL 113-146 the Veteran Access, Choice and Accountability Act of 2014, Section 702. Section 702 targets educational assistance through ensuring in-state tuition/in-district rates to uniformed services veterans and their qualified dependents covered under this Section.

The following individuals shall be charged the in-state rate, or otherwise considered a resident, for tuition purposes:

- A Veteran using educational assistance under either chapter 30 (Montgomery G.I. Bill – Active Duty Program) or chapter 33 (Post-9/11 G.I. Bill), of title 38, United States Code, who lives in Missouri while attending a school located in Missouri (regardless of his/her formal State of residence) and enrolls in the school within three years of discharge or release from a period of active duty service of 90 days or more.
- Anyone using transferred Post-9/11 GI Bill benefits (38 U.S.C. § 3319) who lives in Missouri while attending a school located in Missouri (regardless of his/her formal State of residence) and enrolls in the school within three years of the transferor's discharge or release from a period of active duty service of 90 days or more.
- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same school. The person so described must have enrolled in the school prior to the expiration of the three year period following discharge or release as described above and must be using educational benefits under either chapter 30 or chapter 33, of title 38, United States Code.
- Anyone using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in Missouri while attending a school located in Missouri (regardless of his/her formal State of residence).
- Anyone using transferred Post-9/11 G.I. Bill benefits (38 U.S.C. § 3319) who lives in Missouri while attending a school located in Missouri (regardless of his/her formal state of residence) and the transferor is a member of the uniformed service who is serving on active duty.

UMSL Compliance with the Veterans Benefits and Transition Act of 2018, Section 103

This policy ensures that UMSL will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement of a payment to be provided by the VA under chapter 31 or 33 of this title.

Refunds

A credit balance is the result of an overpayment on a student's account from financial aid, loans or payments received. Credit balance refunds will be processed when a credit actually exists on the student's account. Anticipated financial aid must be received and posted to the student's account in order for a credit to exist and for a refund to be processed.

When financial aid funds are received by the University, the funds are applied to the students account. During the Fall and Spring semesters, financial aid funds are applied to student accounts no sooner than ten days prior to the start of classes. During the Summer semester, a student must be enrolled in enough hours to qualify for financial aid. Aid for that term will not apply to the student's account until all of the course(s) begin that satisfy that qualification. If the student has a credit balance after financial aid funds have paid all account charges in full, the student is now eligible for a refund.

Parent-Plus Loan Refund - If you have any funds available after what is owed directly to the University, the refund may be released to the parent at the address listed on the PLUS Loan Application. Refunds from proceeds of PLUS will be issued to the student only if the parent requests that on the PLUS application.

Credit Card Refund - If a credit card payment has been made towards your student account in the past 120 days, any refund due to you will be returned to that credit card.

Drop/Withdrawal Refund – Students who are leaving school or dropping classes are responsible for canceling their registration and verifying that their classes have been dropped. Any refunding of fees will be made according to the reassessment schedule available on the Student Financial Services website. The Spring and Fall reassessment schedules only apply to regular 16-week session courses. The Summer reassessment schedules only apply to regular 4-week, 8-week and 12-week session courses. Fee reassessment for courses not in regular sessions will be based on the course's total number of calendar days (weekends and holidays included) and the number of calendar days that the student was enrolled in the course. If the meeting dates for your course are different from the regular session meeting dates, please contact the Student Financial Services Office as your fee reassessment for withdrawal or dropping may differ from the regular reassessment.

After the withdrawal/drop of a class, the refund process may require two to four weeks processing time. When a student completely withdraws from a semester and was receiving federal financial aid, the University and/or the student may be required to return some of the financial aid awarded to the student.

Charges that students accrue prior to a refund being issued will be deducted from the refund amount. Charges that are accrued after a refund is issued will be billed to the student on the monthly billing statement. As student accounts go into credit balance, the Student Financial Services Office processes refunds to students by checks through the mail and by direct deposit to students personal checking or savings accounts. Students should allow 7-10 business days from the day that the refund is processed to receive a refund check in the mail. For students that have direct deposit, please allow 3-5 business days from the day that the refund is processed to receive the refund in your bank account.

Cancellation of Registration Due to Nonpayment of Fees

The University will attempt to notify any student whose registration is about to be administratively canceled for nonpayment of fees prior to taking this action. On or before the last day on which a student may enroll in a course, a canceled student's space in a course will be given to other students on that course's wait lists. The canceled student will be placed at the end of the course wait list. Any student who has been administratively canceled for nonpayment of assessed fees may not enroll in a class unless the required fees have been paid. If your classes are canceled for

nonpayment and you wish to be reinstated, the minimum payment will be required plus a late registration fee. When payment is received, you will be charged for all classes that were canceled.

Fees May Change Without Notice

The University reserves the right to modify by increase or decrease the fees charged for attendance and other services at the University, including but not limited to tuition or educational fees, at any time when in the discretion of the governing board the same is in the best interest of the University with all modification of fees to be effective irrespective as to whether fees have or have not been paid by or on behalf of a student prior to the effective date of the modification.

Missouri Score Card

Pursuant to Missouri HB 1606 (2018), information regarding the number of credit hours, program length, employment rate, wage data, and graduates employed in careers related to their program of study at The University of Missouri - St. Louis can be found at the following URL: scorecard.mo.gov.

To Search:

- Enter "**University of Missouri** " in the School / Program box.
- Enter "**63121**" in the Location (Zip Code)
- Choose a Degree/Credential Type. We offer:
 - Bachelor's Degrees
 - Certificates
 - Doctoral/Professional Degrees
 - Educational Specialist
 - Graduate Certificates
 - Master's Degrees
- Choose the Field of Study.

Academic Programs

Accounting BS

General Education Requirements

All Business majors must meet the university general education requirements. As part of meeting the university's general education requirements, all Business majors must complete the prerequisite courses below :

| | | |
|-----------------------------|---|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 or BUS AD 1107 | Basic Calculus Quantitative Methods for Business | 3 |
| MATH 1105 | Basic Probability and Statistics | 3 |

Degree Requirements

All Business majors must meet College of Business G.P.A., good standing and credit requirements (p. 209) as outlined in the Bulletin.

Lower Division Business Core Requirements

| | | |
|-------------|---|---|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |

Total Hours 12

Upper Division Requirements

| | | |
|-----------|------------------|---|
| ENGL 3120 | Business Writing | 3 |
|-----------|------------------|---|

Upper Division Non-Business or Business Requirement

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; also available on our web site.

Upper Division Business Requirements

| | | |
|--|---|----|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
| FINANCE 3500 | Financial Management | 3 |
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 4219 | Strategic Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |
| A minimum of 15 additional hours of upper division approved business electives | | 15 |

Total Hours 36

¹ Course is required for BS Accounting and all BS Business Administration majors.

Assessment Requirement

| | | |
|-----------|-----------------------------|---|
| MGMT 4220 | Business Assessment Testing | 0 |
|-----------|-----------------------------|---|

Degree Requirements

Lower or Upper Division Courses Required

| | | |
|-----------|---|---|
| COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | 3 |
|-----------|---|---|

Choose one of the following courses: 3

| | | |
|-------------|--------------------------------------|--|
| ACCTNG 2430 | Accounting Ethics | |
| PHIL 1130 | Approaches to Ethics (MOTR PHIL 102) | |
| PHIL 2254 | Business Ethics | |

Upper Division Accounting Courses Required ¹

| | | |
|-------------------------------|--|---|
| ACCTNG 3401 | Financial Accounting and Reporting I | 3 |
| ACCTNG 3402 | Financial Accounting and Reporting II | 3 |
| ACCTNG 3411 | Cost Accounting | 3 |
| ACCTNG 3421 or INFSYS 3810 | Accounting Information Systems Information Systems Analysis | 3 |
| ACCTNG 3441 | Income Taxes | 3 |
| ACCTNG 4435 | Auditing | 3 |

Total Hours 24

¹ The prerequisite for enrollment in ACCTNG 3402, ACCTNG 3411, ACCTNG 3441, ACCTNG 3451, and all 4000-level accounting courses is an upper-level accounting grade point average of 2.3. or higher.

See the Office of Undergraduate Academic Advising for alternatives to satisfy the State of Missouri's requirements for eligibility to take the Uniform Certified Public Accounting Examination.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Interpret business process transactions and create financial statements
- Analyze strategic options relevant to business processes
- Identify and assess legal and ethical issues with financial reporting and the accounting profession
- Effectively prepare and present written and oral financial information
- Evaluate business decisions associated with financial analysis, corporate governance, taxation, or business processes
- Understand the role of the audit and design and carry out auditing procedures
- Carry out required income tax compliance reporting procedures
- Explain the impact of International Financial Reporting Standards on Financial Reporting

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|---|-------|
| Fall | Hours | Spring | Hours |
| MATH 1030 | | 3 BUS AD 1107 or MATH 1100 | 3 |
| ENGL 1100 | | 3 ECON 1001 | 3 |
| BUS AD 1000 or ENT 1100 | | 3 INFSYS 2800 | 3 |
| INFSYS 1800 | | 3 EXPLORE – Humanities and Fine Arts | 3 |
| EXPLORE – Humanities and Fine Arts | | 3 EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| INTDSC 1003 | 1 | | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ACCTNG 2400 | | 3 ACCTNG 2410 | 3 |
| ECON 1002 | | 3 BUS AD 2900 | 3 |
| MATH 1105 | | 3 ENT 3100 | 3 |
| COMM 1040 | | 3 SCMA 3301 | 3 |
| CORE – US History and Government | | 3 Cultural Diversity Requirement | 3 |
| | 15 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ACCTNG 3401 | | 3 ACCTNG 3402 | 3 |
| MGMT 3600 | | 3 ACCTNG 3411 | 3 |
| SCMA 3300 | | 3 MKTG 3700 | 3 |
| ENGL 3120 | | 3 FINANCE 3500 | 3 |
| Elective | | 3 Elective | 2 |
| | 15 | | 14 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ACCTNG 3421 | | 3 ACCTNG 2430, PHIL 1130, PHIL 2254, or PHIL 2249 | 3 |
| ACCTNG 3441 | | 3 ACCTNG 4435 | 3 |
| Global Awareness Course | | 3 MGMT 4219 & MGMT 4220 | 3 |
| Elective | | 3 Global Awareness Course | 3 |
| | | Electives | 6 |
| | 12 | | 18 |
| Total Hours: 120 | | | |

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Accounting Data Analytics Graduate Certificate

The Graduate Certificate in Accounting Data Analytics is designed for individuals seeking expertise in the fast growing data analytics specialty in CPA Practice and corporate practice. Students will gain experience with data visualization and analytics techniques applied to business settings.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs. All 12 credit hours taken as part of this certificate transfer to the MBA degree program.

Choose four of the following courses: 12

| | |
|-------------|--|
| ACCTNG 5435 | Graduate Topics in Auditing |
| ACCTNG 5443 | Decision Support Systems for Business Intelligence |
| ACCTNG 5444 | |
| ACCTNG 4450 | Prescriptive Analytics and Optimization |
| ACCTNG 6460 | Data Integration |

Total Hours 12

Accounting Data Security Graduate Certificate

The Accounting Data Security Certificate requires 12 credit hours in data security. Students pursuing the Master of Accounting degree, the MBA with an Accounting Emphasis, or the Post-Baccalaureate Certificate in Accounting may be interested in also earning this certificate. Any four of the following courses qualifies for credit towards the certificate:

| | | |
|-------------|--|---|
| ACCTNG 5408 | Fraud Examination | 3 |
| ACCTNG 5435 | Graduate Topics in Auditing | 3 |
| ACCTNG 5436 | Systems Auditing | 3 |
| ACCTNG 5465 | Principles of Information Security | 3 |
| ACCTNG 5466 | Management of Accounting Networks and Security | 3 |
| ACCTNG 5467 | Advanced Data Security Concepts | 3 |
| ACCTNG 5468 | Accounting Software Assurance | 3 |
| ACCTNG 5469 | Management of Accounting Data Security | 3 |

Accounting MAcc

The following are the Master of Accounting degree requirements. Students with an undergraduate degree in business and/or accounting will find that they can waive several of the requirements based on previous coursework. Overall, a candidate for the Master of Accounting degree must complete a minimum of 30 credit hours.

Core Courses

Students who have had equivalent coursework at the undergraduate level may have these courses waived. Contact the advising office for more information. (For students required to complete any of ACCTNG 5404, 5405, 5411, 5421, or 5447, up to 9 credits can be counted toward the required electives below):

| | | |
|-------------|-------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| ACCTNG 5404 | Professional Accountancy I | 3 |
| ACCTNG 5405 | Professional Accountancy II | 3 |
| ACCTNG 5411 | Cost Systems Analysis | 3 |
| ACCTNG 5421 | Information Systems in Accounting | 3 |

| | | |
|-------------|--|---|
| ACCTNG 5447 | Taxation of Individuals and Businesses | 3 |
|-------------|--|---|

Business Breadth Courses

Students who have had equivalent coursework at the undergraduate level may have these courses waived. Contact the advising office for more information. (For students required to complete these courses, 6 credits can be counted towards the required electives below).

| | | |
|--------------|--------------------------|---|
| SCMA 5300 | Business Analytics | 3 |
| FINANCE 6500 | Financial Management | 3 |
| BUS AD 5900 | Law, Ethics and Business | 3 |

Required Accounting Courses

Students must complete the following three courses. Students with equivalent undergraduate coursework may substitute ACCTNG 4441 or any Accounting course greater than 5401.

| | | |
|-------------|--|---|
| ACCTNG 4401 | Financial Accounting and Reporting III | 3 |
| ACCTNG 4402 | Financial Accounting and Reporting IV | 3 |
| ACCTNG 4435 | Auditing | 3 |

Research Course 3

Select one of the following:

| | | |
|-------------|---|--|
| ACCTNG 5402 | Professional Accounting Research | |
| ACCTNG 5406 | Research and Professional Writing in Accounting | |
| ACCTNG 5441 | Tax Research | |

Graduate Topics Course 3

Select one of the following:

| | | |
|-------------|--|--|
| ACCTNG 5403 | Graduate Topics: Business Analysis and Reporting | |
| ACCTNG 5412 | Graduate Topics in Management Accounting: Controllershship | |
| ACCTNG 5435 | Graduate Topics in Auditing | |
| ACCTNG 6441 | Graduate Topics in Taxation | |

Electives 15

Students must complete 15 credits of electives including at least 9 credits of Accounting courses.

Accounting Electives

Select at least 3 of the following (Not all courses are offered each year):

| | | |
|-------------|--|---|
| ACCTNG 4441 | Advanced Federal Income Tax: Business Taxation | 3 |
| ACCTNG 4450 | Prescriptive Analytics and Optimization | 3 |
| ACCTNG 5402 | Professional Accounting Research | 3 |
| ACCTNG 5403 | Graduate Topics: Business Analysis and Reporting | 3 |
| ACCTNG 5406 | Research and Professional Writing in Accounting | 3 |
| ACCTNG 5408 | Fraud Examination | 3 |
| ACCTNG 5412 | Graduate Topics in Management Accounting: Controllershship | 3 |
| ACCTNG 5435 | Graduate Topics in Auditing | 3 |
| ACCTNG 5436 | Systems Auditing | 3 |
| ACCTNG 5441 | Tax Research | 3 |

| | | |
|-------------|--|---|
| ACCTNG 5443 | Decision Support Systems for Business Intelligence | 3 |
|-------------|--|---|

| | | |
|-------------|--|---|
| ACCTNG 5444 | | 3 |
|-------------|--|---|

| | | |
|-------------|-----------------------------|---|
| ACCTNG 5446 | Advanced Topics in Taxation | 3 |
|-------------|-----------------------------|---|

| | | |
|-------------|---|---|
| ACCTNG 5451 | Accounting and Auditing in Governmental and Not-for-Profit Entities | 3 |
|-------------|---|---|

| | | |
|-------------|------------------------------------|---|
| ACCTNG 5465 | Principles of Information Security | 3 |
|-------------|------------------------------------|---|

| | | |
|-------------|--|---|
| ACCTNG 5466 | Management of Accounting Networks and Security | 3 |
|-------------|--|---|

| | | |
|-------------|---------------------------------|---|
| ACCTNG 5467 | Advanced Data Security Concepts | 3 |
|-------------|---------------------------------|---|

| | | |
|-------------|-------------------------------|---|
| ACCTNG 5468 | Accounting Software Assurance | 3 |
|-------------|-------------------------------|---|

| | | |
|-------------|--|---|
| ACCTNG 5469 | Management of Accounting Data Security | 3 |
|-------------|--|---|

| | | |
|-------------|-----------------------------------|-----|
| ACCTNG 5490 | Graduate Internship in Accounting | 1-3 |
|-------------|-----------------------------------|-----|

| | | |
|-------------|--|-----|
| ACCTNG 5495 | Advanced Special Administrative Problems - Accounting (VITA) Program | 1-3 |
|-------------|--|-----|

| | | |
|-------------|--------------------------------|---|
| ACCTNG 5498 | Graduate Seminar in Accounting | 3 |
|-------------|--------------------------------|---|

| | | |
|-------------|-----------------------------------|-----|
| ACCTNG 5499 | Individual Research in Accounting | 1-3 |
|-------------|-----------------------------------|-----|

| | | |
|-------------|-----------------------------|---|
| ACCTNG 6441 | Graduate Topics in Taxation | 3 |
|-------------|-----------------------------|---|

| | | |
|-------------|------------------|---|
| ACCTNG 6460 | Data Integration | 3 |
|-------------|------------------|---|

Non-Accounting Electives

Students may complete up to 6 credits at the graduate level from other business disciplines. Students should ensure that they will have earned the minimum number of accounting credit hours required for licensure before choosing electives from other business disciplines.

Any BUS AD 5000 and above

Any FINANCE 6500 and above

Any INFSYS 5800 and above

Any SCMA 5300 and above

Any MGMT 5600 and above

Any MKTG 5700 and above

Students must complete a minimum of 30 credit hours while enrolled as a graduate student.

Learning Outcomes

Upon Completion of the program, graduates will be able to:

- Synthesize business process transactions as well as create and analyze financial statements
- Analyze, critique, and inform strategic options relevant to business processes, corporate governance, internal controls, and security
- Identify and discuss the impact of International Financial Reporting Standards upon financial reporting
- Apply ethical judgement in analyzing accounting situations and be able to formulate ethical accounting and business decisions
- Actively participate in team collaborations as well as prepare written professional communications that justify, critique, or inform relevant accounting or business decisions
- Analyze and critique business decisions in the functional business areas of financial analysis, corporate governance, taxation, or business processes

Accounting MAcc Accelerated Master's Degree

The Department of Accounting provides an opportunity for students of recognized academic ability and educational maturity to complete the requirements for the undergraduate and graduate degree in Accounting with a total of 138 credit hours instead of the typical 150 credit hours required when the degrees are pursued separately.

When all the requirements of the BSA program have been completed, students will be awarded the BSA. When all the requirements of the MACC have been completed, students will be awarded the MACC. It should be noted that Certified Public Accounting (CPA) licensure in most states requires 150 hours of university credit. Students earning the BSA/MACC in 138 hours are encouraged to use the additional 12 hours to pursue advanced skills in business analysis, advanced taxation, data analytics, systems controls testing, cyber security, or the like as they complete the accounting, business, and overall credit hours required for CPA licensure.

Admissions Requirements

Students can apply to the Chair of the Accounting Department or a delegate of the Chair for admission into the Accelerated Master of Accounting degree program during the semester they will have completed 60 undergraduate credit hours. A cumulative grade point average of 3.0 or higher is required. Students must also meet with a Graduate Business Programs academic advisor.

Provisional Admission

Students will be admitted to the Accelerated Master's program under provisional status until they have completed the department-specified 12 hours in the program with a grade point average of 3.0 or higher. After completion of the undergraduate degree, upon recommendation from the Department Chair or a delegate of the Chair, students can be admitted to the graduate component of the Accelerated Master's program, which involves admission to the Graduate School.

Graduate Admission

After graduate admission, the student will be classified as a graduate student, will pay graduate tuition for all courses, and must take graduate courses until the completion of the master's degree. Students must maintain a grade point average of 3.0 or higher throughout the combined program.

Applicants are considered for graduate admission into the Accelerated Master's program if they meet the following criteria: (1) are in their final semester in undergraduate status; (2) have a minimum GPA of 3.0 since being granted provisional status; and (3) have met with a Graduate Business Programs academic advisor. A total of 12 hours of graduate coursework may be counted towards the 120 credit hours required for the Bachelor of Science - Accounting degree and the requirements for the Master of Accounting.

Students may resign from the Accelerated Master's Program after earning their bachelor's degree. However, once the bachelor's degree is awarded, the benefit of "double counting" courses will be lost. Any course used to meet a degree requirement for an undergraduate degree cannot be applied to a subsequent master's degree. Undergraduate BSA students who choose to pursue the Accelerated Master of Accounting degree option will be required to take any four of the following courses (12 credits). With permission, provisional Accelerated Master of Accounting students may

take up to 12 hours of 4000/5000/6000 level courses while still classified as undergraduate student. These 12 hours will be treated by the Graduate School as "graduate status," and they may be counted towards a master's degree.

Program Requirements

| | |
|----------------------------------|--|
| Select any four of the following | 12 |
| ACCTNG 4435 | Auditing |
| ACCTNG 5405 | Professional Accountancy II |
| ACCTNG 5411 | Cost Systems Analysis |
| ACCTNG 5447 | Taxation of Individuals and Businesses |
| FINANCE 6500 | Financial Management |
| INFSYS 5800 | Management Information Systems |
| MGMT 4219 | Strategic Management |
| MGMT 5600 | Managing and Leading in Organizations |
| MKTG 5700 | Integrated Marketing Strategies |
| Total Hours | 12 |

The above courses will qualify for credit towards both the Bachelor of Science - Accounting degree and the Master of Accounting degree. If a student has completed the undergraduate equivalent of a course, they may not receive graduate credit. Students may request to substitute other courses, subject to the approval of the Department Chair or a delegate of the Chair.

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Accounting Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

Available to all students except those pursuing the Bachelor of Science in Accounting degree. Students must complete:

| | | |
|--|--------------------------------------|-----------|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| Plus any three upper division accounting electives | | 9 |
| Total Hours | | 15 |

Learning Outcomes

- Analyze business process transactions and create financial statements
- Critically examine strategic options relevant to business processes, corporate governance, internal controls, and security
- Assess business decisions in the functional areas of financial analysis, corporate governance, taxation, and business processes

Accounting Post Baccalaureate Undergraduate Certificate

Prerequisite

Bachelor's degree (in any subject)

Prerequisite Courses

| | | |
|-------------|---|---|
| MATH 1030 | College Algebra (MOTR MATH 130) ¹ | 3 |
| ACCTNG 2400 | Fundamentals of Financial Accounting ² | 3 |
| ACCTNG 2410 | Managerial Accounting ² | 3 |

¹ MATH 1030 College Algebra is a prerequisite for the required accounting courses. It may be taken concurrently with ACCTNG 2400 Fundamentals Of Financial Accounting, but must be completed prior to enrollment in ACCTNG 2410 Managerial Accounting.

² ACCTNG 2400 Fundamentals Of Financial Accounting and ACCTNG 2410 Managerial Accounting are also prerequisites for the 3000-level accounting courses.

Required

Complete 27 hours of accounting courses at the 3000-level or above, at least 15 hours of which are completed at UMSL. The accounting courses must include the six required courses listed below and three accounting electives. Courses previously completed can be waived upon presentation of appropriate documentation. Waived courses will not count toward the 15-hour residency requirement.

Courses must be completed with a grade of C- or higher. The grade point average for all courses counting toward the Post-Baccalaureate Certificate in Accounting must be 2.3 or higher. The prerequisite for enrollment in ACCTNG 3402, ACCTNG 3411, ACCTNG 3441, ACCTNG 3451 and all 4000-level accounting courses is an upper-level accounting grade point average of 2.3 or higher.

Required Courses

| | | |
|-------------|--------------------------------------|---|
| ACCTNG 3401 | Financial Accounting and Reporting I | 3 |
|-------------|--------------------------------------|---|

| | | |
|---|---|-----------|
| ACCTNG 3402 | Financial Accounting and Reporting II | 3 |
| ACCTNG 3411 | Cost Accounting | 3 |
| ACCTNG 3421 | Accounting Information Systems | 3 |
| ACCTNG 3441 | Income Taxes | 3 |
| ACCTNG 4435 | Auditing | 3 |
| Electives | | |
| Select three of the following: ¹ | | 9 |
| ACCTNG 3451 | Accounting for Governmental and Not-For-Profit Entities | |
| ACCTNG 4401 | Financial Accounting and Reporting III | |
| ACCTNG 4402 | Financial Accounting and Reporting IV | |
| ACCTNG 4405 | | |
| ACCTNG 4441 | Advanced Federal Income Tax: Business Taxation | |
| Total Hours | | 27 |

¹ Most of these are offered only once a year.

Notes on qualifying for the CPA exam in Missouri

Successful completion of the Post-Baccalaureate Certificate in Accounting includes all the accounting courses needed to qualify for the CPA exam in Missouri. However, Missouri law also requires a total of 60 credit hours in business (including the accounting courses). Many students with undergraduate degrees in business have satisfied this requirement. A student who has not satisfied this requirement must take additional business classes in order to qualify for the CPA exam.

In addition, Missouri requires 150 credit hours of college level coursework in order to qualify for the CPA exam. A student who has completed a 120-hour undergraduate business degree and the Post-Baccalaureate Certificate in Accounting will need additional coursework in order to satisfy the 150-hour requirement.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Analyze business process transactions and create financial statements
- Critically examine strategic options relevant to business processes, corporate governance, internal controls, and security
- Assess business decisions in the functional areas of financial analysis, corporate governance, taxation, and business processes

ACP Instructional Communication Graduate Certificate

The ACP Instructional Communication Certificate is designed for secondary educators interested in teaching public speaking and related courses to high school students for college credit through programs such as UMSL's Advanced Credit Program. The certificate combines practical application with theory and research to provide teachers with a grounded approach to delivering college appropriate courses with empirical research in communication at the foundation.

Through a combination of online courses and independent studies, students can complete the ACP Communication graduate certificate without visiting campus.

Students who earn the ACP Instructional Communication graduate certificate will be eligible to teach college level courses in public speaking at the secondary level.

Requirements

Graduate Standing. To earn the ACP Communication certificate, students must complete a minimum of 18 hours. Typically, students will earn the certificate by completing the following courses in sequence¹:

| | | |
|--------------------|---|-----------|
| COMM 5000 | ACP - Elements of Public Speaking ([R]) | 3 |
| COMM 5010 | ACP: Elements of Debate ([R]) | 3 |
| COMM 5020 | ACP - Persuasion and Influence ([R]) | 3 |
| COMM 5050 | ACP - Special Topics ([E]) ^{2,3} | 6 |
| COMM 5099 | ACP - Observation and Implementation ([R]) ² | 3 |
| Total Hours | | 18 |

¹ Other 5000+ electives may be substituted based on approval and availability. Contact the Graduate Coordinator in the Department of Communication for more information.

² Pre-requisites: Students must have completed or currently be enrolled in each of the following courses: COMM 5000, COMM 5010, COMM 5020

³ May be repeated.

[R] Required for the certificate.

[E] Elective.

Actuarial Science BS

Campus Address: 408 Social Sciences and Business Building (SSB)

Main Number: 314-516-5353

Fax Number: 314-516-5352

Bachelor of Science (B.S.) in Actuarial Science

The B.S. in Actuarial Science provides students with the quantitative skills used by actuaries. Students are required to complete courses offered by the Department of Mathematics and Computer Science, the Department of Economics and the College of Business Administration. Students take coursework in calculus, financial mathematics, statistics, economics, econometrics, and finance. The program is designed to provide students with a solid preparation to take exams and to complete validation by educational experience requirements needed to begin a career as an actuary.

Certificate in Actuarial Studies

The Certificate in Actuarial Studies is designed to provide the education needed for entry level employment in the actuarial profession.

Career Outlook in Actuarial Science

Graduates with this skill set are hired by insurance firms, consulting firms, and financial institutions. Actuarial training is also transferable to broader

jobs in data science and analytics. Job prospects for those with actuarial degrees are expected to remain strong over the next decade.

For more information on careers in actuarial science, visit the website of the Society of Actuaries (<https://www.soa.org/Member/>).

Bachelor of Science in Actuarial Science

General Education Requirements

Students must satisfy the university general education requirements. Many of the courses for the degree may be used to fulfill math proficiency, information literacy, social science, and math and life/natural sciences requirements. There is no foreign language requirement for the degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Required Courses

Candidates for the B.S. in Actuarial Science degree must complete a program of 62 credit hours of required courses. Each required course must be completed with a grade of C- or better and students must maintain a GPA of 2.0 for courses required for the degree.

| | | |
|--------------------|--|-----------|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| CMP SCI 1250 | Introduction to Computing | 3 |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| ECON 4100 | Introduction to Econometrics | 4 |
| ECON 4120 | Time Series Econometrics for Economics and Finance | 4 |
| or ECON 4130 | Business and Economic Forecasting | |
| FINANCE 3500 | Financial Management | 3 |
| FINANCE 3520 | Investments | 3 |
| FINANCE 3521 | Financial Engineering: Applying Derivatives | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| or ECON 3100 | Economic Data and Statistics | |
| MATH 4010 | Financial Mathematics I | 3 |
| MATH 4020 | Financial Mathematics II | 3 |
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |
| Total Hours | | 62 |

Recommended Courses

Students are strongly encouraged to take as many of the following courses as possible.

| | | |
|--------------|--------------------------------------|-----|
| CMP SCI 2250 | Programming and Data Structures | 3 |
| ECON 3001 | Intermediate Microeconomics | 3 |
| ECON 3002 | Intermediate Macroeconomics | 3 |
| ECON 4110 | Applied Econometrics | 4 |
| ECON 4995 | Internship in Actuarial Science | 1-3 |
| or MATH 4995 | Internship in Actuarial Science | |
| FINANCE 3561 | Principles of Insurance | 3 |
| MATH 2450 | Elementary Linear Algebra | 3 |
| MATH 4260 | Introduction to Stochastic Processes | 3 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Learn basic programming techniques for use in actuarial applications.
- Understand the fundamental concepts of financial mathematics and how those concepts are applied in present and accumulated values for various streams of cash flow.
- Develop the fundamental probability tools for quantitatively assessing risk.
- Use the concepts of statistical inference, such as estimation and hypothesis testing, required for actuarial modeling.
- Become familiar with regression models to analyze and forecast time series data.
- Use economic reasoning to explain individual decision-making and economy-wide outcomes.
- Understand and apply accounting concepts and knowledge of financial instruments and how they are utilized.
- Develop knowledge of the theoretical basis of actuarial models and the application of those models to insurance and other financial risks.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-------|------------------------------------|-------|
| INTDSC 1003 ¹ | 1 | INFSYS 1800 | 3 |
| ENGL 1100 | 3 | MATH 1320 | 3 |
| MATH 1800 | 5 | MATH 1900 | 5 |
| CMP SCI 1250 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| CORE - Communication Proficiency | 3 | | |
| | 15 | | 14 |

Second Year

| Fall | Hours | Spring | Hours |
|-------------|-------|------------------------------------|-------|
| ECON 1001 | 3 | ACCTNG 2400 | 3 |
| INFSYS 2800 | 3 | ECON 1002 | 3 |
| MATH 2000 | 5 | MATH 4020 | 3 |
| MATH 4010 | 3 | MATH 4200 | 3 |
| | | EXPLORE - Humanities and Fine Arts | 3 |
| | 14 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-------|---------------------------------------|-------|
| ECON 4100 | 4 | FINANCE 3521 | 3 |
| ENGL 3100 or 3120 | 3 | EXPLORE - Social Sciences | 3 |
| FINANCE 3500 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| MATH 4210 | 3 | Cultural Diversity Requirement | 3 |
| CORE - US History and Government | 3 | Recommended course, elective or minor | 3 |
| | 16 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--|-------|--|-------|
| ECON 4130 | 4 | Recommended course, elective or minor | 3 |
| FINANCE 3561 | 3 | Recommended course list, elective or minor | 3 |
| Recommended course list, elective or minor | 3 | Recommended course list, elective or minor | 3 |
| Recommended course list, elective or minor | 3 | Recommended course list, elective or minor | 3 |
| Recommended course list, elective or minor | 3 | Recommended course list, elective or minor | 3 |
| | 16 | | 15 |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Actuarial Studies Undergraduate Certificate

Actuaries use the tools of economics, finance, and mathematics to evaluate and price risk. They are employed by insurance companies, pension funds, consulting firms, and a variety of other financial institutions. The actuarial profession has consistently been ranked as one of the most desirable professions in which to be employed. To become an actuary one must satisfy certain educational requirements, pass exams offered by the Society of Actuaries, and complete professional courses.

The Certificate in Actuarial Studies is designed to provide the education needed for entry level employment in the actuarial profession. Those who complete the certificate will satisfy some of the Validation by Educational Experience requirement of the Society of Actuaries and be prepared to take the first two actuarial examinations (P and FM).

Completion of the certificate requires the following courses. Please note that many of these courses have prerequisites so anyone pursuing the certificate should work carefully with an academic advisor.

Required Courses

| | | |
|--------------|---|---|
| FINANCE 3500 | Financial Management | 3 |
| FINANCE 3521 | Financial Engineering: Applying Derivatives | 3 |
| MATH 4010 | Financial Mathematics I | 3 |
| MATH 4020 | Financial Mathematics II | 3 |
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |

Total Hours 18

Residency Requirement: Of the above required six courses at least five must be taken at the University of Missouri-St. Louis.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Interpret, formulate and solve applied problems in probability and statistics.
- Interpret, formulate and solve applied problems in mathematics relating to annuities, bonds and derivative investments.

Acute Care Pediatric Nurse Practitioner Post-Graduate Certificate

Post-graduate certificate (PGC) requirements are tailored to the individual student, depending on past academic work, experience, the student's goals, and specialty requirements. Upon completion of the PGC requirements, a certificate is awarded by the College of Nursing (CON) and Graduate School. Graduates are eligible to apply to take board certification exams in the advanced practice role and population for which they have been prepared.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsl.edu/services/ctl/onlinelearning/state_authorization.html.

Admission Criteria

- Admission to the University by completing the UMSL Graduate School application
- MSN, DNP from a nationally accredited nursing program
- MSN or DNP 3.0 minimum GPA
- Current professional licensure
- Acute Care Pediatric Nurse Practitioner (PNP-AC) post-graduate certificate requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) post-graduate certificate requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Certificate Requirements

Students must complete a minimum of 12 credit hours of coursework from the University of Missouri - St. Louis College of Nursing. Courses must be from the list below.

| | | |
|------------|---|-----|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| NURSE 6743 | Pediatric Health I: Acute and Chronic Care | 4 |
| NURSE 6745 | Pediatric Health II: Complex Acute Care | 4 |
| NURSE 6954 | Advanced Practice Nursing: Practicum I | 2-4 |

| | | |
|------------|--|-----|
| NURSE 6955 | Advanced Practice Nursing: Practicum II | 2-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III | 2-4 |

All students must complete 8 credit hours of Residency.

Adult-Geriatric Nurse Practitioner Post-Graduate Certificate

Post-graduate certificate (PGC) requirements are tailored to the individual student, depending on past academic work, experience, the student's goals, and specialty requirements. Upon completion of the PGC requirements, a certificate is awarded by the College of Nursing (CON) and Graduate School. Graduates are eligible to apply to take board certification exams in the advanced practice role and population for which they have been prepared.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsl.edu/services/ctl/onlinelearning/state_authorization.html.

Admission Criteria

- Admission to the University by completing the UMSL Graduate School application
- MSN, DNP from a nationally accredited nursing program
- MSN or DNP 3.0 minimum GPA
- Current professional licensure
- Acute Care Pediatric Nurse Practitioner (PNP-AC) post-graduate certificate requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) post-graduate certificate requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Certificate Requirements

Students must complete a minimum of 12 credit hours of coursework from the University of Missouri - St. Louis College of Nursing. Courses must be from the list below.

| | | |
|------------|---|-----|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| NURSE 6739 | Adult Health I | 4 |
| NURSE 6740 | Adult Health II | 4 |
| NURSE 6954 | Advanced Practice Nursing: Practicum I | 2-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II | 2-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III | 2-4 |

All students must complete 8 credit hours of Residency. One credit hour is equivalent to 75 residency hours.

African American and African Diaspora Studies Undergraduate Certificate

The Undergraduate Certificate in African American and African Diaspora Studies (AAADS) will offer undergraduate students from any major/discipline an opportunity to engage in an interdisciplinary examination of the history, culture, and life of African Americans and the African diaspora from ancient times to the present day. This program stresses critical thinking, ethical and moral reasoning, intercultural competence, community service, and justice.

Core

| | | |
|-----------|--|---|
| HIST 1003 | African American History | 3 |
| HIST 1007 | Introduction to African and African American Studies | 3 |

| | | |
|-----------|-----------------------------|---|
| COMM 2332 | Intercultural Communication | 3 |
|-----------|-----------------------------|---|

Electives 6

Choose two of the following. At least one course must be 2000-level or above.

| | | |
|--------------|---|--|
| COMM 2235 | Professional Communication | |
| COMM 3355 | Dangerous Messages | |
| ED FND 3251 | Black Americans in Education | |
| ED FND 4330 | History of American Education through the Lens of Social Justice | |
| ENGL 1950 | Topics in Literature | |
| ENGL 2360 | Hey, Have You Read _____? ¹ | |
| ENGL 4790 | Rhetoric and Social Justice | |
| HIST 2000 | Selected Topics in History ¹ | |
| HIST 2026 | Baseball and the Making of Modern America | |
| HIST 2066 | Women and Gender in African History | |
| HIST 2067 | African History through Fiction and Film | |
| HIST 3000 | Special Topics in History ¹ | |
| M H L T 1004 | B.A.M. - Black American Music | |
| M H L T 1070 | | |
| M H L T 1150 | Drumming Cultures of the World (MOTR MUSC 102) | |
| PHIL 3327 | Race and Racism ² | |
| POL SCI 2320 | African Americans and the Political System ² | |
| POL SCI 2370 | The Politics of Identity and Social Justice ² | |
| POL SCI 2580 | African Politics | |
| POL SCI 3880 | Global Diasporas and International Relations in the 21st Century ² | |
| SOC 2192 | Special Topics in Sociology ¹ | |
| SOC 2701 | Race and Society | |
| SOC 3344 | Problems of Urban Community | |
| SOC 3291 | Current Issues in Sociology ¹ | |

| | | |
|-------------|--------------------------------------|--|
| SOC 4360 | Sociology of Minority Groups | |
| SOC 4340 | Race, Crime, and Justice | |
| THEATR 2274 | African-American Cinema ² | |

Capstone 3

A capstone course (minimum of 3 hours) is a 4000-level research, internship, or practicum course not already used as an elective.

This course must be approved, in advance, by the program coordinator for the certificate.

Total Hours 18

Other UMSL courses and courses from other UM campuses, through ICCS or other formats, may be included as electives with prior approval of the program coordinator.

¹ These topical courses are included when the topics or book selections are appropriate for this certificate as determined by the program coordinator.

² These courses have additional prerequisites.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Describe the historical developments of the African American and African diasporan experiences that reflect the complexities of continuity and change
- Analyze the key issues facing African, African American, and African diasporan peoples by applying scholarly research, perspectives and data
- Design programs and tactics that address a major civic or social challenge facing African, African American, or African diaspora communities.

African/African American Studies Minor

Core Course (Required):

| | | |
|-----------|--|---|
| HIST 1007 | Introduction to African and African American Studies | 3 |
|-----------|--|---|

Select at least four of the following electives: 12

| | | |
|--------------|--|--|
| ANTHRO 2124 | Introduction to Contemporary African Cultures (Core Course (Required)) | |
| ANTHRO 3235 | Women in Sub-Saharan Africa: A Contemporary Perspective | |
| ART HS 1105 | | |
| HIST 1003 | African American History | |
| HIST 1061 | | |
| HIST 1062 | Modern Africa: From Colonies to Nations | |
| HIST 2016 | | |
| HIST 2017 | African American History: From Civil Rights to Black Power | |
| HIST 2063 | | |
| HIST 2064 | | |
| M H L T 1180 | Musical Journey Through Africa | |

| | |
|--------------------|--|
| POL SCI 2320 | African Americans and the Political System |
| POL SCI 2580 | African Politics |
| POL SCI 3580 | |
| Total Hours | |
| | 15 |

American Politics Minor

Requirements for Political Science Minors

A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor. Students may count no more than 3 hours in political science taken on a satisfactory/unsatisfactory basis toward the minor. Students taking an internship POL SCI 3940 may count no more than three hours of the internship toward the minor.

Specific Requirements for the Minor

| | | |
|-------------------------------|---|----|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| Select four of the following: | | 12 |
| POL SCI 2280 | Judicial Politics | |
| POL SCI 2300 | State Politics | |
| POL SCI 2320 | African Americans and the Political System | |
| POL SCI 2350 | Introduction to Urban Politics | |
| POL SCI 2260 | Law, Politics and Society | |
| POL SCI 2370 | The Politics of Identity and Social Justice | |
| POL SCI 2380 | The Politics of Gender in the United States | |
| POL SCI 2420 | Introduction to Public Policy | |
| POL SCI 2450 | Labor, Work, Society, and Politics | |
| POL SCI 2820 | United States Foreign Policy | |
| POL SCI 3200 | Constitutional Law | |
| POL SCI 3260 | The Supreme Court | |
| POL SCI 3330 | Public Opinion and Political Participation | |
| POL SCI 3350 | Political Parties and Elections | |
| POL SCI 3390 | Studies in American Politics | |
| POL SCI 3900 | Special Readings ¹ | |
| POL SCI 3940 | Public Affairs Internship ¹ | |
| Total Hours | | 15 |

¹ May be taken with approval of the faculty advisor.

Learning Outcomes

- Demonstrate knowledge of the institutions, political culture, and processes of American politics.
- Analyze the actions of political actors and their motives.

- Assess political issues, formulate evidence-based recommendations, and communicate them with clarity and coherence.

American Studies Minor

American Studies involves an interdisciplinary approach to the study of the history, cultures, politics, and economy of the United States, its colonial antecedents, and its indigenous peoples. At UMSL, the minor enables students also to study the city and region of St. Louis, a quintessentially American city.

Students interested in this minor should contact the coordinator of American Studies for advice and information.

There are 18 hours required in the minor, and in completing these hours candidates must take courses from at least three disciplines. Candidates must have a cumulative grade point average of 2.0 or better in the minor. Three hours of the minor may be taken on a satisfactory/unsatisfactory basis, and a maximum of nine hours will be accepted in transfer. Candidates wishing to take American Studies courses in the Honors College do not need to be members of the Honors College but must register for the courses via the Honors College.

Requirements for the Minor

Completion of the American Studies Minor requires at least 18 credit hours (6 courses) including an interdisciplinary introductory course. Of the remaining 15 hours, at least six hours must be taken from a small group of core courses designed to give students a foundation for further study and at least six hours from a larger group of elective courses which will broaden students' experience or enable them to specialize in specific areas. At least six hours must be taken from advanced level (3000 and 4000) undergraduate courses. Students are recommended to include in this advanced work an American Studies "capstone", an option that may be fulfilled in several ways, which are described below.

Introductory Course

| | | |
|-----------|--|---|
| HIST 2160 | (must be taken in first 12 hours of the minor) | 3 |
|-----------|--|---|

Core Courses

Choose at least one of the following: 3

| | | |
|-----------|---------------------------------|---|
| ENGL 3710 | American Literature Before 1865 | 3 |
| ENGL 3720 | American Literature After 1865 | 3 |

Choose at least one of the following: 3

| | | |
|--------------|---|--|
| HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |
| HIST 1002 | American Civilization 1865 to Present (MOTR HIST 102) | |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | |
| HONORS 1230 | American Traditions: Social and Behavioral Sciences | |

Elective Courses

Choose at least two courses from the following American Studies electives 6

| | |
|--------------|---------------------------------|
| Anthropology | |
| ANTHRO 2120 | Native Peoples of North America |
| Art History | |
| ART HS 1140 | |

| | |
|--------------------------------------|--|
| ART HS 2270 | Art of the United States |
| Criminology | |
| CRIMIN 1100 | Introduction to Criminology and Criminal Justice |
| CRIMIN 1120 | Criminal Law |
| CRIMIN 1150 | Violence in America |
| CRIMIN 4300 | Communities and Crime |
| CRIMIN 4325 | Gender, Crime, and Justice |
| CRIMIN 4340 | Race, Crime, and Justice |
| Economics | |
| ECON 2800 | History of American Economic Development |
| English | |
| ENGL 4620 | Selected Major American Writers II |
| ENGL 4650 | Modern American Fiction |
| History | |
| HIST 2008 | History of St. Louis |
| HIST 2028 | Sex, Drugs, and Rock 'n Roll: The 1960s in Song, Fashion, Dating, and Protest |
| Gender Studies | |
| GS 2020 | Women and Social Movements in U.S. History |
| GS 2380 | The Politics of Gender in the United States |
| GS 3700 | Diversity and Social Justice |
| GS 4335 | Gender and Body Image in Media and Culture |
| Honors | |
| HONORS 2010 | Inquiries in The Humanities (topic must be approved by American Studies coordinator) |
| HONORS 2030 | Inquiries in the Social and Behavioral Sciences (topic must be approved by American Studies coordinator) |
| HONORS 3010 | Advanced Honors Seminar in the Humanities (topic must be approved by American Studies coordinator) |
| HONORS 3030 | Advanced Honors Seminar in the Social and Behavioral Sciences (topic must be approved by American Studies coordinator) |
| Military and Veterans Studies | |
| MVS 2100 | |
| MVS 2130 | |
| Music History | |
| M H L T 1003 | History of Rock Music (MOTR MUSC 100RP) |
| M H L T 1070 | |
| M H L T 1140 | Popular Music in America |
| M H L T 1190 | Musical Journey of the Native North American |
| M H L T 4280 | |
| Political Science | |

| | |
|------------------|---|
| POL SCI 2260 | Law, Politics and Society |
| POL SCI 2320 | African Americans and the Political System |
| POL SCI 2330 | The American Presidency |
| POL SCI 2370 | The Politics of Identity and Social Justice |
| POL SCI 2380 | The Politics of Gender in the United States |
| POL SCI 3210 | Civil Liberties |
| POL SCI 3330 | Public Opinion and Political Participation |
| POL SCI 3460 | The Politics of Poverty and Welfare |
| Sociology | |
| SOC 1040 | Social Problems |
| SOC 2202 | Urban Sociology |
| SOC 2203 | The City |
| SOC 4100 | Introduction to Feminist and Gender Theory |
| SOC 4312 | Sociology of Wealth and Poverty |

Student considering other elective choices must work with the American Studies faculty coordinator to obtain approval to apply these courses to the minor.

Capstone options:

Students are encouraged to complete a capstone for the American Studies minor. A capstone course can satisfy three credit hours of the 18 hour minor. Experiences that could serve as a capstone include appropriate departmental capstone courses, independent studies, research projects, and internships. Interested students should work with the coordinator of American Studies to have a capstone course approved.

Analytical Chemistry Graduate Certificate

The graduate certificate in analytical chemistry is a 12-credit-hour program. It provides the skills and training necessary to advance in growing areas of analytical chemistry, with fields such as environmental sample testing, or verifying the quality and safety of food as well as pharmaceutical and cosmetic products. Analytical chemists also work in clinical areas, supporting the development of assays needed for disease diagnosis, assuring compliance with environmental and other regulations, or supporting the legal process. The certificate requires three analytical chemistry lecture courses. Research credits taken towards the certificate in the Department of Chemistry and Biochemistry must be completed in a research group using experimental analytical techniques. Research credits can be taken in the same or in different research groups. All students must take the three required courses subject to the Graduate School regulations.

A minimum of three of the courses must be taken at UMSL. Research credits must be taken at UMSL. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the Department of Chemistry and Biochemistry.

Certificate applicants must meet the general University of Missouri-St. Louis Graduate School admissions requirements to be admitted to the Certificate program. Students admitted to the Chemistry M.S. program are automatically eligible to pursue the Certificate; however, they must apply

separately to the Certificate program. Students must maintain a minimum GPA of 3.0 to remain in the Certificate program. The certificate is awarded after completion of the 12 credit hours of courses listed below. Students must apply to be awarded the Certificate. Courses taken while enrolled as an undergraduate may not be repeated nor will they count towards the Certificate.

This 12-credit-hour certificate program also counts toward the 30-credit-hour Master of Science in Chemistry degree program requirements. Students may choose to combine this certificate with other courses and/or chemistry Certificates to obtain the Master of Science in Chemistry degree.

Required Courses

| | | |
|-----------|---|---|
| CHEM 5212 | Advanced Instrumental Analysis | 3 |
| CHEM 5652 | Spectroscopic Identification of Organic Compounds | 3 |
| CHEM 5294 | Special Topics in Analytical Chemistry | 1 |

Electives Courses **3**

Choose a total of 3 credit hours from the following

| | | |
|-----------|---|--|
| CHEM 5772 | Advanced Physical Biochemistry | |
| CHEM 6905 | Graduate Research in Chemistry ¹ | |
| CHEM 4733 | Biochemistry Laboratory | |

¹ If CHEM 6905 is chosen, the research project must make significant use of experimental analytical techniques.

Anthropology BA

Beginning Fall 2021, the program is no longer accepting applications.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). Any foreign language may be used to meet the language requirement for the B.A. degrees.

Degree Requirements

All required courses for the major must be completed with a grade of C- or better. The following courses are required:

| | | |
|---|---|---|
| ANTHRO 1005 | Introduction to Human Evolution | 4 |
| ANTHRO 1011 | Introduction To Cultural Anthropology (MOTR ANTH 201) | 3 |
| ANTHRO 1019 | Introduction to Archaeology | 3 |
| ANTHRO 4315 | Anthropology Past, Present, and Future | 3 |
| Select nine additional credit hours in Anthropology numbered 1000-2999 ¹ | | 9 |
| Select two of the following methods courses: | | 6 |
| ANTHRO 3209 | Forensic Anthropology | |
| ANTHRO 3212 | Medical Anthropology | |
| ANTHRO 4000 | Ethnographic Field Research Methods | |
| ANTHRO 4005 | Special Research Methods in Cultural Anthropology | |

ANTHRO 4100

| | | |
|--|--|-----------|
| ANTHRO 4307 | Community Based Research in Anthropology | |
| ANTHRO 4310 | Laboratory Methods in Archaeology | |
| ANTHRO 4314 | The Archaeology of Death | |
| HIST 3199 | Introduction to Historical Inquiry | |
| Select nine additional credit hours in Anthropology numbered 3000-4999 | | 9 |
| Total Hours | | 37 |

¹ The three courses must come from two different subfields: Cultural Anthropology, Archaeology, or Biological Anthropology.

The total number of hours required for the major is 37.

Students may elect to take up to, but not to exceed, 15 additional hours in anthropology courses of their choice.

At the end of the program, students should have these competencies:

- **Discipline-Specific (Content) Knowledge**
Graduates will be able to discuss the importance of cultural diversity, thus preparing them to function in multicultural or international settings. Graduates will understand the common evolutionary origins that unify all cultural differences, as well as human biological variation within our shared humanity. Graduates will develop in-depth knowledge of the culture of a particular region of the world.
- **Communication Skills**
Graduates will develop social science writing skills, including writing of a research proposal for a grant agency and a substantial research report. Graduates will develop oral presentation skills, including presenting a formal research report.
- **Information Management/Quantitative Skills**
Graduates will master research methods in one of the subfields of anthropology (cultural anthropology, biological anthropology, archaeology). Graduates will learn to design and conduct an original research project, working in close cooperation with faculty.
- **Valuing/Ethics/Integrity**
Graduates will be able to discuss and articulate the professional ethics and codes of conduct of the discipline.
- **Critical Thinking Skills**
Graduates will develop the ability to apply anthropological concepts in performing critical analysis of broad historical trends and complex social issues. Graduates will be able to value cultural diversity, thus preparing them to function in multicultural or international settings.
- **Application/Internship Skills**
Graduates will gain hands-on experience in the application of anthropological concepts to real life and will be able to apply anthropological theory to real-life experience.

Residency Requirement

Undergraduate majors must complete a minimum of 17 hours of upper-level (3000-5000) Anthropology courses in residence, including:

| | | |
|------------------------------------|--|---|
| ANTHRO 4315 | Anthropology Past, Present, and Future | 3 |
| And at least one of the following: | | 3 |
| ANTHRO 3209 | Forensic Anthropology | |
| ANTHRO 3211 | Linguistic Anthropology | |

| | | |
|-------------|--|---|
| ANTHRO 3212 | Medical Anthropology | |
| ANTHRO 4015 | Data Analytics in the Social Sciences | |
| ANTHRO 4000 | Ethnographic Field Research Methods | |
| ANTHRO 4100 | | |
| ANTHRO 4307 | Community Based Research in Anthropology | |
| ANTHRO 4310 | Laboratory Methods in Archaeology | |
| Total Hours | | 6 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate an appreciation for the diversity of human cultures and the interconnectedness of people around the world
- Demonstrate knowledge of the evolutionary and historical processes that shaped our ancestors and led to the biological, behavioral, and cultural diversity seen in the present
- Demonstrate a command of key concepts, issues, theories, and debates in anthropology
- Demonstrate knowledge of varying types of anthropological data and how they are collected, analyzed, synthesized, and interpreted
- Think critically and analytically about issues of social justice and social inequality
- Apply problem-solving and research skills beneficial to anthropology as well as to a variety of careers in today’s global economy
- Communicate cross-culturally and within multicultural settings
- Demonstrate an appreciation for the role of anthropology in the workplace and the real world

Sample Four Year Plan

| First Year | | | |
|-------------------------------------|-------|--------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 ANTHRO 1005 | 4 |
| ANTHRO 1011 | | 3 ANTHRO 1019 | 3 |
| ENGL 1100 | | 3 Foreign Language 1002 | 5 |
| CORE - Mathematics Proficiency | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| Foreign Language 1001 | | 5 | |
| 15 | | 15 | |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ANTHRO 1000-2999 level course | | 3 ANTHRO 1000-2999 level course | 3 |
| ANTHRO 1000-2999 level course | | 3 CORE - US History and Government | 3 |
| Foreign Language 2101 | | 3 CORE - Information Literacy | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Math and Sciences | 3 |
| EXPLORE - Math and Natural Sciences | | 3 Elective or minor | 3 |
| 15 | | 15 | |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ANTHRO 4000 | | 3 ANTHRO 3000-4999 course | 3 |
| ANTHRO 3000-4999 level course | | 3 CORE - Communication Proficiency | 3 |
| ENGL 3100 | | 3 Elective or minor | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 Elective or minor | 3 |
| EXPLORE - Math and Natural Sciences | | 3 Elective or minor | 3 |
| 15 | | 15 | |

| Fourth Year | | | |
|-------------------------|-------|--|-------|
| Fall | Hours | Spring | Hours |
| ANTHRO 4000 | | 3 ANTHRO 4315 | 3 |
| ANTHRO 3000-4999 course | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | Recommended course list, elective or minor | 1 |
| | 15 | | 16 |
| Total Hours: 121 | | | |

INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Anthropology Minor

All required courses for the minor must be completed with a grade of C- or better. Six hours must be taken at the 3000 level or above. At least three elective credits at any level must be selected from the list of Cultural Anthropology courses, and at least three elective credits must be selected from the list of Archaeology courses below. Other relevant UMSL courses may be included as electives with prior approval of the program coordinator.

| | | |
|-------------------------------|--|---|
| ANTHRO 1005 | Introduction to Human Evolution | 4 |
| Cultural Anthropology Courses | | |
| Choose one of the following: | | 3 |
| ANTHRO 1011 | Introduction to Cultural Anthropology (MOTR ANTH 201) | |
| ANTHRO 1021 | The Body in Culture | |
| ANTHRO 1025/ HIST 1076 | World Cultures and History | |
| ANTHRO 1041 | Sex and Gender Across Cultures | |
| ANTHRO 2104 | Medicine in Culture and History | |
| ANTHRO 2106 | Past, Present, and Future of Pandemics | |
| ANTHRO 2150 | Zombies, Vampires, and Monsters: The Supernatural in Popular Culture | |
| Archeology Courses | | |
| Choose one of the following: | | 3 |
| ANTHRO 1033 | World Archaeology | |
| HIST 1034 | Introduction to Ancient Egypt and Its Civilization | |
| ANTHRO 1037 | The Wonders of Greece: Introduction to Greek History and Culture | |
| ANTHRO 2109 | Archaeological Field School | |
| ANTHRO 3241 | Myths and Monuments | |
| ANTHRO 3246 | Medicine and Disease in the Ancient World | |
| ANTHRO 3290 | Advanced Topics in Archaeology | |

| | | |
|-------------------------------------|--|-----------|
| HIST 3032 | China's Rise: From the Opium Wars to Global Superpower | |
| ANTHRO 4314 | The Archaeology of Death | |
| Electives | | |
| Two ANTHRO courses at 3000 or above | | 6 |
| Total Hours | | 16 |

Applied Behavior Analysis Graduate Certificate

Required Foundation Courses

Students are required to complete the following courses within the first 15 hours of study.

| | | |
|--------------------|--|----------|
| SPEC ED 6641 | Basic Principles and Concepts of Behavior Analysis | 3 |
| SPEC ED 6642 | Behavior Assessment | 3 |
| SPEC ED 6643 | Research Methods in Applied Behavior Analysis | 3 |
| Total Hours | | 9 |

Required Courses

Students are required to complete the following courses.

| | | |
|--------------------|---|-----------|
| SPEC ED 6644 | Behavior Interventions in Applied Behavior Analysis | 3 |
| SPEC ED 6645 | Ethics and Professionalism in Applied Behavior Analysis | 3 |
| SPEC ED 6646 | Verbal Behavior Concepts and Applications | 3 |
| SPEC ED 6647 | Advanced Concepts and Principles in Behavior Analysis | 3 |
| SPEC ED 6648 | Behavior-Based Consultation and Supervision | 3 |
| Total Hours | | 15 |

Required Practicum Courses

Through the course of five semesters, students are required to completed practicum courses in order to accrue the minimal hours of supervised experience required by the BACB to qualify for the BCBA exam.

| | | |
|--------------------|--|-----------|
| SPEC ED 6651 | Practicum I in Applied Behavior Analysis | 2 |
| SPEC ED 6652 | Practicum II in Applied Behavior Analysis | 2 |
| SPEC ED 6653 | Practicum III in Applied Behavior Analysis | 2 |
| SPEC ED 6654 | Practicum IV in Applied Behavior Analysis | 2 |
| SPEC ED 6655 | Practicum V in Applied Behavior Analysis | 2 |
| Total Hours | | 10 |

Applied Behavior Analysis MS

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL Bulletin. Students are considered for admission to the graduate program in Applied Behavioral Analysis only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

In addition to Graduate School admission requirements, the following requirements apply:

- An undergraduate degree with a minimum cumulative GPA of 3.0
- Letter of Intent/Statement of Purpose (1-2 pages)
- One Letter of Reference

Degree Requirements

To earn an M.S. in Applied Behavior Analysis, students must complete at least 23 credit hours of graduate-level course work, 10 credit hours of practicum experience, and at least 6 credit hours of Thesis Research for which students will be required to write and defend a thesis.

Required Foundation Courses

Students are required to complete the following courses within the first 15 credit hours of study.

| | | |
|--------------------|--|----------|
| SPEC ED 6641 | Basic Principles and Concepts of Behavior Analysis | 3 |
| SPEC ED 6642 | Behavior Assessment | 3 |
| SPEC ED 6643 | Research Methods in Applied Behavior Analysis | 3 |
| Total Hours | | 9 |

Required Courses

Students are required to complete the following courses.

| | | |
|--------------------|---|-----------|
| SPEC ED 6644 | Behavior Interventions in Applied Behavior Analysis | 3 |
| SPEC ED 6645 | Ethics and Professionalism in Applied Behavior Analysis | 3 |
| SPEC ED 6646 | Verbal Behavior Concepts and Applications | 3 |
| SPEC ED 6647 | Advanced Concepts and Principles in Behavior Analysis | 3 |
| SPEC ED 6648 | Behavior-Based Consultation and Supervision | 3 |
| Total Hours | | 15 |

Required Practicum Courses

Through the course of five semesters, students are required to complete practicum courses in order to accrue the minimal hours of supervised experience required by the BACB to qualify for the BCBA exam.

| | | |
|--------------|---|---|
| SPEC ED 6651 | Practicum I in Applied Behavior Analysis | 2 |
| SPEC ED 6652 | Practicum II in Applied Behavior Analysis | 2 |

| | | |
|--------------------|--|-----------|
| SPEC ED 6653 | Practicum III in Applied Behavior Analysis | 2 |
| SPEC ED 6654 | Practicum IV in Applied Behavior Analysis | 2 |
| SPEC ED 6655 | Practicum V in Applied Behavior Analysis | 2 |
| Total Hours | | 10 |

Required Research Courses

Students take a minimum of 6 thesis credit hours (no more than 3 per semester) starting in year two of the program.

| | | |
|--------------------|-------------------------------------|----------|
| SPEC ED 6661 | Thesis in Applied Behavior Analysis | 6 |
| Total Hours | | 6 |

Thesis Requirement

Students are required to complete a total of 6 credit hours of thesis. The student will engage in sustained and self-motivated study through the research process, conferring with advisors, and drafting and revising a manuscript. The thesis proposal must be approved by the committee and successfully defended. A committee chair will be identified, who will consult with the student on selecting two other members for the committee.

Students will work with their committee chair to identify a thesis project such as the following but not limited to a literature review, a scholarly tutorial, or an empirical study. The thesis project should be a scholarly work related to behavior analysis.

Students are expected to follow all other general requirements of the Graduate School regarding master's degree and thesis requirements.

Applied Econometrics and Data Analysis Undergraduate Certificate

Those with economics degrees are in high demand in a large number of occupations, whether in business or government; students with advanced econometrics skills who understand how to apply these techniques in real-world settings are in even higher demand. This Certificate in Applied Econometrics and Data Analysis is designed to provide the education needed for employment in analysis positions in business or government. The Certificate is a valuable credential for economics majors with a quantitative focus, (applied) math majors, and selected students from other social sciences.

The Certificate consists of 6 courses met through 3 required courses and 3 electives which must be selected from the list below. At least 4 of these courses must be completed in residency at UMSL. (Note that all of these courses have prerequisites that the student must complete before taking the selected course.)

Required Courses

| | | |
|--------------|--|---|
| ECON 4100 | Introduction to Econometrics | 4 |
| ECON 4110 | Applied Econometrics | 4 |
| ECON 4120 | Time Series Econometrics for Economics and Finance | 4 |
| or ECON 4130 | Business and Economic Forecasting | |

Electives

The remaining 3 electives must come from the following list: 9-10

| | |
|--------------|---|
| ECON 4040 | Booms and Busts in the Economy: Data and Theory |
| ECON 4120 | Time Series Econometrics for Economics and Finance (if course not used above) |
| ECON 4130 | Business and Economic Forecasting (if course not used above) |
| ECON 4160 | Geospatial Analysis in the Social Sciences |
| MATH 4200 | Mathematical Statistics I |
| MATH 4210 | Mathematical Statistics II |
| POL SCI 4040 | Survey Research Practicum in Political Science |
| PSYCH 4365 | Psychological Testing and Assessment |
| SOC 4040 | Survey Research Practicum for Sociology |
| SOC 3221 | Qualitative Methods in Social Research |
| SOC 4312 | Sociology of Wealth and Poverty |

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Use statistical software to estimate, analyze, and interpret economic relationships applying regression analysis techniques to data.
- Develop appropriate econometric models using real-world data to make management or policy recommendations in a variety of professional settings.
- Apply key concepts of estimation and forecasting in a time series context.

Applied Psychology of Child Advocacy Studies BA

General Education Requirements

Majors must satisfy the university and college General Education curricular requirements (p. 30). Selected courses in Psychology and Child Advocacy Studies may be used to meet General Education Social and Behavioral Sciences requirements.

Foreign Language Requirement

Candidates for the B.A. are required to satisfactorily complete 13 credit hours in one foreign language.

Degree Requirements

Core

| | | |
|--------------------------------------|---|---|
| CAST 1000 | Introduction to Child Advocacy Studies | 3 |
| PSYCH 1003 | General Psychology (MOTR PSYC 100) | 3 |
| Choose one of the following courses: | | 3 |
| PSYCH 2268 | Lifespan Developmental Psychology (MOTR PSYC 200) | |

| | | |
|------------------|--|----|
| PSYCH 2270 | Developmental Psychology: Infancy, Childhood and Adolescence | |
| ED PSY 2212 | Child and Adolescent Development | |
| Required Courses | | |
| CAST 2100 | Communication in Child Advocacy | 3 |
| CAST 2275 | The Ethics, Values, and Policy of Child Advocacy | 3 |
| PSYCH 2201 | Psychological Statistics | 4 |
| PSYCH 2219 | Research Methods in Psychological Science | 3 |
| PSYCH 2211 | Introduction to Biological Psychology | 3 |
| PSYCH 2245 | Psychological Disorders | 3 |
| CAST 3295 | Service Learning Projects in Child Advocacy | 2 |
| CAST 3290 | Traumatic Stress in Childhood and Adolescence | 3 |
| CAST 4428 | Foundations of Practice in Child Advocacy | 3 |
| CAST 4398 | Child Maltreatment: A Multidisciplinary Approach | 3 |
| CAST 4498 | Forensic Investigation of Child Abuse | 3 |
| CAST 4598 | Child Abuse Assessment and Intervention | 3 |
| CAST 4698 | Internship in Child Advocacy Studies | 3 |
| CAST 4700 | Field Education Seminar in Child Advocacy Studies | 1 |
| Total Hours | | 49 |

Sample Four Year Plan

| | | | |
|--|-------|--|-------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 | 1 | CAST 2100 | 3 |
| CAST 1000 | 3 | PSYCH 2268, 2270, or ED PSY 2212 | 3 |
| ENGL 1100 | 3 | FGN LANG 1001::Language and Culture I | 5 |
| MATH 1030 | 3 | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| PSYCH 1003 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| CORE - US History and Government | 3 | | |
| | 16 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| CAST 2275 | 3 | CAST 3290 | 3 |
| CAST 3295 | 2 | PSYCH 2219 | 3 |
| PSYCH 2201 | 4 | FGN LANG 2101::Language and Culter III | 3 |
| PSYCH 2245 | 3 | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| FGN LANG 1002::Language and Culture II | 5 | EXPLORE - Humanities and Fine Arts | 3 |
| | 17 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| CAST 3798 | 3 | CAST 4398 | 3 |
| ENGL 3100 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| PSYCH 2211 | 3 | Elective or minor | 9 |
| EXPLORE - Mathematics and Life/ Natural Sciences | 3 | | |

| | | | |
|-------------------|-------|-------------------|-------|
| Elective or minor | 3 | | |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| CAST 4498 | 3 | CAST 4598 | 3 |
| Elective or minor | 12 | CAST 4698 | 3 |
| | | CAST 4700 | 1 |
| | | Elective or minor | 6 |
| | 15 | | 13 |
| Total Hours: 123 | | | |

Artificial Intelligence Graduate Certificate

The graduate certificate in Artificial Intelligence is a four-course (12 credit hour) program. It provides skills and training necessary to start and/or advance in the growing areas of AI, with a range of electives to focus more specifically in one's desired direction of study. All students must take two required courses and two electives.

A minimum of three courses must be taken from UMSL. A maximum of two courses can be used from the 4000-level. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the department chair or email info@arch.umsl.edu.

| | | |
|------------------------------|--|----|
| Required Courses | | |
| CMP SCI 5130 | Advanced Data Structures and Algorithms | 3 |
| CMP SCI 5300 | Artificial Intelligence | 3 |
| Elective Courses | | 6 |
| Choose two of the following: | | |
| CMP SCI 4610 | Database Management Systems | |
| CMP SCI 5151 | Statistical Methods for Data Science | |
| CMP SCI 5320 | Evolutionary Computation | |
| CMP SCI 5340 | Machine Learning | |
| CMP SCI 5342 | Data Mining | |
| CMP SCI 5370 | Biological Data Science | |
| CMP SCI 5390 | Deep Learning | |
| CMP SCI 5420 | Digital Image Processing and Computer Vision | |
| CMP SCI 6320 | Advances in Evolutionary Computation | |
| CMP SCI 6340 | Genetic Programming | |
| Total Hours | | 12 |

Artificial Intelligence Undergraduate Certificate

The undergraduate certificate in Artificial Intelligence is a five-course (15 credit hour) program. It provides skills and training necessary to start or progress in the growing areas of AI, with a range of electives to focus more specifically in one's desired direction of study. A minimum GPA of 2.5 is required for admission.

A minimum of three courses must be taken from UMSL. Courses may be substituted with the permission of the certificate coordinator. For

more information, students can contact the department chair or email info@arch.edu.

Required Courses

| | | |
|--------------|---|---|
| CMP SCI 3130 | Design and Analysis of Algorithms | 3 |
| CMP SCI 4300 | Introduction to Artificial Intelligence | 3 |

Electives

Choose three of the following courses: 9

| | | |
|--------------|--|--|
| CMP SCI 4151 | Introduction to Statistical Methods for Data Science | |
| CMP SCI 4320 | Introduction to Evolutionary Computation | |
| CMP SCI 4340 | Introduction to Machine Learning | |
| CMP SCI 4342 | Introduction to Data Mining | |
| CMP SCI 4370 | Introduction to Biological Data Science | |
| CMP SCI 4390 | Introduction to Deep Learning | |
| CMP SCI 4420 | Introduction to Digital Image Processing and Computer Vision | |
| CMP SCI 4610 | Database Management Systems | |

Total Hours 15

Athletic Coaching Minor

The Athletic Coaching minor is intended for those who would like to work with youth in a variety of sport settings, in either school or non-school settings. The following courses are required:

| | | |
|--------------|---|---|
| HLTH PE 3275 | Psychological Aspects of Physical Education | 3 |
| HLTH PE 3280 | Human Anatomy and Physiology | 4 |
| HLTH PE 3285 | Safety and Emergency Care for Health and Physical Education | 3 |
| PHY ED 3283 | Kinesiology | 3 |
| PHY ED 3287 | Seminar in Exercise Science | 3 |
| HLTH PE 3284 | Physiology of Human Exercise | 3 |
| EDUC 4989 | Internship I | 3 |

Total Hours 22

Auditing Graduate Certificate

The Certificate Program in Auditing provides students with the knowledge and judgment needed to conduct audits of for-profit, not-for-profit, and government entities. Concepts associated with independent audits, systems audits, controls evaluations, internal audits, and operational audits are examined.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs. All 12 credit hours taken as part of this certificate transfer to the MBA degree program.

Required Courses

| | | |
|-------------|-----------------------------|---|
| ACCTNG 4435 | Auditing | 3 |
| ACCTNG 5435 | Graduate Topics in Auditing | 3 |

Electives

Select two of the following courses: 6

| | | |
|-------------------------------|---|--|
| ACCTNG 5402 or ACCTNG 5406 | Professional Accounting Research Research and Professional Writing in Accounting | |
| ACCTNG 5408 | Fraud Examination | |
| ACCTNG 5436 | Systems Auditing | |

Total Hours 12

Autism Studies Graduate Certificate

The mission of the certificate program is:

- To improve current preparation of teachers and related educational practitioners in the greater St. Louis area with dedicated coursework that increases program participants' understanding and skills necessary to providing comprehensive and holistic programming (in areas of academic, social, functional, and life skills) that addresses the unique characteristics of individuals with Autism.
- To provide contemporary, best practices-based preparation of professionals who specialize in the treatment of individuals with autism spectrum disorders (ASD) and/or who work collaboratively with school personnel to recognize and follow the ASD profile that best educates the students
- To gain greater understanding of challenges faced by families of individuals with ASD
- To prepare personnel to educate and support individuals with ASD, which includes autism, Asperger Syndrome, and other pervasive developmental disorders
- To address the complex needs of students with ASD, including those who require intensive and highly individualized programs, to those who require less intensive modifications to succeed in their educational, functional, and life goals
- To increase the current body of scholarly and applied knowledge pertaining to the science and practice in areas of cognitive disability studies.

Required Courses

| A. Special Education Concentration I: 9 hours ¹ | | |
|---|--|---|
| SPEC ED 6415 | Disability Law and Policy | 3 |
| SPEC ED 6437 | Applied Behavior Analysis: Functional Assessment and Interventions | 3 |
| ED PSY 6545 | Consultation in Schools and Related Settings | 3 |
| B. Autism and Developmental Disabilities Concentration II: 9 hours | | |
| SPEC ED 6430 | Characteristics and Education of Individuals with Low-Incidence Disabilities | 3 |
| SPEC ED 6610 | Foundations of Autism Spectrum Disorder: Research to Practice | 3 |

| | | |
|--------------|---|---|
| SPEC ED 6620 | Assessment and Interventions for Children and Youth with Autism Spectrum Disorder | 3 |
|--------------|---|---|

¹ The first three courses in the autism certificate are the same as those in the M.Ed. Special Education Concentration I.

Total Hours: Minimum 18 credit hours

Biochemistry and Biotechnology BS

The mission of the Biochemistry and Biotechnology Program is to provide students with a solid foundation in both chemistry and biology, as well as specialized training in the rapidly growing fields of biochemistry and biotechnology. Faculty members in this program are engaged in teaching and research in a broad range of areas, including genetics and molecular biology, microbiology and immunology, and protein biochemistry and biophysics. Students have the opportunity through coursework, laboratories, seminars, and research experience to develop the knowledge and skills necessary to enter the workforce or to continue with further graduate education.

Degree Requirements

General Education Requirements

Students must satisfy the university and college general education requirements. Some math or science courses required for the major may be used to meet the science and mathematics requirement of the university. There is no foreign language requirement for the degree.

All Biochemistry & Biotechnology majors are required to take a capstone seminar (either CHEM 4797 or BIOL 4797) during the semester in which they plan to graduate (the winter semester for students graduating in the summer). Students may not receive credit for both CHEM 4797 and BIOL 4797.

Satisfactory/Unsatisfactory Option

Up to 18 credit hours may be taken on a satisfactory /unsatisfactory (s/u). Excluded from this option are required courses in biology, chemistry, physics, and mathematics.

Non-major Biology or Chemistry courses

Courses in Biology with a number less than 1800 and courses in Chemistry with a number less than 1100 do not count toward the credit hours required for a major in biochemistry and biotechnology.

Research for Credit

A maximum of 3 credit hours from any combination of BIOL 4905 and CHEM 3905 may be applied toward the Biochemistry & Biotechnology program. This provides an opportunity to gain research experience under the supervision of a faculty member. The project will normally include a review of the literature, laboratory experience and a final research report.

Transfer of Credit from Saint Louis Community Colleges

Students transferring BIO 219 and BIO 220 from Saint Louis Community Colleges will not have to complete BIOL 4614. However, they will have

to take an additional 3 credit hours of Biochemistry and Biotechnology Elective coursework.

Biology Core Courses

| | | |
|-----------|--|---|
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 2012 | Genetics | 3 |
| BIOL 2013 | Genetics Laboratory | 2 |
| BIOL 2482 | Microbiology | 3 |
| BIOL 2483 | Microbiology Laboratory | 2 |
| BIOL 3622 | Cell Biology | 3 |

Chemistry Core Courses

| | | |
|-----------|---|---|
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2223 | Quantitative Analysis in Chemistry | 4 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| CHEM 3302 | Physical Chemistry for The Life Sciences | 3 |

Math and Physics Core Courses

| | | |
|--------------|----------------------------------|---|
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1035 | Trigonometry | 2 |
| MATH 1100 | Basic Calculus | 3 |
| or MATH 1800 | Analytic Geometry and Calculus I | |
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1012 | Basic Physics II | 3 |

Biochemistry and Biotechnology Core Courses

| | | |
|--------------|---|---|
| BIOL 4602 | Molecular Biology (Courses not taken to fulfill the requirement, may be used as an elective) | 3 |
| or BIOL 4608 | Synthetic Biology | |
| or BIOL 4632 | Nucleic Acid Structure and Function | |
| or BIOL 4642 | Plant Molecular Biology and Biotechnology | |
| BIOL 4614 | Biotechnology Laboratory I | 4 |
| CHEM 4712 | Biochemistry | 3 |
| CHEM 4733 | Biochemistry Laboratory | 2 |
| CHEM 4722 | Advanced Biochemistry | 3 |
| BIOL 4797 | Biochemistry and Biotechnology Seminar (Students may not receive credit for both BIOL 4797 and CHEM 4797) | 1 |
| or CHEM 4797 | Biochemistry and Biotechnology Seminar | |

Biochemistry and Biotechnology Elective Courses

| | | |
|------------------------------|---|---|
| Select two of the following: | | 6 |
| BIOL 3699 | Undergraduate Internship in Biotechnology | |
| BIOL 4442 | Developmental Biology | |
| BIOL 4550 | Bacterial Pathogenesis | |
| BIOL 4602 | Molecular Biology | |
| BIOL 4608 | Synthetic Biology | |
| BIOL 4615 | Biotechnology Laboratory II | |

| | |
|--------------------|--|
| BIOL 4622 | Cellular Basis of Disease |
| BIOL 4632 | Nucleic Acid Structure and Function |
| BIOL 4642 | Plant Molecular Biology and Biotechnology |
| BIOL 4652 | Virology |
| BIOL 4842 | Immunobiology |
| BIOL 4905 | Research (must be supervised by Biochemistry and Biotechnology faculty) |
| BIOL 4920 | Selected Topics in Biology (when relevant) |
| CHEM 3643 | Advanced Organic Chemistry Laboratory |
| CHEM 3905 | Chemical Research (must be supervised by Biochemistry and Biotechnology faculty) |
| CHEM 4772 | Physical Biochemistry |
| CHEM 4774 | Introduction to Bioinformatics |
| Total Hours | 79 |

Electives

Recommendations include basic statistics (MATH 1320), computer science, public speaking (COMM 1040), foreign language, ethics, and undergraduate research.

Minor in Biology

Students who complete the B.S. degree in Biochemistry and Biotechnology may also obtain a minor in biology by completing BIOL 1821, Introductory Biology : Organisms and the Environment. The minor must be approved by the chair of the Department of Biology. At least 9 hours of the biology course credits must be taken in residence at UMSL. Candidates must have a cumulative grade point average of 2.0 or better in the minor, and none of the courses may be taken on a satisfactory/unsatisfactory (S/U) basis.

Minor in Chemistry

Students who complete the B.S. degree in Biochemistry and Biotechnology will also fulfill the course requirements for a minor in Chemistry. A GPA of at least 2.0 is required for the courses presented for the minor. At least three courses toward the Chemistry minor must be completed at UMSL.

Program Learning Outcomes

Students often think of the physical and life sciences as areas in which one masters a collection of "scientific facts". However, an education in Biochemistry & Biotechnology involves much more than memorizing facts. Students in this program will develop a well-rounded set of competencies in several critical areas. These include:

- **Discipline-Specific Knowledge.** Graduates will demonstrate a clear understanding of the overriding principles and theorems within and between the primary content areas of chemistry, biology, and biochemistry, including the
 - Structure and function of the basic biological units of living organisms and their role in life and disease.
 - Information flow, exchange, and storage from parent to offspring or from parent cells to progeny cells.

- Organic reactions and physical chemical principles underlying metabolic reactions.
- Molecular mechanisms commonly used to regulate metabolic and cellular pathways.

- **Laboratory Skills.** Scientists not only learn the results of others, they work in the lab to generate new knowledge. Graduates will develop basic skills associated with performing laboratory experiments in chemistry, biology, and biochemistry following a broad introduction of commonly used equipment and procedures.
- **Critical thinking Skills.** Graduates will be able to formulate meaningful hypotheses and evaluate data critically, including an appreciation of the potential sources of error associated with laboratory measurements and an ability to troubleshoot technical issues.
- **Problem Solving Skills.** Graduates will be able to define and solve scientific problems. In part, this expands on laboratory skills, as students learn how to interpret and evaluate their data.
- **Translational Skills.** Graduates will be able to take general principles from various areas of chemistry, biochemistry, and biology and apply them towards solutions for novel and emerging biotechnology problems.
- **Communication Skills.** Scientists not only must be able to solve problems, they must also be able to communicate those solutions to others. Graduates of this program can present data in a clear and accurate manner. Graduates will be able to write scientific reports and make effective oral presentations of their results and ideas.
- **Scientific Literacy.** Scientists must be able to build on the previous work of others and to put their new results into the larger context of the field. Graduates will be able to find and retrieve information within the vast scientific literature in chemistry, biology, and biochemistry. Graduates will have the background knowledge necessary to read the literature and scientific information presented to the public with good comprehension and be able to critically evaluate reliability, accuracy, authority, and point of view or bias.
- **Professional Ethics.** Graduates will follow standard scientific practices, including honestly and objectively evaluating and reporting data and acknowledging the ideas and published work of others. In doing so, graduates will demonstrate an understanding and respect for the accepted standards of conduct associated with the profession.

Sample Four Year Plan

| First Year | | | |
|----------------------------------|-------|--------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 | | 1 CHEM 1111 | 5 |
| ENGL 1100 | | 3 COMM 1040 | 3 |
| MATH 1030 | | 3 CORE - Communication Proficiency | 3 |
| MATH 1035 | | 2 EXPLORE - Humanities and Fine Arts | 3 |
| CORE - US History and Government | | 3 EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | | 3 | |
| | 15 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| BIOL 1831 | | 5 BIOL 2012 | 3 |
| CHEM 1121 | | 5 BIOL 2013 | 2 |
| MATH 1100 | | 3 CHEM 2612 | 3 |
| Cultural Diversity Requirement | | 3 EXPLORE - Social Sciences | 3 |

| | | | |
|------------------------------------|--------------|--------------------------|--------------|
| EXPLORE - Humanities and Fine Arts | | 3 | |
| 16 | | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| BIOL 3622 | 3 | BIOL 2482 | 3 |
| BIOL 4614 | 4 | BIOL 2483 | 2 |
| ENGL 3160 | 3 | BIOL 4602 | 3 |
| CHEM 2622 | 3 | CHEM 2223 | 3 |
| PHYSICS 1011 | 3 | PHYSICS 1012 | 3 |
| PHYSICS 1011L | 1 | PHYSICS 1012L | 1 |
| 17 | | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| CHEM 4712 | 3 | CHEM 3302 | 3 |
| CHEM 2633 | 2 | CHEM 4722 | 3 |
| CHEM 4733 | 2 | CHEM 4797 or BIOL 4797 | 1 |
| Biochem/Biotech Elective | 3 | Biochem/Biotech Elective | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | Elective or minor | 3 |
| Elective or minor | 3 | | |
| 16 | | | 13 |
| Total Hours: 123 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change

Biochemistry and Biotechnology BS/MS Dual Degree Program

The BS/MS ("2+3") BCBT program is an accelerated program that allows students of appropriate academic ability and maturity to complete both a B.S. and a M.S. in Biochemistry and Biotechnology in five years of full time study. The program allows students to apply 12 of the 30 M.S. credit hours towards the B.S. (per the approval of the College of Arts and Sciences), reducing the overall required hours for the two. Students will pay graduate credit hour tuition for all courses applied to the graduate degree. All other requirements for the B.S. and M.S. degrees remain in effect.

Admission Requirements

Students interested in this program must go through a two-step admission process. First, applicants for Provisional Status must have completed all courses in the biology, chemistry, math and physics cores of the B.S. BCBT program. CHEM 4712 Biochemistry must be in progress or completed prior to applying for Provisional Graduate status. Applicants should have completed all of the general education requirements. Applicants must also have a minimum G.P.A. of 3.0 (both overall and in science courses) and must submit at least two letters of recommendation (one instructor and one academic advisor is recommended).

The second step of the admission process is the transition from Provisional status to formal graduate status. Admission requirements for formal graduate status are the same as for the traditional MS program.

Awarding of Degrees

Both degrees (the B.S. and M.S.) will be awarded when all requirements for the entire program have been completed. In other words, the B.S. and M.S. degrees will be simultaneously awarded at the completion of study.

Students who officially withdraw from the BS/MS Dual BCBT Degree Program and who have successfully completed all of the requirements for the B.S. degree will be awarded the B.S. degree.

Biochemistry and Biotechnology MS

The Biochemistry and Biotechnology Program offers three types of Master of Science degrees.

Non-Thesis

One option is a 30-credit-hour non-thesis option suitable for those with laboratory research experience or for others, such as educators, who do not require research experience.

Thesis

The second option is 30 credit hours, but it includes laboratory-based research under the supervision of one of the program faculty members, leading to a written thesis. All students admitted to the graduate program are considered to be in the non-thesis program. They may transfer into the thesis program after they have been accepted as a thesis student by one of the faculty.

Professional Science

The third option is a 32-credit-hour Professional Science emphasis area that includes a strong business component for students who are interested in learning more about the business aspects of companies. This track may not be appropriate for students who are interested in pursuing a PhD or working primarily as laboratory scientists. For more information go to the Professional Science program page. (p. 407)

Admission Requirements

Applicants to the M.S. program must submit a completed application and personal data forms, and transcripts of all previous postsecondary academic work. Submission of Graduate Record Examination scores and letters of recommendation, although not required, will be considered. Admission as a regular graduate student requires graduation from an accredited college with a minimum grade point overall and in biology and chemistry courses of 3.0 (where A=4.0). Students will generally be expected to have completed a major in biology, chemistry, biochemistry or biotechnology. In addition to the Graduate School admission requirements, applicants should have completed undergraduate courses in biochemistry, organic chemistry, cell biology, and genetics. Applicants may be asked to make up any deficiencies in these areas as a condition of enrollment.

All international applicants, except those from countries where English is the primary language, must show English proficiency by submitting according to UMSL's International Student and Scholar Services requirements.

Degree Requirements

Both the thesis and non-thesis options require a total of 30 graduate credit hours, of which at least half must be at the 5000-level or above. A maximum of 12 credit hours of Graduate Research (BIOL 6905 or CHEM 6905) may be applied toward the thesis option and a maximum of 5

credit hours toward the non-thesis option. Students must have a 3.0 GPA in non-research courses.

Required Courses

| | | |
|--------------|--|---|
| CHEM 5722 | Advanced Graduate Biochemistry | 3 |
| CHEM 5774 | Bioinformatics | 3 |
| or BIOL 5436 | Advanced Applied Bioinformatics | |
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6602 | Advanced Molecular Biology | 3 |
| or BIOL 6608 | Advanced Synthetic Biology | |
| or BIOL 6632 | Advanced Nucleic Acid Structure and Function | |
| or BIOL 6642 | Advanced Plant Biology and Biotechnology | |
| BIOL 6889 | Graduate Seminar | 2 |

Elective Courses 15

| | | |
|-----------|---|--|
| CHEM 4733 | Biochemistry Laboratory | |
| CHEM 5212 | Advanced Instrumental Analysis | |
| CHEM 5294 | Special Topics in Analytical Chemistry | |
| CHEM 5302 | Foundations of Physical Chemistry | |
| CHEM 5612 | Advanced Organic Chemistry II - Reactions And Synthesis | |
| CHEM 5652 | Spectroscopic Identification of Organic Compounds | |
| CHEM 5772 | Advanced Physical Biochemistry | |
| CHEM 5694 | Special Topics in Organic Chemistry (when relevant) | |
| CHEM 5774 | Bioinformatics | |
| CHEM 5794 | Special Topics in Biochemistry | |
| CHEM 6787 | Problem Seminar in Biochemistry ¹ | |
| CHEM 6905 | Graduate Research in Chemistry | |
| BIOL 4122 | Biostatistics | |
| BIOL 4842 | Immunobiology | |
| BIOL 5012 | Advanced Genetics | |
| BIOL 5069 | Topics in Cellular and Molecular Biology ¹ | |
| BIOL 5099 | Biology Colloquium ¹ | |
| BIOL 5436 | Advanced Applied Bioinformatics | |
| BIOL 6608 | Advanced Synthetic Biology | |
| BIOL 6442 | Advanced Developmental Biology | |
| BIOL 6550 | Advanced Bacterial Pathogenesis | |
| BIOL 6602 | Advanced Molecular Biology | |
| BIOL 6622 | Advanced Cellular Basis of Disease | |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | |
| BIOL 6652 | Advanced Virology | |
| BIOL 6699 | Graduate Internship in Biotechnology | |
| BIOL 6889 | Graduate Seminar (when relevant) | |
| BIOL 6905 | Graduate Research in Biology | |

| | |
|-----------|--|
| BIOL 6920 | Advanced Topics in Biology (when relevant) |
|-----------|--|

Total Hours 30

¹ Maximum of 3 credit hours between BIOL 5069, BIOL 5099, and CHEM 6787.

Biochemistry and Biotechnology MS, Professional Emphasis

This track requires a total of 32 graduate credit hours, of which at least half must be at the 5000-level or above. Students take 21 credit hours of science courses (Biology and Chemistry) and 9 hours in business courses. In addition, each student is required to take 2 credit hours of either an on-campus practicum course or an off-campus internship.

Required Courses in Biology and Chemistry

| | | |
|--------------|--------------------------------------|---|
| CHEM 5722 | Advanced Graduate Biochemistry | 3 |
| CHEM 5774 | Bioinformatics | 3 |
| or BIOL 5436 | Advanced Applied Bioinformatics | |
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6602 | Advanced Molecular Biology | 3 |
| or BIOL 6608 | Advanced Synthetic Biology | |
| BIOL 6889 | Graduate Seminar | 2 |

Required Internship or Practicum 2

Choose one of the following:

CHEM/BIOL 5798

CHEM/BIOL 5799

Professional Science Business Electives 9

| | |
|-------------|--|
| MGMT 3623 | Industrial and Organizational Psychology |
| BUS AD 5000 | Economics for Managers |
| BUS AD 5100 | Managerial Communication |
| MGMT 5600 | Managing and Leading in Organizations |
| MKTG 5700 | Integrated Marketing Strategies |
| BUS AD 5900 | Law, Ethics and Business |

Elective Courses in Biology and Chemistry 6

| | |
|--------------|---|
| CHEM 4733 | Biochemistry Laboratory |
| CHEM 5302 | Foundations of Physical Chemistry |
| CHEM 5694 | Special Topics in Organic Chemistry |
| CHEM 5772 | Advanced Physical Biochemistry |
| CHEM 5794 | Special Topics in Biochemistry |
| CHEM 6787 | Problem Seminar in Biochemistry ¹ |
| CHEM 6905 | Graduate Research in Chemistry ² |
| or BIOL 6905 | Graduate Research in Biology |
| BIOL 4842 | Immunobiology |
| BIOL 5012 | Advanced Genetics |
| BIOL 5069 | Topics in Cellular and Molecular Biology ¹ |
| BIOL 5099 | Biology Colloquium ¹ |
| BIOL 6602 | Advanced Molecular Biology |
| BIOL 6608 | Advanced Synthetic Biology |

| | | |
|--------------------|--|-----------|
| BIOL 6622 | Advanced Cellular Basis of Disease | |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | |
| BIOL 6652 | Advanced Virology | |
| BIOL 6920 | Advanced Topics in Biology | |
| Total Hours | | 32 |

¹ Maximum of 2 credit hours between BIOL 5069, BIOL 5099 and CHEM 6787.

² Can be taken for up to 2 credit hours in either CHEM 6905 or BIOL 6905. Students must have a 3.0 GPA in non-research courses.

Biochemistry and Biotechnology MS Accelerated Master's Degree

The Biochemistry and Biotechnology (BCBT) Program offers an Accelerated MS degree program that allows students to simultaneously earn their BS and their MS in BCBT. Students accepted to the Accelerated MS degree program will be permitted to count up to 9 credits toward both degrees.

Students are encouraged to work closely with their BCBT undergraduate advisor, the Accelerated MS advisor, and the BCBT Program Director to ensure that courses are timed appropriately to maximize their benefits. It is strongly recommended that students meet with the Accelerated MS advisor as soon as possible, ideally before their junior year.

Students in the Accelerated MS program will complete the MS through the non-thesis coursework path. The thesis MS and Professional Science MS programs cannot be combined with this program.

Eligibility

Students need to have fulfilled the core curriculum requirements for the Bachelor of Science degree prior to applying for the Accelerated MS program.

Biology Core Courses

| | | |
|-----------|--|---|
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 2012 | Genetics | 3 |
| BIOL 2013 | Genetics Laboratory | 2 |
| BIOL 2482 | Microbiology | 3 |
| BIOL 2483 | Microbiology Laboratory | 2 |
| BIOL 3622 | Cell Biology | 3 |

Chemistry Core Course

| | | |
|-----------|---|---|
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2223 | Quantitative Analysis in Chemistry | 4 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| CHEM 3302 | Physical Chemistry for The Life Sciences | 3 |

Math and Physics Core Courses

| | | |
|--------------|----------------------------------|---|
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1035 | Trigonometry | 2 |
| MATH 1100 | Basic Calculus | 3 |
| or MATH 1800 | Analytic Geometry and Calculus I | |
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1012 | Basic Physics II | 3 |

Admission Requirements

Provisional Admission

Applicants are considered for provisional admission if they meet the following criteria.

- Earned 60 hours as an undergraduate
- Have a minimum GPA of 3.0 with a B or better in all core courses listed above
- Have approval from both their BCBT undergraduate advisor and BCBT Program Director

It is recommended to apply for provisional status as a junior, preferably in the first semester of junior year.

Graduate course options for Provisional students are listed below. Courses completed by undergraduate students who have been provisionally admitted to the Accelerated MS program can count towards both their BS and MS degrees. Courses in this phase will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. Courses must be approved before the semester starts. Any 4000-level course taken before admission to the Accelerated MS program will apply to the undergraduate requirements only.

Seniors who have earned more than 105 credit hours cannot be considered for the Accelerated MS degree program.

Graduate Admission

Applicants are considered for graduate admission with the following criteria.

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Submitted at least one positive recommendation letter from an UMSL BCBT faculty member
- Submitted to the BCBT Program Director a statement of purpose explaining why an advanced degree in BCBT is of interest and why the applicant merits consideration
- Have met with the BCBT Accelerated MS advisor

Based on the above information, the BCBT undergraduate advisor, Accelerated MS advisor and Program Director will determine whether the student can apply for graduate admission. The final decision concerning graduate admission is made by the BCBT Program Director and the Graduate School. Students admitted to the graduate program must take graduate courses until the completion of the MS degree.

Completing the BS and MS Degrees

To finish the BCBT BS degree, a student must also complete the following requirements.

Biochemistry and Biotechnology Core Courses

Choose one of the following: 3

| | | |
|----------------|--|---|
| BIOL 4602/6602 | Molecular Biology (upper level Molecular Biology or equivalent course required for MS) | 3 |
| BIOL 4608/6608 | Synthetic Biology | |
| BIOL 4632/6632 | Nucleic Acid Structure and Function | |
| BIOL 4642/6642 | Plant Molecular Biology and Biotechnology | |
| BIOL 4614 | Biotechnology Laboratory I | 4 |
| CHEM 4712 | Biochemistry | 3 |
| CHEM 4733 | Biochemistry Laboratory | 2 |
| CHEM 4722 | Advanced Biochemistry (Chem 5722 required for MS) | 3 |
| or CHEM 5722 | Advanced Graduate Biochemistry | |
| BIOL 4797 | Biochemistry and Biotechnology Seminar | 1 |
| or CHEM 4797 | Biochemistry and Biotechnology Seminar | |

Biochemistry and Biotechnology Elective Courses

Choose two of the following courses: 6

| | | |
|--------------|---|--|
| CHEM 4772 | Physical Biochemistry | |
| or CHEM 5772 | Advanced Physical Biochemistry | |
| CHEM 4774 | Introduction to Bioinformatics | |
| or CHEM 5774 | Bioinformatics | |
| CHEM 5302 | Foundations of Physical Chemistry | |
| CHEM 5602 | Advanced Organic Chemistry I - Physical Organic | |
| CHEM 5694 | Special Topics in Organic Chemistry | |
| CHEM 5794 | Special Topics in Biochemistry | |
| CHEM 6787 | Problem Seminar in Biochemistry | |
| BIOL 4442 | Developmental Biology | |
| or BIOL 6442 | Advanced Developmental Biology | |
| BIOL 4550 | Bacterial Pathogenesis | |
| or BIOL 6550 | Advanced Bacterial Pathogenesis | |
| BIOL 4602 | Molecular Biology | |
| or BIOL 6602 | Advanced Molecular Biology | |
| BIOL 4608 | Synthetic Biology | |
| or BIOL 6608 | Advanced Synthetic Biology | |
| BIOL 4615 | Biotechnology Laboratory II (BIOL 6615 required for MS) | |
| or BIOL 6615 | Advanced Biotechnology Laboratory II | |
| BIOL 4622 | Cellular Basis of Disease | |
| or BIOL 6622 | Advanced Cellular Basis of Disease | |
| BIOL 4632 | Nucleic Acid Structure and Function | |
| or BIOL 6632 | Advanced Nucleic Acid Structure and Function | |
| BIOL 4642 | Plant Molecular Biology and Biotechnology | |
| or BIOL 6642 | Advanced Plant Biology and Biotechnology | |
| BIOL 4842 | Immunobiology | |
| BIOL 4905 | Research ((must be supervised by BCBT faculty)) | |
| BIOL 4920 | Selected Topics in Biology (when relevant) | |

| | | |
|--------------|--|--|
| or BIOL 6920 | Advanced Topics in Biology | |
| CHEM 3905 | Chemical Research (must be supervised by BCBT faculty) | |
| CHEM 3643 | Advanced Organic Chemistry Laboratory | |
| BIOL 5012 | Advanced Genetics | |

Total Hours 22**Courses for both BS and MS Credit**

The following Biology or Chemistry courses can count toward both the BCBT BS and BCBT MS degree, up to a maximum of 9 credit hours.

| | | |
|-----------|--|---|
| CHEM 4733 | Biochemistry Laboratory | 2 |
| CHEM 5302 | Foundations of Physical Chemistry | 3 |
| CHEM 5602 | Advanced Organic Chemistry I - Physical Organic | 3 |
| CHEM 5694 | Special Topics in Organic Chemistry | 1 |
| CHEM 5722 | Advanced Graduate Biochemistry | 3 |
| CHEM 5772 | Advanced Physical Biochemistry (CHEM 5722 required for MS) | 3 |
| CHEM 5774 | Bioinformatics ¹ | 3 |
| CHEM 5794 | Special Topics in Biochemistry | 1 |
| CHEM 6787 | Problem Seminar in Biochemistry | 1 |
| BIOL 4842 | Immunobiology | 3 |
| BIOL 5012 | Advanced Genetics | 3 |
| BIOL 5436 | Advanced Applied Bioinformatics ¹ | 3 |
| BIOL 6442 | Advanced Developmental Biology | 3 |
| BIOL 6550 | Advanced Bacterial Pathogenesis | 3 |
| BIOL 6602 | Advanced Molecular Biology | 3 |
| BIOL 6608 | Advanced Synthetic Biology | 3 |
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6622 | Advanced Cellular Basis of Disease | 3 |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | 3 |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | 3 |
| BIOL 6652 | Advanced Virology | 3 |
| BIOL 6920 | Advanced Topics in Biology | 1 |

¹ One Bioinformatics course is required for the MS.

Other courses may be allowed upon approval of the Graduate Program Director.

Awarding of Degrees

The undergraduate degree will be awarded when the student meets the requirements for the BS degree, including at least 120 total credit hours, completion of the BCBT core, electives, and laboratory requirements, and completion of the associated requirements. The student must work with the undergraduate advisor and/or the Accelerated MS advisor to apply to graduate. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program to begin the following semester.

The graduate degree will be awarded when the student meets the requirements for the MS degree, including at least 30 credit hours of coursework at the graduate level. The student must work with the Accelerated MS advisor and Program Director to apply to graduate.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Biochemistry Graduate Certificate

The graduate Certificate in Biochemistry is 12-credit-hour program. It provides skills and training necessary to advance in the area of biochemistry, which deals with the structure, composition, and chemical reactions of substances in living systems. Biochemistry includes bioorganic, bioinorganic and biophysical chemistry. The Certificate requires three biochemistry lecture courses (each three credits) and three credits of elective courses. All students must take these three required courses and three credits of elective course, subject to the Graduate School regulations.

A minimum of three of the courses must be taken at UMSL. Research credits must be taken at UMSL. Courses may be substituted with the permission of the Certificate coordinator. For more information, students can contact the Department of Chemistry and Biochemistry.

Certificate applicants must meet the general University of Missouri-St. Louis Graduate School admissions requirements to be admitted to the Certificate program. Students admitted to the Chemistry M.S. program are automatically eligible to pursue the Certificate; however, they must apply separately to the Certificate program. Students must maintain a minimum GPA of 3.0 to remain in the Certificate program. The certificate is awarded after completion of the 12 credit hours of courses listed below. Students must apply to be awarded the Certificate. Courses taken while enrolled as an undergraduate may not be repeated nor will they count towards the Certificate.

This 12-credit-hour certificate program also counts toward the 30-credit-hour Master of Science in Chemistry degree program requirements. Students may choose to combine this certificate with other courses and/or certificates to obtain the Master of Science in Chemistry degree.

Required Courses

| | | |
|-----------|--------------------------------|---|
| CHEM 5722 | Advanced Graduate Biochemistry | 3 |
| CHEM 5772 | Advanced Physical Biochemistry | 3 |
| CHEM 5774 | Bioinformatics | 3 |

Elective Courses

Choose a total of 3 credit hours from the following:

| | |
|-----------|---|
| CHEM 5794 | Special Topics in Biochemistry |
| CHEM 4733 | Biochemistry Laboratory |
| CHEM 6787 | Problem Seminar in Biochemistry |
| CHEM 6905 | Graduate Research in Chemistry ¹ |

¹ If CHEM 6905 is chosen, the research project must be in biochemistry.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Demonstrate an in-depth knowledge in protein, nucleic acid and membrane biochemistry, as well as biophysical chemistry or computational biology.
- Take responsibility for the success of projects associated with biochemistry.

Bioethics Graduate Certificate

The Graduate Certificate in Bioethics blends the missions and values of the medical field and social work for equitable service provision, knowledgeable development of ethical policies and just professional decision making at the institutional, local, or state level. This program provides an interdisciplinary exploration of bioethical issues that arise in health care, biological sciences and emerging technologies. It is most applicable to students with interests in nursing, social work, law, public policy, public health, philosophy, and theology.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admission requirements.

Certificate Requirements

Core

| | | |
|--------------|-----------------------------|---|
| PHIL 4435 | Classical Ethical Theory | 3 |
| or PHIL 4438 | Recent Ethical Theory | |
| PHIL 5558 | Current Issues in Bioethics | 3 |

Electives

Choose two of the following:

| | |
|-------------|--|
| SOC WK 6443 | Health Care Policy (required for MSW students) |
| NURSE 4900 | Ethics and Values in Population Health |
| PHIL 5530 | Seminar in Social and Political Philosophy |
| SOC WK 6630 | Diagnosis and Related Pharmacology for Social Work Practice |
| SOC WK 4755 | Poverty, Human Rights, and Social Justice |
| SOC WK 5635 | Social Work Practice with LGBT Populations: Deconstructing the Alphabet Soup |
| SOC WK 6645 | Social Work in Healthcare Settings |

Total Hours

No more than 6 total credits can be earned through courses at the 4000 level.

Additional elective courses can be included with the approval of the Bioethics program coordinator.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Identify and deconstruct bioethical problems in health care, systems, policies, and laws

- Apply ethical principles, norms, and theories in ethically complex situations to facilitate open and informed discussion among multiple stakeholders
- Apply ethical theories and methods to real-world bioethical dilemmas
- Describe the essential theories and methods that underpin the ethics of public health, clinical care, science, and research
- Identify and describe basic clinical concepts and processes in nursing and social work as well as connect them to present and future bio-ethical dilemmas

Biology BA

The B.A. degree in biology is designed to prepare students for basic technical positions and graduate studies in the life sciences. Candidates for the degree have the same core courses and general education requirements as those seeking the Bachelor of Science degree, but with less emphasis on science electives and more emphasis on liberal arts.

General Education Requirements

Students must satisfy the university and college general education requirements (p. 30). Some Biology courses may be used to meet the science and mathematics requirement of the university.

Candidates for the B.A. degree must fulfill the foreign language requirement of the College of Arts and Sciences. There is no foreign language requirement for the B.S. degree.

Satisfactory/Unsatisfactory Option

Up to 18 credit hours may be taken on a satisfactory/ unsatisfactory (s/u) basis. Excluded from this option are required courses in biology, chemistry, physics, and mathematics.

Non-major Biology Courses

The following 1000 level biology courses do not count toward the biology credit hours required for a major in biology. Moreover, if biology majors take these courses, they are treated as biology courses when computing the 70 credit hours outside of biology needed to be included in the 120 total credit hours required for graduation.

| | | |
|-----------|--|---|
| BIOL 1012 | General Biology: The Science of Life (MOTR BIOL 100) | 3 |
| BIOL 1013 | General Biology Laboratory: The Science of Life | 1 |
| BIOL 1102 | Human Biology (MOTR LIFS 150) | 3 |
| BIOL 1131 | Human Physiology and Anatomy I | 4 |
| BIOL 1141 | Human Physiology and Anatomy II | 4 |
| BIOL 1110 | Nutrition in Health | 3 |
| BIOL 1150 | Concepts in Health and Wellness | 3 |
| BIOL 1162 | General Microbiology | 3 |
| BIOL 1202 | Environmental Biology | 3 |

Degree Requirements

The B.A. degree provides maximum flexibility for biology majors to pursue an undergraduate liberal arts course of study that can lead to professional careers in the life sciences. Candidates must have a cumulative grade point average of 2.0 or better in biology courses. Candidates must also earn a minimum grade of C- in all core courses.

A minimum of 18 hours at or above the 2000 level, including one laboratory and one 4000 level elective, must be taken in residence in the UMSL Department of Biology in order to receive a B.A. degree from the College of Arts and Sciences with a major in biology.

Lecture and Seminar Course Requirements

The following biology courses or their equivalents are required:

| Core | | |
|------------------------------|--|--------------|
| BIOL 1800 | Introduction to the Biology Major | 1 |
| BIOL 1821 | Introductory Biology: Organisms and the Environment (MOTR BIOL 150LEC) | 5 |
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 2012 | Genetics | 3 |
| BIOL 3302 | Evolution | 3 |
| BIOL 3622 | Cell Biology | 3 |
| Capstone | | 2-3 |
| Select one of the following: | | |
| BIOL 4889 | Senior Seminar | |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | |
| Total Hours | | 22-23 |

Elective Courses

Four additional biology lecture courses at the 2000 level or higher are required. They may be selected from any of the lecture or lecture-laboratory courses offered. Selection of these courses should reflect the career interest of the student. Biochemistry CHEM 4712 can also be used toward satisfying this requirement.

At least two of these courses must be at the 4000 level or higher with at least one taken in residence from the UMSL Department of Biology. No more than one of these higher-level courses can be used to fulfill other requirements (e.g. statistics requirements or biochemistry option).

Laboratory Course Requirements

Three biology laboratory courses at the 2000 level or higher are required. They may be taken from any of the lecture-laboratory or laboratory courses offered. Two credit hours of BIOL 3699, BIOL 4299, BIOL 4905, or BIOL 4915 (no combination of these courses allowed) can be used to fulfill one laboratory requirement. Students may take CHEM 4733 to satisfy one of these laboratory course requirements, but students may not use both BIOL 4713 and CHEM 4733 to fulfill this requirement.

Communication Skills

Courses in foreign languages and in writing are required for development of the basic communication skills needed to transmit scientific information. The following satisfy this requirement:

| Foreign Language | | |
|---|--|---|
| The foreign language requirement of the College of Arts & Sciences fulfills the departmental requirement. | | 3 |
| Writing | | |
| ENGL 3160 | Writing in the Sciences (strongly preferred) | 3 |

| | |
|--------------------|----------------------|
| or ENGL 3100 | Junior-Level Writing |
| Total Hours | 6 |

Associated Science Area

The following courses or their equivalents must be successfully completed in science areas related to biology:

| | | |
|---|--|--------------|
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1011L | Basic Physics I Laboratory | 1 |
| PHYSICS 1012 | Basic Physics II | 3 |
| PHYSICS 1012L | Basic Physics II Laboratory | 1 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2612 | Organic Chemistry I | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 | Basic Calculus | 3-5 |
| or MATH 1800 | Analytic Geometry and Calculus I | |
| Select one of the following advanced Chemistry courses: | | 2-3 |
| CHEM 2223 | Quantitative Analysis in Chemistry | |
| CHEM 2622 | Organic Chemistry II | |
| CHEM 2633 | Organic Chemistry Laboratory | |
| BIOL 4732 | Principles of Biochemistry | |
| Select one of the following statistics options: | | 3-4 |
| BIOL 4122 | Biostatistics | |
| MATH 1320 | Introduction to Probability and Statistics | |
| Total Hours | | 32-36 |

Research Opportunity

Students in the B.A. Biology degree program who are interested in gaining research experience are encouraged to take a minimum of 2 credit hours of undergraduate research, BIOL 4905. The privilege of doing undergraduate research provides students with a first-hand opportunity to experience the research process under the supervision of a faculty member or off-campus scientist. The project normally includes a library search of pertinent literature, laboratory or field experience, and a summary paper and a presentation, all based on an average 8 hr. per week per credit hour for a 15 week semester.

Thesis in Biology Research and the Degree with Distinction

The Department of Biology offers high-achieving students the opportunity to present primary research in the form of a written thesis and to graduate with a Degree with Distinction in Biology. The first step in conducting an undergraduate thesis is to identify a faculty research mentor with whom you can conduct novel research. The mentor, along with two UMSL faculty members, will be readers of the thesis. Students need a minimum of two semesters, usually more, to conduct research. After students have identified a research mentor and have completed 75 credit hours, they may apply for a Degree with Distinction in Biology. The final thesis will be written in the form of a scientific manuscript and presented orally in an advertised public forum at least 6 weeks prior to commencement. The readers of the thesis will decide if the thesis merits a Degree with Distinction, and will report their recommendation to the Dean of Arts and Sciences. In addition to fulfilling the coursework required for a

B.S. or B.A. in Biology and the thesis itself, students must also fulfill all the requirements for UMSL's Degree with Distinction.

Learning Outcomes

Integrative Knowledge

Graduates will demonstrate a clear understanding of the overriding principles and theorems within and between the content areas of anatomy, botany, cytology, ecology, evolutionary biology, microbiology, physiology, and zoology. Specifically, graduates will demonstrate competency in the following areas:

- Structure and function of the basic biological units of living organisms
- Information flow, exchange and storage from parent to offspring or from parent cells to progeny cells.
- Pathways and transformations of energy and matter that govern metabolism
- Systems that govern interactions between organisms or between organisms and their environment
- Biodiversity at the genetic, organismal, community, and global scales
- Evolution, common ancestry, and changes to biological populations over successive generations.

Laboratory Skills

Scientists not only learn the results of others, they work in the lab to generate new knowledge. Graduates will demonstrate basic skills associated with performing laboratory experiments or field studies in biology following a broad introduction of commonly used equipment and procedures.

Critical Thinking Skills

Graduates will be able to formulate meaningful hypotheses, design experiments to test them, and evaluate data critically, including an appreciation of the potential sources of error associated with laboratory measurements and troubleshooting technical issues.

Scientific Literacy

Graduates will be able to identify the need for information, procure the information from relevant scientific literature publications and databases, and critically evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias.

Communication Skills

Scientists not only must be able to solve problems, they also must be able to communicate those solutions to others. Graduates of this program demonstrate how to present scientific concepts and information in a clear and accurate manner. Specifically, graduates will be able to write scientific reports and make effective oral presentations of their results and ideas.

Professional and Research Ethics

Graduates will honestly and objectively evaluate and report data in an ethical and legal manner to promote the values that are essential to scholarly work: trust, accountability, mutual respect, and fairness. By doing so, graduates will come to understand and respect the accepted standards of conduct associated with the scientific profession regarding citation, use of privileged information, integrity of data, and authorship.

Foreign Language

B.A. graduates will demonstrate basic proficiency in speaking, listening, writing and reading in a language in addition to English.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|-------------------------------|-------|------------------------------------|-------|
| INTDSC 1003 ¹ | | 1 BIOL 1821 | 5 |
| BIOL 1800 | | 1 CHEM 1111 | 5 |
| ENGL 1100 | | 3 MATH 1035 | 2 |
| MATH 1030 | | 3 CORE - Communication Proficiency | 3 |
| CORE- US History & Government | 3 | | |
| EXPLORE - Social Sciences | 3 | | |
| | 14 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|--|-------|
| BIOL 1831 | | 5 BIOL 2012 | 3 |
| CHEM 1121 | | 5 BIOL 2013 | 2 |
| MATH 1100 | | 3 CHEM 2612 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 MATH 1320 | 3 |
| | | EXPLORE - Social & Behavioral Sciences | 3 |
| | 16 | | 14 |

Third Year

| Fall | Hours | Spring | Hours |
|--|-------|-------------------------|-------|
| BIOL 2000+ Biology Lecture Elective | | 3 BIOL 3302 | 3 |
| BIOL 2000+ Biology Laboratory Elective | | 2 ENGL 3160 | 3 |
| BIOL 3622 | | 3 PHYSICS 1012 | 3 |
| CHEM XXXX::Chemistry Major Requirement | | 3 PHYSICS 1012L | 1 |
| PHYSICS 1011 | | 3 Foreign Language 1001 | 5 |
| PHYSICS 1011L | 1 | | |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--|-------|---|-------|
| BIOL XXXX Biology Lecture Elective | | 3 BIOL 4889 | 2 |
| BIOL XXXX Biology Lecture Elective | | 3 BIOL 4XXX 4000-Level Biology Lecture Elective | 3 |
| BIOL 2000+ Biology Laboratory Elective | | 2 Foreign Language 2101 | 3 |
| FGN LANG 1002 | | 5 Cultural Diversity Requirement | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| | | EXPLORE - Social Sciences | 3 |
| | 16 | | 17 |

Total Hours: 122

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Academic Tracks within the Major of Biology

Biology majors may choose to focus their elective hours in a particular sub-discipline of biology, or academic track. These tracks are groups of departmental courses that fit within sub-disciplines of biology and are recommendations for students wanting to pursue careers in specific

sub-disciplines. Academic tracks are NOT majors and are only intended to serve as guides for courses within a particular area of biology and are represented by current faculty expertise. Selecting an academic track does not prevent a student from taking courses in another track. Students should not expect to take all recommended courses for each academic track. Students may choose not to select an academic track. Currently, the Biology Department offers three academic tracks: Cell and Molecular Biology; Ecology, Evolution and Conservation Biology; and Pre-professional/Health Sciences.

Cell and Molecular Biology Track

| | | |
|-----------|---|---|
| BIOL 2482 | Microbiology | 3 |
| BIOL 2483 | Microbiology Laboratory | 2 |
| BIOL 4442 | Developmental Biology | 3 |
| BIOL 4550 | Bacterial Pathogenesis | 3 |
| BIOL 4602 | Molecular Biology | 3 |
| BIOL 4614 | Biotechnology Laboratory I | 4 |
| BIOL 4615 | Biotechnology Laboratory II | 4 |
| BIOL 4622 | Cellular Basis of Disease | 3 |
| BIOL 4632 | Nucleic Acid Structure and Function | 3 |
| BIOL 4642 | Plant Molecular Biology and Biotechnology | 3 |
| BIOL 4652 | Virology | 3 |
| BIOL 4732 | Principles of Biochemistry | 3 |
| BIOL 4713 | Techniques in Biochemistry | 2 |
| BIOL 4842 | Immunobiology | 3 |

Ecology, Evolution and Conservation Biology Track

| | | |
|-----------|---------------------------------|---|
| BIOL 2102 | Ecology | 3 |
| BIOL 2103 | Ecology Laboratory | 2 |
| BIOL 2402 | Vertebrate Anatomy | 3 |
| BIOL 2403 | Vertebrate Anatomy Laboratory | 2 |
| BIOL 2482 | Microbiology | 3 |
| BIOL 2483 | Microbiology Laboratory | 2 |
| BIOL 3102 | Animal Behavior | 3 |
| BIOL 3103 | Animal Behavior Laboratory | 2 |
| BIOL 3202 | Conservation Biology | 3 |
| BIOL 3203 | Conservation Biology Laboratory | 2 |
| BIOL 3802 | Vertebrate Physiology | 3 |
| BIOL 3803 | Vertebrate Physiology Lab | 2 |
| BIOL 4102 | Behavioral Ecology | 3 |
| BIOL 4122 | Biostatistics | 3 |
| BIOL 4182 | Population Biology | 3 |
| BIOL 4299 | Practicum in Conservation | 2 |
| BIOL 4402 | Ornithology | 3 |
| BIOL 4403 | Ornithology Laboratory | 2 |
| BIOL 4422 | Entomology | 3 |
| BIOL 4423 | Entomology Laboratory | 2 |

Pre-professional/Health Sciences Track

| | | |
|-----------|-------------------------------|---|
| BIOL 2402 | Vertebrate Anatomy | 3 |
| BIOL 2403 | Vertebrate Anatomy Laboratory | 2 |
| BIOL 2482 | Microbiology | 3 |
| BIOL 2483 | Microbiology Laboratory | 2 |
| BIOL 3802 | Vertebrate Physiology | 3 |
| BIOL 3803 | Vertebrate Physiology Lab | 2 |

| | | |
|-----------|------------------------------|---|
| BIOL 4442 | Developmental Biology | 3 |
| BIOL 4550 | Bacterial Pathogenesis | 3 |
| BIOL 4602 | Molecular Biology | 3 |
| BIOL 4622 | Cellular Basis of Disease | 3 |
| BIOL 4652 | Virology | 3 |
| BIOL 4732 | Principles of Biochemistry | 3 |
| BIOL 4822 | Introduction to Neuroscience | 3 |
| BIOL 4842 | Immunobiology | 3 |

B.S. Ed. in Secondary Education with Emphasis in Biology

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Biology with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Biology BS

The B.S. degree in biology is designed to prepare students for basic technical positions and graduate studies in the life sciences. Candidates for the degree have the same core courses and general education requirements as those seeking the Bachelor of Arts degree, as well as additional requirements in depth of study, laboratory experience, communication skills, and background in associated science areas.

General Education Requirements

Students must satisfy the university and college general education requirements (p. 30). Some Biology courses may be used to meet the science and mathematics requirement of the university.

Candidates for the B.A. degree must fulfill the foreign language requirement of the College of Arts and Sciences. There is no foreign language requirement for the B.S. degree.

Satisfactory/Unsatisfactory Option

Up to 18 credit hours may be taken on a satisfactory/ unsatisfactory (s/u) basis. Excluded from this option are required courses in biology, chemistry, physics, and mathematics.

Non-major Biology Courses

The following 1000 level biology courses do not count toward the biology credit hours required for a major in biology. Moreover, if biology majors take these courses, they are treated as biology courses when computing the 70 credit hours outside of biology needed to be included in the 120 total credit hours required for graduation.

| | | |
|-----------|--|---|
| BIOL 1012 | General Biology: The Science of Life (MOTR BIOL 100) | 3 |
| BIOL 1013 | General Biology Laboratory: The Science of Life | 1 |
| BIOL 1102 | Human Biology (MOTR LIFS 150) | 3 |
| BIOL 1131 | Human Physiology and Anatomy I | 4 |
| BIOL 1141 | Human Physiology and Anatomy II | 4 |
| BIOL 1110 | Nutrition in Health | 3 |
| BIOL 1150 | Concepts in Health and Wellness | 3 |
| BIOL 1162 | General Microbiology | 3 |
| BIOL 1202 | Environmental Biology | 3 |

Degree Requirements

The B.S. degree in biology is designed to prepare students for basic technical positions and graduate studies in the life sciences. Candidates for the degree have the same core courses and general education requirements as those seeking the Bachelor of Arts degree, as well as additional requirements in depth of study, laboratory experience, communication skills, and background in associated science areas. Candidates must have a cumulative grade point average of 2.0 or better in biology courses. Candidates must earn a minimum grade of C- in all core courses.

To fulfill the requirements for the B.S. the coursework below must be completed. A minimum of 22 hours of biology courses at or above the 2000 level, including two laboratory courses and one 4000 level course, must be taken in residence in the UMSL Department of Biology in order to receive a B.S. degree from the College of Arts and Sciences with a major in biology.

Lecture and Seminar Course Requirements

The following biology courses or their equivalents are required:

Core

| | | |
|-----------------|--|------------|
| BIOL 1800 | Introduction to the Biology Major | 1 |
| BIOL 1821 | Introductory Biology: Organisms and the Environment (MOTR BIOL 150LEC) | 5 |
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 2012 | Genetics | 3 |
| BIOL 3302 | Evolution | 3 |
| BIOL 3622 | Cell Biology | 3 |
| Capstone | | 2-3 |

Select one of the following:

| | | |
|--------------------|--|--------------|
| BIOL 4889 | Senior Seminar | |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | |
| Total Hours | | 22-23 |

Elective Courses

Five additional biology lecture courses at the 2000 level or higher are required. They may be selected from any of the lecture or lecture-laboratory courses offered. Selection of these courses should reflect the career interest of the student and may be selected from optional academic tracks (see below). CHEM 4712 can also be used toward satisfying this requirement.

At least two biology lecture courses taken as electives must be at the 4000 level or higher with at least one from the UMSL Department of Biology. No more than one of these higher-level courses can be used to fulfill other requirements (e.g. statistics requirement or biochemistry option).

Laboratory Course Requirements

Four biology laboratory courses at the 2000 level or higher are required. They may be selected from any of the lecture-laboratory or laboratory courses offered. Two credit hours of BIOL 3699, BIOL 4905, or BIOL 4915 (no combination of these courses allowed) can be used to fulfill one laboratory requirement. Students may take CHEM 4733 to satisfy one of these laboratory course requirements, but students may not use both BIOL 4713 and CHEM 4733 to fulfill this requirement.

Communication Skills

Courses in both formal speaking and writing are required for development of the basic communication skills needed to transmit scientific information.

Formal Speaking

| | | |
|-----------|---|---|
| COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | 3 |
|-----------|---|---|

Writing

| | | |
|--------------|--|---|
| ENGL 3160 | Writing in the Sciences (strongly preferred) | 3 |
| or ENGL 3110 | | |

| | | |
|--------------------|--|----------|
| Total Hours | | 6 |
|--------------------|--|----------|

Associated Science Areas

The following courses or their equivalents must be successfully completed:

| | | |
|---------------|---|---|
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1011L | Basic Physics I Laboratory | 1 |
| PHYSICS 1012 | Basic Physics II | 3 |
| PHYSICS 1012L | Basic Physics II Laboratory | 1 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| or BIOL 4732 | Principles of Biochemistry | |
| CHEM 2223 | Quantitative Analysis in Chemistry | 3 |
| or CHEM 2633 | Organic Chemistry Laboratory | |

| | | |
|--------------------|--|--------------|
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 | Basic Calculus | 3-5 |
| or MATH 1800 | Analytic Geometry and Calculus I | |
| BIOL 4122 | Biostatistics | 3 |
| or MATH 1320 | Introduction to Probability and Statistics | |
| PHIL 2256 | Bioethics | 3 |
| or PHIL 3380 | Philosophy of Science | |
| Total Hours | | 39-41 |

Research Opportunity

Students in the B.S. Biology degree program who are interested in gaining research experience are encouraged to take a minimum of 2 credit hours of undergraduate research, BIOL 4905. The privilege of doing undergraduate research provides students with a first-hand opportunity to experience the research process under the supervision of a faculty member or off-campus scientist. The project normally includes a library search of pertinent literature, laboratory or field experience, and a summary paper and a presentation, all based on an average 8 hr. per week per credit hour for a 15 week semester.

Thesis in Biology Research and the Degree with Distinction

The Department of Biology offers high-achieving students the opportunity to present primary research in the form of a written thesis and to graduate with a Degree with Distinction in Biology. The first step in conducting an undergraduate thesis is to identify a faculty research mentor with whom you can conduct novel research. The mentor, along with two UMSL faculty members, will be readers of the thesis. Students need a minimum of two semesters, usually more, to conduct research. After students have identified a research mentor and have completed 75 credit hours, they may apply for a Degree with Distinction in Biology. The final thesis will be written in the form of a scientific manuscript and presented orally in an advertised public forum at least 6 weeks prior to commencement. The readers of the thesis will decide if the thesis merits a Degree with Distinction, and will report their recommendation to the Dean of Arts and Sciences. In addition to fulfilling the coursework required for a B.S. or B.A. in Biology and the thesis itself, students must also fulfill all the requirements for UMSL's Degree with Distinction.

Pre-professional Graduation

The Department of Biology sponsors a 3+4 Program for the UMSL College of Optometry.

In this program students may be admitted to the College of Optometry after completing three years (90 semester hours) of study in the Department of Biology. The undergraduate degree is granted when students satisfactorily complete the first year of optometry school. One or more of the following conditions must be met in order to qualify for the undergraduate degree. All general education requirements and all requirements for the major, except electives, must be completed. Any deficiency in required courses must be remedied with courses taken at UMSL within three years after entering the College of Optometry. Up to 6 hours from the College of Optometry may be substituted for undergraduate degree requirements, with approval of the Department of Biology.

UMSL – Logan College (3+3 program)

The Department of Biology has developed a 3+3 articulation agreement with Logan College of Chiropractic (LCC). This program enables qualified students the opportunity to complete a Bachelor of Science degree in

Biology for the University of Missouri – St. Louis as well as a Doctor of Chiropractic for Logan College of Chiropractic in six years.

The program is only open to students who enter UMSL as first-time freshmen.

Participants must complete their first 90 hours of college work (3 years) at UMSL following a prescribed curriculum.

Participants who have achieved at least 3.25 GPA at UMSL will automatically be granted admission by Logan College of Chiropractic.

After successfully completing an additional 30 credit hours (4th year) at Logan, a student will receive a BS in Biology degree from UMSL.

After completing two additional years at Logan, the student will receive a doctorate in chiropractic

The acceptance of transfer credits or testing toward completion of degree requirements shall be governed by current policies of UMSL. However, no more than 20 credits of required courses, and NONE of the science credits required for admission to LCC may be earned via examination or transfer from another school

LCC shall accept, for the entrance date of their choice, all students who successfully complete the Pre-Chiropractic Program with a cumulative GPA of 3.25 or higher and meet all other criteria for admission

Students who earn less than a 3.25 GPA, but at least a 2.50 GPA, will be eligible for admission to LCC, and will receive appropriate consideration in the admission process for having completed the UMSL Pre-Chiropractic Program, but will not receive the assurance of a seat reserved for students earning a 3.25 or higher GPA

Students will make application to LCC one year in advance of their desired entrance date and will complete all required application procedures thereafter in a timely manner, including submission of recommendation and a satisfactory interview.

This program offers benefits to students (six years instead of seven from high school to doctorate). The University of Missouri courses are listed below:

General Education Requirements

| | | |
|--|--|---|
| Humanities: | | 9 |
| Select from General Education List | | |
| Social Sciences (One course must be a Psychology): | | 9 |
| Select from General Education List of courses meeting Social Science Gen. Ed requirements. | | |
| American History & Government | | 3 |
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| or BIOL 4122 | Biostatistics | |
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| ENGL 3160 | Writing in the Sciences | 3 |
| Major | | |
| Foundation courses: | | |
| BIOL 1821 | Introductory Biology: Organisms and the Environment (MOTR BIOL 150LEC) | 5 |

| | | |
|---------------|--|-----|
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 2012 | Genetics | 3 |
| BIOL 2482 | Microbiology | 3 |
| BIOL 3622 | Cell Biology | 3 |
| BIOL 3302 | Evolution | 3 |
| BIOL 4732 | Principles of Biochemistry | 3 |
| BIOL 4889 | Senior Seminar | 2 |
| PHYSICS 1011 | Basic Physics I (MOTR PHYS 150L) | 3 |
| PHYSICS 1011L | Basic Physics I Laboratory | 1 |
| PHYSICS 1012 | Basic Physics II | 3 |
| PHYSICS 1012L | Basic Physics II Laboratory | 1 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| PHIL 2256 | Bioethics | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1035 | Trigonometry | 2 |
| MATH 1100 | Basic Calculus | 3-5 |
| or MATH 1800 | Analytic Geometry and Calculus I | |

Total Hours **94-96**

The remaining 30 hours to be taken at Logan include:

- Transfer Credits (34):
- Anatomy I / Lab (6)
- Spinal Anatomy / Lab (5)
- Biochemistry I / Lab (4)
- Histology / Cell Biology / Lab (5)
- Anatomy II / Lab (6)
- Neuroanatomy / Lab (5)
- Biochemistry II (4)
- Physiology I (4)
- Microbiology / Lab (4)

Learning Outcomes

Integrative Knowledge

Graduates will demonstrate a clear understanding of the overriding principles and theorems within and between the content areas of anatomy, botany, cytology, ecology, evolutionary biology, microbiology, physiology, and zoology. Specifically, graduates will demonstrate competency in the following areas:

- Structure and function of the basic biological units of living organisms
- Information flow, exchange and storage from parent to offspring or from parent cells to progeny cells.
- Pathways and transformations of energy and matter that govern metabolism
- Systems that govern interactions between organisms or between organisms and their environment

- Biodiversity at the genetic, organismal, community, and global scales
- Evolution, common ancestry, and changes to biological populations over successive generations.

Laboratory Skills

Scientists not only learn the results of others, they work in the lab to generate new knowledge. Graduates will demonstrate basic skills associated with performing laboratory experiments or field studies in biology following a broad introduction of commonly used equipment and procedures.

Critical Thinking Skills

Graduates will be able to formulate meaningful hypotheses, design experiments to test them, and evaluate data critically, including an appreciation of the potential sources of error associated with laboratory measurements and troubleshooting technical issues.

Scientific Literacy

Graduates will be able to identify the need for information, procure the information from relevant scientific literature publications and databases, and critically evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias.

Communication Skills

Scientists not only must be able to solve problems, they also must be able to communicate those solutions to others. Graduates of this program demonstrate how to present scientific concepts and information in a clear and accurate manner. Specifically, graduates will be able to write scientific reports and make effective oral presentations of their results and ideas.

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Sample Plan of Study

| | | | |
|-------------------------------------|-------|---------------------------------------|-------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 MATH 1035 | 2 |
| BIOL 1800 | | 1 BIOL 1821 | 5 |
| ENGL 1100 | | 3 CHEM 1111 | 5 |
| MATH 1030 | | 3 COMM 1040 | 3 |
| CORE - US History and Government | 3 | | |
| EXPLORE - Social Sciences | 3 | | |
| | 14 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| BIOL 1831 | | 5 BIOL 2012 | 3 |
| CHEM 1121 | | 5 BIOL 2013 | 2 |
| MATH 1100 | | 3 CHEM 2612 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 MATH 1320 | 3 |
| | | EXPLORE - Social Sciences | 3 |
| | 16 | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| BIOL 2000+ Biology Lecture Elective | | 3 BIOL 2000+ Biology Lecture Elective | 3 |

| | | | |
|------------------------------------|-------|---|-------|
| BIOL 2000+ Biology Lab Elective | 2 | BIOL 2000+ Biology Lab Elective | 2 |
| BIOL 3622 | 3 | BIOL 3302 | 3 |
| CHEM 2622, BIOL 4732, or CHEM 4712 | 3 | CHEM 2223 | 3 |
| PHYSICS 1011 | 3 | PHYSICS 1012 | 3 |
| PHYSICS 1011L | 1 | PHYSICS 1012L | 1 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| BIOL XXXX Biology Lecture Elective | | 3 BIOL 4889 | 2 |
| BIOL XXXX Biology Lab Elective | | 2 BIOL 4XXX 4000-Level Biology Lecture Elective | 3 |
| BIOL 4000-level Lecture Course | | 3 ENGL 3160 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 PHIL 2256 or 3380 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Social Sciences | 3 |
| | | Cultural Diversity Requirement | 3 |
| | 14 | | 17 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshman and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

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Biology majors may choose to focus their elective hours in a particular sub-discipline of biology, or academic track. These tracks are groups of departmental courses that fit within sub-disciplines of biology and are recommendations for students wanting to pursue careers in specific sub-disciplines. Academic tracks are NOT majors and are only intended to serve as guides for courses within a particular area of biology and are represented by current faculty expertise. Selecting an academic track does not prevent a student from taking courses in another track. Students should not expect to take all recommended courses for each academic track. Students may choose not to select an academic track. Currently, the Biology Department offers three academic tracks: Cell and Molecular Biology; Ecology, Evolution and Conservation Biology; and Pre-professional/Health Sciences.

Cell and Molecular Biology Track

| | | |
|-----------|---|---|
| BIOL 2482 | Microbiology | 3 |
| BIOL 2483 | Microbiology Laboratory | 2 |
| BIOL 4442 | Developmental Biology | 3 |
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| BIOL 4632 | Nucleic Acid Structure and Function | 3 |
| BIOL 4642 | Plant Molecular Biology and Biotechnology | 3 |
| BIOL 4652 | Virology | 3 |
| BIOL 4713 | Techniques in Biochemistry | 2 |
| BIOL 4842 | Immunobiology | 3 |

Ecology, Evolution and Conservation Biology Track

| | | |
|-----------|---------------------------------|---|
| BIOL 2102 | Ecology | 3 |
| BIOL 2103 | Ecology Laboratory | 2 |
| BIOL 2402 | Vertebrate Anatomy | 3 |
| BIOL 2403 | Vertebrate Anatomy Laboratory | 2 |
| BIOL 2482 | Microbiology | 3 |
| BIOL 2483 | Microbiology Laboratory | 2 |
| BIOL 3102 | Animal Behavior | 3 |
| BIOL 3103 | Animal Behavior Laboratory | 2 |
| BIOL 3203 | Conservation Biology Laboratory | 2 |
| BIOL 3802 | Vertebrate Physiology | 3 |
| BIOL 3803 | Vertebrate Physiology Lab | 2 |
| BIOL 4102 | Behavioral Ecology | 3 |
| BIOL 4122 | Biostatistics | 3 |
| BIOL 4182 | Population Biology | 3 |
| BIOL 4299 | Practicum in Conservation | 2 |
| BIOL 4402 | Ornithology | 3 |
| BIOL 4403 | Ornithology Laboratory | 2 |
| BIOL 4422 | Entomology | 3 |
| BIOL 4423 | Entomology Laboratory | 2 |

Pre-professional/Health Sciences Track

| | | |
|-----------|-------------------------------|---|
| BIOL 2402 | Vertebrate Anatomy | 3 |
| BIOL 2403 | Vertebrate Anatomy Laboratory | 2 |
| BIOL 2482 | Microbiology | 3 |
| BIOL 2483 | Microbiology Laboratory | 2 |
| BIOL 3802 | Vertebrate Physiology | 3 |
| BIOL 3803 | Vertebrate Physiology Lab | 2 |
| BIOL 4442 | Developmental Biology | 3 |
| BIOL 4550 | Bacterial Pathogenesis | 3 |
| BIOL 4602 | Molecular Biology | 3 |
| BIOL 4622 | Cellular Basis of Disease | 3 |
| BIOL 4652 | Virology | 3 |
| BIOL 4732 | Principles of Biochemistry | 3 |
| BIOL 4822 | Introduction to Neuroscience | 3 |
| BIOL 4842 | Immunobiology | 3 |

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B.A. or B.S. in Biology with Master's Level Coursework for Secondary Teacher Certification

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Biology Minor

Students may minor in biology by completing a minimum of 19 credit hours in biology, of which at least 9 hours of the biology course credits must be taken in residence at UMSL.

Requirements are:

| | | |
|--|--|-----------|
| BIOL 1821 | Introductory Biology: Organisms and the Environment (MOTR BIOL 150L) | 5 |
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 2012 | Genetics | 3 |
| Two additional courses totaling no less than 6 credit hours. At least one course should be at the 3000 level or above. | | 6 |
| Total Hours | | 19 |

All students must plan an appropriate course of study in consultation with an advisor, and the program must be given prior approval by the Chairperson of the Department of Biology. Under certain circumstances, a student may deviate from the prescribed course of study and substitute a group of courses that exhibit a coherent area of specialization to coordinate with a career objective.

Candidates must have a cumulative grade point average of 2.0 or better in the minor, courses may be taken on a satisfactory/ unsatisfactory (s/u) basis.

Learning Outcomes**Foundational Knowledge**

Students with a minor in biology will demonstrate an understanding of the fundamental principles of biology including the structure and function of cells and their components, heredity and variation in populations, and evolution.

Laboratory Skills

Minors will acquire a basic understanding of how the scientific method is employed for research.

Biology MS**Advisors**

All graduate students will have a faculty advisor. In the event that a student's interest changes or the faculty advisor feels the student's direction no longer falls with his/her area of expertise, the student and advisor should discuss whether a change of advisor is warranted. The graduate director must be notified in writing of any change in advisors. If a student or advisor is uncomfortable discussing the issue directly with

the other, he/she is encouraged to meet with the director of the graduate program.

Graduate Assistantships

Stipends for teaching and research assistantships are awarded on a competitive basis to qualified graduate students in masters or PhD. Programs. Tuition fees are waived for graduate assistants. Applications for assistantships must be sent to the Director of Graduate Studies in the Department of Biology and received by December 15.

The Department of Biology offers three ways of achieving the Master of Science degree. The first is a 30 credit hour non-thesis option suitable for those who may already have extensive research experience, for educators who seek to upgrade their academic skills but do not require research experience, or for those who need to broaden their biological background. The second is a 32 credit hour Professional Science track that includes a strong business component for students who are interested in learning more about the business aspects of companies. This track may not be appropriate for students who are interested in pursuing a PhD or working primarily as laboratory scientists. The third is a 30 credit hour traditional apprenticeship in research leading to a written thesis. All students admitted to the graduate program are considered to be in the non-thesis program unless they have been accepted into an individual faculty lab. Starting with a common core, both the thesis and non-thesis option may be developed into a final degree program in either of two broad areas in biology:

1. Cell and Molecular Biology or
2. Ecology, Evolution, and Systematics.

Non-thesis students may also elect to take courses in both areas. Only the non-thesis option is available in the Professional Science emphasis.

M.S. Admission Requirements

Applicants to the M.S. program must submit completed application and personal data forms, three letters of recommendation from undergraduate faculty or work supervisors, and transcripts of all previous work. Submission of Graduate Record Examination scores, although not required, is highly recommended and will be helpful for positive consideration of admittance. Admission as a regular graduate student requires graduation from an accredited college with a minimum grade point average overall and in biology courses of 3.0 (where A = 4.0).

All foreign applicants, except those from countries where English is the primary language, must take the TOEFL. Ordinarily, a score of 213 on the computer-based exam (550 on the paper-based exam) or better is required.

In addition to the Graduate School admission requirements, applicants should have completed advanced undergraduate biology courses including genetics, biochemistry, and evolution. Courses in organic chemistry, college physics, and calculus are also expected, and a course in statistics is highly recommended.

Students admitted to the degree program who have not met some of the prerequisites may be asked to pass appropriate courses before graduating. These courses will be agreed upon by the student's advisor and the student during the first semester of enrollment. In particular, undergraduate deficiencies in genetics and either biochemistry or evolution shall be made up by taking the appropriate course(s). Three credits of BIOL 4920 Selected Topics can be given to graduate students for BIOL 2012 (Genetics) or BIOL 3302 (Evolution), if they receive a grade

of B or better for all undergraduate course work and complete a graduate level paper assigned by the instructor. Instructor consent is required.

General Requirements

All students are required to take at least 4 but not more than 8 hours of BIOL 6889, Graduate Seminar. However, Professional Science masters students must take only 4 credit hours total of BIOL 6889. Thesis students are required to take BIOL 5179, Ethical Issues in Biology. Students are expected to maintain a GPA of 3.0 or better. Students may choose to specialize in either Cellular and Molecular Biology (CMB) emphasis area or the Ecology, Evolution and Systematics (EES) emphasis area, and appropriate courses in each area will be recommended by the student's advisor. The Professional Science emphasis area in CMB has specific course requirements that are described below.

Non-thesis Option

Including the general requirement, students must take at least 30 graduate credit hours, of which at least half must be at the 5000 or 6000 level. No more than 5 hours of BIOL 6905, Graduate Research, may be counted toward the degree.

Thesis Option

The student and adviser work together to develop a research plan. The thesis proposal must be approved by the student's adviser and advisory committee before the student enrolls in more than 4 credit hours of BIOL 6905, Graduate Research, and before the student has completed 15 credit hours in the master's program. No more than 13 hours of BIOL 6905, Graduate Research, may be counted toward 30 hours of the degree. A thesis embodying results of original research shall be submitted to and approved by the Department of Biology and the Graduate School. This approval requires both a written thesis and oral presentation and defense.

Biology MS, Cellular and Molecular Biology Emphasis

The Department of Biology offers three ways of achieving the Master of Science degree. The first is a 30 credit hour non-thesis option suitable for those who may already have extensive research experience, for educators who seek to upgrade their academic skills but do not require research experience, or for those who need to broaden their biological background. The second is a 32 credit hour Professional Science track that includes a strong business component for students who are interested in learning more about the business aspects of companies. This track may not be appropriate for students who are interested in pursuing a PhD or working primarily as laboratory scientists. The third is a 30 credit hour traditional apprenticeship in research leading to a written thesis. All students admitted to the graduate program are considered to be in the non-thesis program unless they have been accepted into an individual faculty lab. Starting with a common core, both the thesis and non-thesis option may be developed into a final degree program in either of two broad areas in biology:

1. Cell and Molecular Biology or
2. Ecology, Evolution, and Systematics.

Non-thesis students may also elect to take courses in both areas. Only the non-thesis option is available in the Professional Science emphasis.

M.S. Admission Requirements

Applicants to the M.S. program must submit completed application and personal data forms, three letters of recommendation from undergraduate faculty or work supervisors, and transcripts of all previous work. Submission of Graduate Record Examination scores, although not required, is highly recommended and will be helpful for positive consideration of admittance. Admission as a regular graduate student requires graduation from an accredited college with a minimum grade point average overall and in biology courses of 3.0 (where A = 4.0).

All foreign applicants, except those from countries where English is the primary language, must take the TOEFL. Ordinarily, a score of 213 on the computer-based exam (550 on the paper-based exam) or better is required.

In addition to the Graduate School admission requirements, applicants should have completed advanced undergraduate biology courses including genetics, biochemistry, and evolution. Courses in organic chemistry, college physics, and calculus are also expected, and a course in statistics is highly recommended.

Students admitted to the degree program who have not met some of the prerequisites may be asked to pass appropriate courses before graduating. These courses will be agreed upon by the student's advisor and the student during the first semester of enrollment. In particular, undergraduate deficiencies in genetics and either biochemistry or evolution shall be made up by taking the appropriate course(s). Three credits of BIOL 4920 Selected Topics can be given to graduate students for BIOL 2012 (Genetics) or BIOL 3302 (Evolution), if they receive a grade of B or better for all undergraduate course work and complete a graduate level paper assigned by the instructor. Instructor consent is required.

General Requirements

All students are required to take at least 4 but not more than 8 hours of BIOL 6889, Graduate Seminar. However, Professional Science masters students must take only 4 credit hours total of BIOL 6889. Thesis students are required to take BIOL 5179, Ethical Issues in Biology. Students are expected to maintain a GPA of 3.0 or better. Students may choose to specialize in either Cellular and Molecular Biology (CMB) emphasis area or the Ecology, Evolution and Systematics (EES) emphasis area, and appropriate courses in each area will be recommended by the student's advisor. The Professional Science emphasis area in CMB has specific course requirements that are described below.

Non-thesis Option

Including the general requirement, students must take at least 30 graduate credit hours, of which at least half must be at the 5000 or 6000 level. No more than 5 hours of BIOL 6905, Graduate Research, may be counted toward the degree.

Thesis Option

The student and adviser work together to develop a research plan. The thesis proposal must be approved by the student's adviser and advisory committee before the student enrolls in more than 4 credit hours of BIOL 6905, Graduate Research, and before the student has completed 15 credit hours in the master's program. No more than 13 hours of BIOL 6905, Graduate Research, may be counted toward 30 hours of the degree. A thesis embodying results of original research shall be submitted to and approved by the Department of Biology and the Graduate School.

This approval requires both a written thesis and oral presentation and defense.

Biology MS, Ecology Evolution and Systematics Emphasis

The Department of Biology offers three ways of achieving the Master of Science degree. The first is a 30 credit hour non-thesis option suitable for those who may already have extensive research experience, for educators who seek to upgrade their academic skills but do not require research experience, or for those who need to broaden their biological background. The second is a 32 credit hour Professional Science track that includes a strong business component for students who are interested in learning more about the business aspects of companies. This track may not be appropriate for students who are interested in pursuing a PhD or working primarily as laboratory scientists. The third is a 30 credit hour traditional apprenticeship in research leading to a written thesis. All students admitted to the graduate program are considered to be in the non-thesis program unless they have been accepted into an individual faculty lab. Starting with a common core, both the thesis and non-thesis option may be developed into a final degree program in either of two broad areas in biology:

1. Cell and Molecular Biology or
2. Ecology, Evolution, and Systematics.

Non-thesis students may also elect to take courses in both areas. Only the non-thesis option is available in the Professional Science emphasis.

M.S. Admission Requirements

Applicants to the M.S. program must submit completed application and personal data forms, three letters of recommendation from undergraduate faculty or work supervisors, and transcripts of all previous work. Submission of Graduate Record Examination scores, although not required, is highly recommended and will be helpful for positive consideration of admittance. Admission as a regular graduate student requires graduation from an accredited college with a minimum grade point average overall and in biology courses of 3.0 (where A = 4.0).

All foreign applicants, except those from countries where English is the primary language, must take the TOEFL. Ordinarily, a score of 213 on the computer-based exam (550 on the paper-based exam) or better is required.

In addition to the Graduate School admission requirements, applicants should have completed advanced undergraduate biology courses including genetics, biochemistry, and evolution. Courses in organic chemistry, college physics, and calculus are also expected, and a course in statistics is highly recommended.

Students admitted to the degree program who have not met some of the prerequisites may be asked to pass appropriate courses before graduating. These courses will be agreed upon by the student's advisor and the student during the first semester of enrollment. In particular, undergraduate deficiencies in genetics and either biochemistry or evolution shall be made up by taking the appropriate course(s). Three credits of BIOL 4920 Selected Topics can be given to graduate students for BIOL 2012 (Genetics) or BIOL 3302 (Evolution), if they receive a grade of B or better for all undergraduate course work and complete a graduate level paper assigned by the instructor. Instructor consent is required.

General Requirements

All students are required to take at least 4 but not more than 8 hours of BIOL 6889, Graduate Seminar. However, Professional Science masters students must take only 4 credit hours total of BIOL 6889. Thesis students are required to take BIOL 5179, Ethical Issues in Biology. Students are expected to maintain a GPA of 3.0 or better. Students may choose to specialize in either Cellular and Molecular Biology (CMB) emphasis area or the Ecology, Evolution and Systematics (EES) emphasis area, and appropriate courses in each area will be recommended by the student's advisor. The Professional Science emphasis area in CMB has specific course requirements that are described below.

Non-thesis Option

Including the general requirement, students must take at least 30 graduate credit hours, of which at least half must be at the 5000 or 6000 level. No more than 5 hours of BIOL 6905, Graduate Research, may be counted toward the degree.

Thesis Option

The student and adviser work together to develop a research plan. The thesis proposal must be approved by the student's adviser and advisory committee before the student enrolls in more than 4 credit hours of BIOL 6905, Graduate Research, and before the student has completed 15 credit hours in the master's program. No more than 13 hours of BIOL 6905, Graduate Research, may be counted toward 30 hours of the degree. A thesis embodying results of original research shall be submitted to and approved by the Department of Biology and the Graduate School. This approval requires both a written thesis and oral presentation and defense.

Biology MS, Professional Science in Cellular and Molecular Biology Emphasis

This Master of Science in Biology with the Professional Science in Cellular and Molecular Biology emphasis requires a total of 32 credit hours, of which at least half must be at the 5000-level or above. Students will take 21 credit hours in Biology, 9 hours in business courses, and 2 credit hours of internship/practicum. Professional Science students: 1) must take 2 seminars (4 credit hours total) of **BIOL 6889**, 2) are limited to a maximum of 2 credit hours of Topics in Cellular and Molecular Biology (**BIOL 5069**) and 3) cannot count any hours of Graduate Research (BIOL 6905) as part of the 32 credit hour total.

Required Courses

| | | |
|--------------------------------|--|------|
| BIOL 6889 | Graduate Seminar (must be taken twice) | 4 |
| Choose three of the following: | | 9-10 |
| BIOL 6602 | Advanced Molecular Biology | |
| BIOL 6615 | Advanced Biotechnology Laboratory II | |
| BIOL 6622 | Advanced Cellular Basis of Disease | |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | |

Elective Courses in Biology

7-8

| | | |
|--|--|-----------|
| BIOL 4713 | Techniques in Biochemistry | |
| BIOL 4842 | Immunobiology | |
| BIOL 5069 | Topics in Cellular and Molecular Biology ¹ | |
| BIOL 6442 | Advanced Developmental Biology | |
| BIOL 6550 | Advanced Bacterial Pathogenesis | |
| BIOL 6602 | Advanced Molecular Biology | |
| BIOL 6622 | Advanced Cellular Basis of Disease | |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | |
| BIOL 6652 | Advanced Virology | |
| BIOL 6920 | Advanced Topics in Biology (when relevant) | |
| Required Internship or Practicum | | 2 |
| BIOL 5798 or BIOL 5799 | Practicum in Science in Business Internship in Sciences in Business | |
| Professional Science Business Electives | | 9 |
| MGMT 3623 | Industrial and Organizational Psychology | |
| BUS AD 5000 | Economics for Managers | |
| BUS AD 5100 | Managerial Communication | |
| MGMT 5600 | Managing and Leading in Organizations | |
| MKTG 5700 | Integrated Marketing Strategies | |
| BUS AD 5900 | Law, Ethics and Business | |
| Total Hours | | 32 |

¹ Maximum of 2 credit hours.

Biology MS, Accelerated Master's Degree

The Department of Biology offers an Accelerated MS degree program that allows students to simultaneously earn their BS and their MS in Biology. Students accepted to the Accelerated MS degree program will be permitted to count up to 9 credits toward both degrees.

Students are encouraged to work closely with their Biology undergraduate advisor and the Biology Graduate Program Director to ensure that courses are timed appropriately to maximize their benefits. It is strongly recommended that students meet with the Graduate Director as soon as possible, ideally before their junior year.

Students in the Accelerated MS program will complete the MS through the non-thesis coursework path; the thesis MS and Professional Science MS programs cannot be combined with this program.

Eligibility

Students must have fulfilled the core curriculum requirements for the Bachelor of Science degree prior to applying for the Accelerated MS program.

| | | |
|--------------------|--|-----------|
| BIOL 1800 | Introduction to the Biology Major | 1 |
| BIOL 1821 | Introductory Biology: Organisms and the Environment (MOTR BIOL 150L) | 5 |
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 2012 | Genetics | 3 |
| BIOL 3302 | Evolution | 3 |
| BIOL 3622 | Cell Biology | 3 |
| Total Hours | | 20 |

Admission Requirements

Provisional Admission

Applicants are considered for provisional admission if they meet the following criteria:

- Earned 60 hours as an undergraduate
- Have a minimum GPA of 3.0 with a B or better in all core courses listed above
- Have approval from both their Biology undergraduate advisor and Biology Graduate Program Director

It is recommended to apply for provisional status as a junior, preferably in the first semester of junior year.

Graduate course options for Provisional students are listed below.

Courses completed by undergraduate students who have been provisionally admitted to the Accelerated MS program can count towards both their BS and MS degrees. Courses in this phase will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. Courses must be approved before the semester starts. Any 4000-level course taken before admission to the Accelerated MS program will apply to the undergraduate requirements only unless given prior permission from the Graduate School.

Seniors who have earned more than 105 credit hours cannot be considered for the Accelerated MS degree program.

Graduate Admission

Applicants are considered for graduate admission with the following criteria:

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Submitted at least one positive recommendation letter from an UMSL Biology faculty member
- Submitted to the Biology Graduate Director a statement of purpose explaining why an advanced degree in Biology is of interest and why the applicant merits consideration
- Have met with the Biology Graduate Director

Based on the above information, the Biology Graduate Committee will determine whether the student can apply for graduate admission. Final decisions concerning graduate admission are made by the Graduate School Director and the Graduate School. Students admitted to the graduate program must take graduate courses until the completion of the MS degree.

Courses for Both BS and MS Credit

The following Biology courses can count toward both the BS and MS degree, up to a maximum of 9 credit hours.

| | | |
|-----------|---------------------------------|---|
| BIOL 4122 | Biostatistics | 3 |
| BIOL 4402 | Ornithology | 3 |
| BIOL 4422 | Entomology | 3 |
| BIOL 4732 | Principles of Biochemistry | 3 |
| BIOL 4822 | Introduction to Neuroscience | 3 |
| BIOL 4842 | Immunobiology | 3 |
| BIOL 5012 | Advanced Genetics | 3 |
| BIOL 5192 | Community Ecology | 3 |
| BIOL 5302 | Advanced Evolution | 3 |
| BIOL 5312 | Theory of Systematics | 3 |
| BIOL 5436 | Advanced Applied Bioinformatics | 3 |

All 6000-level Biology courses (excluding BIOL 6299, BIOL 6699, BIOL 6889, BIOL 6905 and BIOL 6915)

Other courses may be allowed upon approval of the Graduate Program Director.

Awarding of Degrees

The undergraduate degree will be awarded when the student meets the requirements for the BS degree, including at least 120 total credit hours, completion of the Biology core, elective, and laboratory requirements, and completion of the associated requirements. The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed, including at least 30 credit hours of coursework at the graduate level.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Biology PhD, Cell and Molecular Biology Emphasis

The doctoral program emphasizes empirical and theoretical approaches to biological research. Students are required to integrate basic skills in biology with focal studies in an emphasis area. The program is designed to provide research experience and training appropriate for advanced positions in academic research and teaching, government and public agencies, and industry.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Biology only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

In addition to Graduate School admission requirements, applicants to the Ph.D. in Biology program must submit three letters of recommendation

submitted from individuals able to comment on academic potential (such as faculty members at previously attended colleges or universities) and transcripts of all postsecondary academic work. We encourage GRE scores (Verbal, Quantitative, and Analytical) to be sent as well; however these are not required. Admission to the Ph.D. program normally requires a minimum grade point average overall and in biology courses of 3.0 (where A=4.0). Applicants from countries where English is not a primary language are required to meet the language requirements set by UMSL Global. Scores must be submitted before admission can be decided.

Applicants should have a bachelor's or M.S. degree from an accredited United States college or university or evidence of equivalent training at an accredited institution outside the United States. They should have the appropriate background for graduate work in biology, including courses in genetics, biochemistry, and evolution. Courses in organic chemistry, college physics, and calculus are expected. Students admitted to the Ph.D. program who have not met all the prerequisites may be required to make up deficiencies before admission to candidacy. The deficiencies will be decided during orientation meetings prior to the start of the second semester.

Degree Requirements

In addition to the general requirements of the Graduate School, the basic requirements for the Ph.D. degree in Biology include 60 graduate credit hours. At least 30 of the 60 hours must be taken at the 5000 or 6000 level. With the explicit consent of the graduate committee, students may take for graduate credit up to 3 credit hours of 3000 level courses in allied departments. Courses in biology at the 3000 level and below are not available for graduate credit. At least 31 of the 60 hours must be taken while in residence at the University of Missouri-St. Louis. Graduate credit for course work transferred from another program is subject to approval by the graduate committee and by the Graduate School. Graduate courses taken elsewhere will be considered for transfer credit during orientation meetings conducted prior to the start of the second semester of enrollment.

The requirements for all Ph.D. students include:

Coursework

- At least 30 credits of course work, including the following required courses (20 credits total)

| | | |
|--------------------------|--|-----------|
| BIOL 6889 | Graduate Seminar | 6 |
| BIOL 5178 & BIOL 5179 | Introduction to Graduate Research in Biology and Ethical Issues in Biology (to be taken in first year) | 2 |
| BIOL 5436 | Advanced Applied Bioinformatics | 3 |
| BIOL 4122 | Biostatistics | 3 |
| BIOL 5012 | Advanced Genetics | 3 |
| BIOL 5302 | Advanced Evolution | 3 |
| Total Hours | | 20 |

- Up to 30 credits of graduate research (BIOL 6905)

The maximum number of credit hours that may be applied toward the 60-hour requirement is limited as stated below:

- BIOL 6889, Graduate Seminar: 10 hours
- BIOL 6905, Graduate Research: 30 hours

The department also offers five 1-credit journal-club-style classes, focusing on different topics. A maximum of six credits from this group of courses can be applied towards the degree:

| | | |
|-----------|---|---|
| BIOL 5059 | Topics in Ecology, Evolution, and Systematics | 1 |
| BIOL 5069 | Topics in Cellular and Molecular Biology | 1 |
| BIOL 5079 | Topics in Floristic Taxonomy | 1 |
| BIOL 5089 | Topics in Animal Behavior | 1 |
| BIOL 5099 | Biology Colloquium | 1 |

Emphasis areas

Each Ph.D. student should select one of three emphasis areas, and choose at least six credit hours of appropriate elective courses to fit this area in consultation with their advisor. These emphases include Ecology, Evolution, and Behavior (EEB), Cellular and Molecular Biology (CMB), or Integrative Biology (IB), which would involve a combination of coursework from both of the previous emphases. Other courses may be included as electives with prior approval of the program coordinator.

Ecology, Evolution and Behavior Electives

| | | |
|-----------|---------------------------------------|---|
| BIOL 5192 | Community Ecology | 3 |
| BIOL 5312 | Theory of Systematics | 3 |
| BIOL 6102 | Advanced Topics in Behavioral Ecology | 3 |
| BIOL 6182 | Advanced Population Biology | 3 |
| BIOL 6502 | Advanced Evolution of Cognition | 3 |

Cellular and Molecular Biology Electives

| | | |
|-----------|--|---|
| BIOL 6442 | Advanced Developmental Biology | 3 |
| BIOL 6550 | Advanced Bacterial Pathogenesis | 3 |
| BIOL 6602 | Advanced Molecular Biology | 3 |
| BIOL 6608 | Advanced Synthetic Biology | 3 |
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6622 | Advanced Cellular Basis of Disease | 3 |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | 3 |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | 3 |
| BIOL 6652 | Advanced Virology | 3 |

Integrative Biology Electives

| | | |
|-----------|--|---|
| BIOL 5192 | Community Ecology | 3 |
| BIOL 5312 | Theory of Systematics | 3 |
| BIOL 6102 | Advanced Topics in Behavioral Ecology | 3 |
| BIOL 6182 | Advanced Population Biology | 3 |
| BIOL 6502 | Advanced Evolution of Cognition | 3 |
| BIOL 6608 | Advanced Synthetic Biology | 3 |
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6622 | Advanced Cellular Basis of Disease | 3 |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | 3 |

| | | |
|-----------|--|---|
| BIOL 6642 | Advanced Plant Biology and Biotechnology | 3 |
| BIOL 6652 | Advanced Virology | 3 |

Maintenance of Status

All students are expected to maintain a GPA of 3.0 or better. To maintain their status in the program, normally students will meet formally each year with their thesis committee, or if that has not been formed yet, with their dissertation advisor.

Identifying a Dissertation Advisor

All PhD students must identify a dissertation advisor, via mutual consent between the student and the advisor. Students entering the program with an agreement in hand may join the lab in their first semester (this is more common for the EEB emphasis). Alternatively, students entering the program may rotate through three labs to identify a permanent lab and advisor (more common for the CMB emphasis). Additionally, students are expected to work with their advisor to assemble their dissertation committee by the end of the 2nd year.

In the event that a student's interest changes or the dissertation advisor feels the student's direction no longer falls with his/her area of expertise, the student and advisor should discuss whether a change of advisor is warranted. The graduate director must be notified in writing of any change in advisors. If a student or advisor is uncomfortable discussing the issue directly with the other, he/she is encouraged to meet with the director of the graduate program. If a student is unable to identify an advisor, they may be dismissed from the PhD program, typically with the option of completing an MS degree.

Qualifying Examination

All students must pass a qualifying examination, consisting of a written and oral component, which will normally be taken in the fall semester of the third year of graduate school. When a candidate has prior graduate experience or an especially strong undergraduate preparation, the examination may be taken earlier. Alternatively, those who require extra time due to a high load of language classes or missing prerequisite courses may petition for a one-time extension.

Admission to Candidacy

To be admitted to candidacy, students must satisfy the requirements of the Graduate School, which includes passing all qualifying examinations and completing all required course work.

Dissertation Proposal

All students must defend orally a written dissertation proposal to their dissertation committee. After successful defense, the proposal must be submitted to the director of graduate studies in biology and approved by the Graduate School. The proposal is to be successfully defended by the end of the sixth semester.

Dissertation

A dissertation embodying the results of original research shall be submitted to and approved by the Department of Biology and the Graduate School. The general regulations of the Graduate School concerning the preparation of the dissertation must be met. These rules include a public oral defense of the written dissertation. Dissertations are to be presented in a style appropriate for one or more publications in scientific journals.

Teaching

At least one semester of supervised teaching is required of all doctoral students.

Biology PhD, Ecology, Evolution and Behavior Emphasis

The doctoral program emphasizes empirical and theoretical approaches to biological research. Students are required to integrate basic skills in biology with focal studies in an emphasis area. The program is designed to provide research experience and training appropriate for advanced positions in academic research and teaching, government and public agencies, and industry.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Biology only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

In addition to Graduate School admission requirements, applicants to the Ph.D. in Biology program must submit three letters of recommendation submitted from individuals able to comment on academic potential (such as faculty members at previously attended colleges or universities) and transcripts of all postsecondary academic work. We encourage GRE scores (Verbal, Quantitative, and Analytical) to be sent as well; however these are not required. Admission to the Ph.D. program normally requires a minimum grade point average overall and in biology courses of 3.0 (where A=4.0). Applicants from countries where English is not a primary language are required to meet the language requirements set by UMSL Global. Scores must be submitted before admission can be decided.

Applicants should have a bachelor's or M.S. degree from an accredited United States college or university or evidence of equivalent training at an accredited institution outside the United States. They should have the appropriate background for graduate work in biology, including courses in genetics, biochemistry, and evolution. Courses in organic chemistry, college physics, and calculus are expected. Students admitted to the Ph.D. program who have not met all the prerequisites may be required to make up deficiencies before admission to candidacy. The deficiencies will be decided during orientation meetings prior to the start of the second semester.

Degree Requirements

In addition to the general requirements of the Graduate School, the basic requirements for the Ph.D. degree in Biology include 60 graduate credit hours. At least 30 of the 60 hours must be taken at the 5000 or 6000 level. With the explicit consent of the graduate committee, students may take for graduate credit up to 3 credit hours of 3000 level courses in allied departments. Courses in biology at the 3000 level and below are not available for graduate credit. At least 31 of the 60 hours must be taken while in residence at the University of Missouri-St. Louis. Graduate credit for course work transferred from another program is subject to approval by the graduate committee and by the Graduate School. Graduate courses taken elsewhere will be considered for transfer credit during orientation meetings conducted prior to the start of the second semester of enrollment.

The requirements for all Ph.D. students include:

Coursework

- At least 30 credits of course work, including the following required courses (20 credits total)

| | | |
|-----------------------|--|---|
| BIOL 6889 | Graduate Seminar | 6 |
| BIOL 5178 & BIOL 5179 | Introduction to Graduate Research in Biology and Ethical Issues in Biology (to be taken in first year) | 2 |
| BIOL 5436 | Advanced Applied Bioinformatics | 3 |
| BIOL 4122 | Biostatistics | 3 |
| BIOL 5012 | Advanced Genetics | 3 |
| BIOL 5302 | Advanced Evolution | 3 |

Total Hours **20**

- Up to 30 credits of graduate research (BIOL 6905)

The maximum number of credit hours that may be applied toward the 60-hour requirement is limited as stated below:

- BIOL 6889, Graduate Seminar: 10 hours
- BIOL 6905, Graduate Research: 30 hours

The department also offers five 1-credit journal-club-style classes, focusing on different topics. A maximum of six credits from this group of courses can be applied towards the degree:

| | | |
|-----------|---|---|
| BIOL 5059 | Topics in Ecology, Evolution, and Systematics | 1 |
| BIOL 5069 | Topics in Cellular and Molecular Biology | 1 |
| BIOL 5079 | Topics in Floristic Taxonomy | 1 |
| BIOL 5089 | Topics in Animal Behavior | 1 |
| BIOL 5099 | Biology Colloquium | 1 |

Emphasis areas

Each Ph.D. student should select one of three emphasis areas, and choose at least six credit hours of appropriate elective courses to fit this area in consultation with their advisor. These emphases include Ecology, Evolution, and Behavior (EEB), Cellular and Molecular Biology (CMB), or Integrative Biology (IB), which would involve a combination of coursework from both of the previous emphases. Other courses may be included as electives with prior approval of the program coordinator.

Ecology, Evolution and Behavior Electives

| | | |
|-----------|---------------------------------------|---|
| BIOL 5192 | Community Ecology | 3 |
| BIOL 5312 | Theory of Systematics | 3 |
| BIOL 6102 | Advanced Topics in Behavioral Ecology | 3 |
| BIOL 6182 | Advanced Population Biology | 3 |
| BIOL 6502 | Advanced Evolution of Cognition | 3 |

Cellular and Molecular Biology Electives

| | | |
|-----------|---------------------------------|---|
| BIOL 6442 | Advanced Developmental Biology | 3 |
| BIOL 6550 | Advanced Bacterial Pathogenesis | 3 |
| BIOL 6602 | Advanced Molecular Biology | 3 |
| BIOL 6608 | Advanced Synthetic Biology | 3 |

| | | |
|-----------|--|---|
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6622 | Advanced Cellular Basis of Disease | 3 |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | 3 |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | 3 |
| BIOL 6652 | Advanced Virology | 3 |

Integrative Biology Electives

| | | |
|-----------|--|---|
| BIOL 5192 | Community Ecology | 3 |
| BIOL 5312 | Theory of Systematics | 3 |
| BIOL 6102 | Advanced Topics in Behavioral Ecology | 3 |
| BIOL 6182 | Advanced Population Biology | 3 |
| BIOL 6502 | Advanced Evolution of Cognition | 3 |
| BIOL 6608 | Advanced Synthetic Biology | 3 |
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6622 | Advanced Cellular Basis of Disease | 3 |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | 3 |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | 3 |
| BIOL 6652 | Advanced Virology | 3 |

Maintenance of Status

All students are expected to maintain a GPA of 3.0 or better. To maintain their status in the program, normally students will meet formally each year with their thesis committee, or if that has not been formed yet, with their dissertation advisor.

Identifying a Dissertation Advisor

All PhD students must identify a dissertation advisor, via mutual consent between the student and the advisor. Students entering the program with an agreement in hand may join the lab in their first semester (this is more common for the EEB emphasis). Alternatively, students entering the program may rotate through three labs to identify a permanent lab and advisor (more common for the CMB emphasis). Additionally, students are expected to work with their advisor to assemble their dissertation committee by the end of the 2nd year.

In the event that a student's interest changes or the dissertation advisor feels the student's direction no longer falls with his/her area of expertise, the student and advisor should discuss whether a change of advisor is warranted. The graduate director must be notified in writing of any change in advisors. If a student or advisor is uncomfortable discussing the issue directly with the other, he/she is encouraged to meet with the director of the graduate program. If a student is unable to identify an advisor, they may be dismissed from the PhD program, typically with the option of completing an MS degree.

Qualifying Examination

All students must pass a qualifying examination, consisting of a written and oral component, which will normally be taken in the fall semester of the third year of graduate school. When a candidate has prior graduate experience or an especially strong undergraduate preparation, the examination may be taken earlier. Alternatively, those who require extra

time due to a high load of language classes or missing prerequisite courses may petition for a one-time extension.

Admission to Candidacy

To be admitted to candidacy, students must satisfy the requirements of the Graduate School, which includes passing all qualifying examinations and completing all required course work.

Dissertation Proposal

All students must defend orally a written dissertation proposal to their dissertation committee. After successful defense, the proposal must be submitted to the director of graduate studies in biology and approved by the Graduate School. The proposal is to be successfully defended by the end of the sixth semester.

Dissertation

A dissertation embodying the results of original research shall be submitted to and approved by the Department of Biology and the Graduate School. The general regulations of the Graduate School concerning the preparation of the dissertation must be met. These rules include a public oral defense of the written dissertation. Dissertations are to be presented in a style appropriate for one or more publications in scientific journals.

Teaching

At least one semester of supervised teaching is required of all doctoral students.

Biology PhD, Integrative Biology Emphasis

The doctoral program emphasizes empirical and theoretical approaches to biological research. Students are required to integrate basic skills in biology with focal studies in an emphasis area. The program is designed to provide research experience and training appropriate for advanced positions in academic research and teaching, government and public agencies, and industry.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Biology only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

In addition to Graduate School admission requirements, applicants to the Ph.D. in Biology program must submit three letters of recommendation submitted from individuals able to comment on academic potential (such as faculty members at previously attended colleges or universities) and transcripts of all postsecondary academic work. We encourage GRE scores (Verbal, Quantitative, and Analytical) to be sent as well; however these are not required. Admission to the Ph.D. program normally requires a minimum grade point average overall and in biology courses of 3.0 (where A=4.0). Applicants from countries where English is not a primary language are required to meet the language requirements set by UMSL Global. Scores must be submitted before admission can be decided.

Applicants should have a bachelor's or M.S. degree from an accredited United States college or university or evidence of equivalent training at an accredited institution outside the United States. They should have the appropriate background for graduate work in biology, including courses

in genetics, biochemistry, and evolution. Courses in organic chemistry, college physics, and calculus are expected. Students admitted to the Ph.D. program who have not met all the prerequisites may be required to make up deficiencies before admission to candidacy. The deficiencies will be decided during orientation meetings prior to the start of the second semester.

Degree Requirements

In addition to the general requirements of the Graduate School, the basic requirements for the Ph.D. degree in Biology include 60 graduate credit hours. At least 30 of the 60 hours must be taken at the 5000 or 6000 level. With the explicit consent of the graduate committee, students may take for graduate credit up to 3 credit hours of 3000 level courses in allied departments. Courses in biology at the 3000 level and below are not available for graduate credit. At least 31 of the 60 hours must be taken while in residence at the University of Missouri-St. Louis. Graduate credit for course work transferred from another program is subject to approval by the graduate committee and by the Graduate School. Graduate courses taken elsewhere will be considered for transfer credit during orientation meetings conducted prior to the start of the second semester of enrollment.

The requirements for all Ph.D. students include:

Coursework

- At least 30 credits of course work, including the following required courses (20 credits total)

| | | |
|-----------------------|--|----|
| BIOL 6889 | Graduate Seminar | 6 |
| BIOL 5178 & BIOL 5179 | Introduction to Graduate Research in Biology and Ethical Issues in Biology (to be taken in first year) | 2 |
| BIOL 5436 | Advanced Applied Bioinformatics | 3 |
| BIOL 4122 | Biostatistics | 3 |
| BIOL 5012 | Advanced Genetics | 3 |
| BIOL 5302 | Advanced Evolution | 3 |
| Total Hours | | 20 |

- Up to 30 credits of graduate research (BIOL 6905)

The maximum number of credit hours that may be applied toward the 60-hour requirement is limited as stated below:

- BIOL 6889, Graduate Seminar: 10 hours
- BIOL 6905, Graduate Research: 30 hours

The department also offers five 1-credit journal-club-style classes, focusing on different topics. A maximum of six credits from this group of courses can be applied towards the degree:

| | | |
|-----------|---|---|
| BIOL 5059 | Topics in Ecology, Evolution, and Systematics | 1 |
| BIOL 5069 | Topics in Cellular and Molecular Biology | 1 |
| BIOL 5079 | Topics in Floristic Taxonomy | 1 |
| BIOL 5089 | Topics in Animal Behavior | 1 |
| BIOL 5099 | Biology Colloquium | 1 |

Emphasis areas

Each Ph.D. student should select one of three emphasis areas, and choose at least six credit hours of appropriate elective courses to fit this area in consultation with their advisor. These emphases include Ecology, Evolution, and Behavior (EEB), Cellular and Molecular Biology (CMB), or Integrative Biology (IB), which would involve a combination of coursework from both of the previous emphases. Other courses may be included as electives with prior approval of the program coordinator.

Ecology, Evolution and Behavior Electives

| | | |
|-----------|---------------------------------------|---|
| BIOL 5192 | Community Ecology | 3 |
| BIOL 5312 | Theory of Systematics | 3 |
| BIOL 6102 | Advanced Topics in Behavioral Ecology | 3 |
| BIOL 6182 | Advanced Population Biology | 3 |
| BIOL 6502 | Advanced Evolution of Cognition | 3 |

Cellular and Molecular Biology Electives

| | | |
|-----------|--|---|
| BIOL 6442 | Advanced Developmental Biology | 3 |
| BIOL 6550 | Advanced Bacterial Pathogenesis | 3 |
| BIOL 6602 | Advanced Molecular Biology | 3 |
| BIOL 6608 | Advanced Synthetic Biology | 3 |
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6622 | Advanced Cellular Basis of Disease | 3 |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | 3 |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | 3 |
| BIOL 6652 | Advanced Virology | 3 |

Integrative Biology Electives

| | | |
|-----------|--|---|
| BIOL 5192 | Community Ecology | 3 |
| BIOL 5312 | Theory of Systematics | 3 |
| BIOL 6102 | Advanced Topics in Behavioral Ecology | 3 |
| BIOL 6182 | Advanced Population Biology | 3 |
| BIOL 6502 | Advanced Evolution of Cognition | 3 |
| BIOL 6608 | Advanced Synthetic Biology | 3 |
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6622 | Advanced Cellular Basis of Disease | 3 |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function | 3 |
| BIOL 6642 | Advanced Plant Biology and Biotechnology | 3 |
| BIOL 6652 | Advanced Virology | 3 |

Maintenance of Status

All students are expected to maintain a GPA of 3.0 or better. To maintain their status in the program, normally students will meet formally each year with their thesis committee, or if that has not been formed yet, with their dissertation advisor.

Identifying a Dissertation Advisor

All PhD students must identify a dissertation advisor, via mutual consent between the student and the advisor. Students entering the program with an agreement in hand may join the lab in their first semester (this is more common for the EEB emphasis). Alternatively, students entering the program may rotate through three labs to identify a permanent lab and advisor (more common for the CMB emphasis). Additionally, students are expected to work with their advisor to assemble their dissertation committee by the end of the 2nd year.

In the event that a student's interest changes or the dissertation advisor feels the student's direction no longer falls with his/her area of expertise, the student and advisor should discuss whether a change of advisor is warranted. The graduate director must be notified in writing of any change in advisors. If a student or advisor is uncomfortable discussing the issue directly with the other, he/she is encouraged to meet with the director of the graduate program. If a student is unable to identify an advisor, they may be dismissed from the PhD program, typically with the option of completing an MS degree.

Qualifying Examination

All students must pass a qualifying examination, consisting of a written and oral component, which will normally be taken in the fall semester of the third year of graduate school. When a candidate has prior graduate experience or an especially strong undergraduate preparation, the examination may be taken earlier. Alternatively, those who require extra time due to a high load of language classes or missing prerequisite courses may petition for a one-time extension.

Admission to Candidacy

To be admitted to candidacy, students must satisfy the requirements of the Graduate School, which includes passing all qualifying examinations and completing all required course work.

Dissertation Proposal

All students must defend orally a written dissertation proposal to their dissertation committee. After successful defense, the proposal must be submitted to the director of graduate studies in biology and approved by the Graduate School. The proposal is to be successfully defended by the end of the sixth semester.

Dissertation

A dissertation embodying the results of original research shall be submitted to and approved by the Department of Biology and the Graduate School. The general regulations of the Graduate School concerning the preparation of the dissertation must be met. These rules include a public oral defense of the written dissertation. Dissertations are to be presented in a style appropriate for one or more publications in scientific journals.

Teaching

At least one semester of supervised teaching is required of all doctoral students.

Biotechnology Graduate Certificate

The Graduate Certificate in Biotechnology is offered for students with a bachelor's degree who wish to obtain advanced level training in those fields of biology that pertain to biotechnology without necessarily earning a master's degree. Students who enter this program may have a variety

of interests, including biochemistry, microbiology, molecular biology, cell biology, developmental biology, or molecular evolution.

Admission

Students who wish to earn a Graduate Certificate in Biotechnology must apply to the Biotechnology Certificate Program for admission to the program. Students must be enrolled in the graduate program at the University of Missouri-St. Louis either as non-degree students or as master's students.

Students who wish to obtain a Master's degree with a Biotechnology Certificate must be accepted into the Master's degree program in Biology as well as into the Biotechnology Certificate Program. Students who apply to the certificate program as non-degree students will earn only the certificate.

Students must have at least a 3.0 GPA for undergraduate course work to be accepted into the program. The minimum course prerequisites for admission to the program are undergraduate courses in genetics, cell biology, and biochemistry.

Requirements

Students must maintain a minimum GPA of 3.0 to remain in the certificate program. The certificate is awarded after completion of the courses listed below. Students enrolled in the Master's program may simultaneously earn a graduate degree and count the appropriate courses from the list below toward the Biotechnology Certificate.

The biotechnology certificate requires 18 credit hours of course work:

| | | |
|--------------|---|---|
| BIOL 6615 | Advanced Biotechnology Laboratory II | 4 |
| BIOL 6602 | Advanced Molecular Biology (If both Group II courses are taken, one may be used as elective credit) | 3 |
| or BIOL 6612 | | |

Electives

Select 11 credits from the following: 11

| | |
|-----------|--|
| Biology | |
| BIOL 4712 | |
| BIOL 4842 | Immunobiology |
| BIOL 5069 | Topics in Cellular and Molecular Biology |
| BIOL 6550 | Advanced Bacterial Pathogenesis |
| BIOL 6612 | |
| BIOL 6622 | Advanced Cellular Basis of Disease |
| BIOL 6632 | Advanced Nucleic Acid Structure and Function |
| BIOL 6642 | Advanced Plant Biology and Biotechnology |
| BIOL 6652 | Advanced Virology |
| BIOL 6699 | Graduate Internship in Biotechnology |
| BIOL 6889 | Graduate Seminar |
| BIOL 6915 | Graduate Research Practicum |
| BIOL 6920 | Advanced Topics in Biology |
| Chemistry | |
| CHEM 4722 | Advanced Biochemistry |

| | |
|--------------------|-------------------------|
| CHEM 4733 | Biochemistry Laboratory |
| CHEM 4772 | Physical Biochemistry |
| Total Hours | 18 |

Business Administration BS

General Education Requirements

All Business majors must meet the university general education requirements. As part of meeting the university's general education requirements, all Business majors must complete the prerequisite courses below :

| | | |
|----------------|--|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 | Basic Calculus | 3 |
| or BUS AD 1107 | Quantitative Methods for Business | |
| MATH 1105 | Basic Probability and Statistics | 3 |

Degree Requirements

All Business majors must meet College of Business G.P.A., good standing and credit requirements (p. 209) as outlined in the Bulletin.

Lower Division Business Core Requirements

| | | |
|-------------|---|---|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |

Total Hours 12

Upper Division Requirements

| | | |
|-----------|------------------|---|
| ENGL 3120 | Business Writing | 3 |
|-----------|------------------|---|

Upper Division Non-Business or Business Requirement

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; also available on our web site.

Upper Division Business Requirements

| | | |
|--------------|---|---|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
| FINANCE 3500 | Financial Management | 3 |
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 4219 | Strategic Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |

| | |
|--|-----------|
| A minimum of 15 additional hours of upper division approved business electives | 15 |
| Total Hours | 36 |

¹ Course is required for BS Accounting and all BS Business Administration majors.

Assessment Requirement

| | | |
|-----------|-----------------------------|---|
| MGMT 4220 | Business Assessment Testing | 0 |
|-----------|-----------------------------|---|

General Business

For those undecided regarding a specific emphasis area, a general business degree option is available. Students must complete a minimum of 18 hours of upper division approved business electives (see comprehensive list of business courses in the course descriptions section of this publication)

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Articulate and apply foundational knowledge associated with core business disciplines (accounting, finance, supply chain management, marketing, information technology, and management). (Functional Business Knowledge)
- (a) Identify business problems and opportunities, (b) analyze relevant strategic, tactical, and operational options through qualitative and quantitative methods in order to (c) make recommendations and provide the rationale behind decisions. (Decision Making Skills)
- Identify and evaluate global business factors, including the opportunities, constraints and risks of operating across various country environments. (Global Orientation)
- Identify legal/ethical issues, assess impact, and decide on a socially responsible course of action. (Ethical Orientation)
- Students will be able to effectively communicate business issues, analyses and recommendations in written and oral presentations to stakeholders. (Business Communication Skills)
- Develop technological and quantitative skills, including those associated with statistics, data visualization and analysis, project management, social media, and those commensurate with their business specialization. (Technological Skills)
- Demonstrate interpersonal skills to collaborate within diverse teams, effectively engage with stakeholders in a professional manner, and develop leadership skills. (Interpersonal Skills)

Sample Four Year Plan

| First Year | | | |
|---------------------------------|-------|--|-------|
| Fall | Hours | Spring | Hours |
| MATH 1030 | | 3 BUS AD 1107 or MATH 1100 | 3 |
| ENGL 1100 | | 3 ECON 1001 | 3 |
| BUS AD 1000 or ENT 1100 | | 3 INFSYS 2800 | 3 |
| INFSYS 1800 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| Explore- Humanities & Fine Arts | | 3 EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| INTDSC 1003 | 1 | | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 1105 | | 3 ACCTNG 2410 | 3 |

| | | |
|---------------------------------|--------------------------------------|----|
| ACCTNG 2400 | 3 BUS AD 2900 | 3 |
| ECON 1002 | 3 SCMA 3300 | 3 |
| CORE: Communication Proficiency | 3 EXPLORE – Humanities and Fine Arts | 3 |
| CORE: US History and Government | 3 Cultural Diversity Requirement | 3 |
| | 15 | 15 |

| Third Year | | | |
|------------|-------|---|-------|
| Fall | Hours | Spring | Hours |
| SCMA 3301 | | 3 ENT 3100 | 3 |
| MGMT 3600 | | 3 FINANCE 3500 | 3 |
| ENGL 3120 | | 3 Junior/Senior Level Business Elective | 3 |
| MKTG 3700 | | 3 Global Awareness Course | 3 |
| Elective | | 3 Elective | 3 |
| | 15 | | 15 |

| Fourth Year | | | |
|---------------------------------------|-------|---|-------|
| Fall | Hours | Spring | Hours |
| Junior/Senior Level Business Elective | | 6 MGMT 4219 & MGMT 4220 | 3 |
| Global Awareness Course | | 3 Junior/Senior Level Business Elective | 6 |
| Electives | | 6 Electives | 5 |
| | 15 | | 14 |

Total Hours: 120

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Business Administration BS, Entrepreneurship Emphasis

The Entrepreneurship emphasis area will focus on students acquiring knowledge, abilities, and skills enabling them to ultimately develop and successfully launch entrepreneurial ventures in small, medium sized, corporate, and not-for-profit organizational settings.

General Education Requirements

All Business majors must meet the university general education requirements. As part of meeting the university's general education requirements, all Business majors must complete the prerequisite courses below :

| | | |
|--------------------------|--|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 or BUS AD 1107 | Basic Calculus | 3 |
| MATH 1105 | Quantitative Methods for Business | 3 |
| | Basic Probability and Statistics | 3 |

Degree Requirements

All Business majors must meet College of Business G.P.A., good standing and credit requirements (p. 209) as outlined in the Bulletin.

Lower Division Business Core Requirements

| | | |
|-------------|--------------------------------------|---|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
|-------------|--------------------------------------|---|

| | | |
|--------------------|---|-----------|
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| Total Hours | | 12 |

Upper Division Requirements

| | | |
|-----------|------------------|---|
| ENGL 3120 | Business Writing | 3 |
|-----------|------------------|---|

Upper Division Non-Business or Business Requirement

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; also available on our web site.

Upper Division Business Requirements

| | | |
|--|---|-----------|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
| FINANCE 3500 | Financial Management | 3 |
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 4219 | Strategic Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |
| A minimum of 15 additional hours of upper division approved business electives | | 15 |
| Total Hours | | 36 |

¹ Course is required for BS Accounting and all BS Business Administration majors.

Assessment Requirement

| | | |
|-----------|-----------------------------|---|
| MGMT 4220 | Business Assessment Testing | 0 |
|-----------|-----------------------------|---|

Emphasis Area Requirements

Required Courses

| | | |
|----------|---|---|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
|----------|---|---|

Elective

Choose five of the following courses: ² 15

| | | |
|--------------------|---|--|
| ENT 3133/MKTG 3733 | Customer Relationship Management (CRM) | |
| ENT 3145 | Seminar in Venture Capital and Private Equity | |
| ENT 3150 | Entrepreneurial Opportunity Evaluation | |
| ENT 3161/MKTG 3761 | Entrepreneurial Product Development | |
| ENT 3190 | Internship in Entrepreneurship ³ | |
| ENT 4100 | Entrepreneurship Capstone | |
| ENT 4114/MGMT 4614 | Entrepreneurship/Small Business Management | |
| ENT 4147 | Introduction to Project Management | |

| | | |
|--------------------|--|-----------|
| ENT 4199 | Independent Study in Entrepreneurship ³ | |
| Total Hours | | 18 |

¹ ENT 3100 should be taken before any electives in the program.

² Other elective courses may be taken with approval of program coordinator.

³ At most, only one of ENT 3190 and ENT 4199 may be counted toward the Entrepreneurship emphasis area.

Learning Outcomes

Upon completion of the program, graduates should be able to:

- Articulate and apply foundational knowledge associated with core business disciplines (accounting, finance, supply chain management, marketing, information technology, and management). (Functional Business Knowledge)
- (a) Identify business problems and opportunities, (b) analyze relevant strategic, tactical, and operational options through qualitative and quantitative methods in order to (c) make recommendations and provide the rationale behind decisions. (Decision Making Skills)
- Identify and evaluate global business factors, including the opportunities, constraints and risks of operating across various country environments. (Global Orientation)
- Identify legal/ethical issues, assess impact, and decide on a socially responsible course of action. (Ethical Orientation)
- Students will be able to effectively communicate business issues, analyses and recommendations in written and oral presentations to stakeholders. (Business Communication Skills)
- Develop technological and quantitative skills, including those associated with statistics, data visualization and analysis, project management, social media, and those commensurate with their business specialization. (Technological Skills)
- Demonstrate interpersonal skills to collaborate within diverse teams, effectively engage with stakeholders in a professional manner, and develop leadership skills. (Interpersonal Skills)
- Utilize innovation and creativity tools and techniques to solve business and social problems.
- Describe how venture capital and private equity processes operate, and explain other sources of financing for entrepreneurial ventures.
- Demonstrate an entrepreneurial mindset by creating and launching a real-world business or social venture.
- Demonstrate expertise in applying methods and processes that support effective scaling of entrepreneurial ventures, including operational and strategic planning, project management techniques, and protecting technology.

Sample Four Year Plan

| First Year | | | |
|----------------------------------|-------|------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 BUS AD 1107 or MATH 1100 | 3 |
| MATH 1030 | 3 | ECON 1001 | 3 |
| ENGL 1100 | 3 | INFSYS 2800 | 3 |
| ENT 1100 | 3 | CORE - Communication Proficiency | 3 |
| INFSYS 1800 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| CORE - US History and Government | 3 | | |
| 16 | | 15 | |

Second Year

| Fall | Hours | Spring | Hours |
|---|-------|--------------------------------------|-------|
| MATH 1105 | | 3 ACCTNG 2410 | 3 |
| ACCTNG 2400 | | 3 BUS AD 2900 | 3 |
| ECON 1002 | | 3 SCMA 3300 | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 ENT 3100 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|-------------------------|-------|----------------------------------|-------|
| MGMT 3600 | | 3 FINANCE 3500 | 3 |
| MKTG 3700 | | 3 ENT 3000-Level Elective | 3 |
| SCMA 3301 | | 3 Cultural Diversity Requirement | 3 |
| ENT 3000-level Elective | | 3 Electives | 6 |
| ENGL 3120 | | 3 | |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------------------|-------|----------------------------|-------|
| ENT 3000-level Electives | | 6 MGMT 4219 & MGMT 4220 | 3 |
| Global Awareness Course | | 3 ENT 4100 | 3 |
| Elective | | 6 Global Awareness Course | 3 |
| | | Elective | 5 |
| | 15 | | 14 |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Business Administration BS, Finance Emphasis

General Education Requirements

All Business majors must meet the university general education requirements. As part of meeting the university's general education requirements, all Business majors must complete the prerequisite courses below :

| | | |
|-----------------------------|---|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 or BUS AD 1107 | Basic Calculus Quantitative Methods for Business | 3 |
| MATH 1105 | Basic Probability and Statistics | 3 |

Degree Requirements

All Business majors must meet College of Business G.P.A., good standing and credit requirements (p. 209) as outlined in the Bulletin.

Lower Division Business Core Requirements

| | | |
|-------------|---|---|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |

Total Hours 12

Upper Division Requirements

| | | |
|-----------|------------------|---|
| ENGL 3120 | Business Writing | 3 |
|-----------|------------------|---|

Upper Division Non-Business or Business Requirement

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; also available on our web site.

Upper Division Business Requirements

| | | |
|--|---|-----------|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
| FINANCE 3500 | Financial Management | 3 |
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 4219 | Strategic Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |
| A minimum of 15 additional hours of upper division approved business electives | | 15 |
| Total Hours | | 36 |

¹ Course is required for BS Accounting and all BS Business Administration majors.

Assessment Requirement

| | | |
|-----------|-----------------------------|---|
| MGMT 4220 | Business Assessment Testing | 0 |
|-----------|-----------------------------|---|

Emphasis in Finance

Finance is a multidisciplinary field that combines various concepts from management, economics and accounting with financial techniques to make sound business decisions and solve problems.

A minimum of 18 hours of upper division finance electives must be selected from the following:

| | | |
|--------------|--|---|
| FINANCE 3501 | Financial Policies | 3 |
| FINANCE 3503 | Computer Applications in Finance | 3 |
| FINANCE 3520 | Investments | 3 |
| FINANCE 3521 | Financial Engineering: Applying Derivatives | 3 |
| FINANCE 3523 | Fixed Income Analysis | 3 |
| FINANCE 3525 | Practicum in Investments | 1 |
| FINANCE 3540 | Introduction to Financial Institutions and Financial Markets | 3 |

| | | |
|--------------------------------|---|-----|
| FINANCE 3541 | Commercial Bank Management | 3 |
| FINANCE 3542 | Principles of Real Estate | 3 |
| FINANCE 3560 | Practice of Personal Financial Planning | 3 |
| FINANCE 3561 | Principles of Insurance | 3 |
| FINANCE 3562 | Life Insurance and Employee Benefits | 3 |
| FINANCE 3563 | Retirement Planning and Employee Benefits | 3 |
| FINANCE 3564 | Estate Planning and Trusts | 3 |
| FINANCE/INTL BUS 3580 | International Corporate Finance | 3 |
| FINANCE/INTL BUS 3582 | International Investments | 3 |
| FINANCE 3585/ INTL BUS 3281 | Business in China | 3 |
| FINANCE 3590 | Internship in Finance | 1-3 |
| FINANCE 3598 | Seminar in Finance | 1-3 |
| FINANCE 3599 | Independent Study in Finance (approved) | 1-3 |

Track Certification

Students may combine selected courses from the list above, and other specified upper division business electives, to fulfill a designated track with dual objectives of acquiring in depth knowledge, and to prepare and be eligible for various professional certification examinations. Detailed information is available in the Office of Undergraduate Academic Advising. The specific tracks available include:

- Corporate Finance
- Financial Institutions and Services
- Investment and Portfolio Management
- Financial Planning
- Insurance

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Articulate and apply foundational knowledge associated with core business disciplines (accounting, finance, supply chain management, marketing, information technology, and management). (Functional Business Knowledge)
- (a) Identify business problems and opportunities, (b) analyze relevant strategic, tactical, and operational options through qualitative and quantitative methods in order to (c) make recommendations and provide the rationale behind decisions. (Decision Making Skills)
- Identify and evaluate global business factors, including the opportunities, constraints and risks of operating across various country environments. (Global Orientation)
- Identify legal/ethical issues, assess impact, and decide on a socially responsible course of action. (Ethical Orientation)
- Students will be able to effectively communicate business issues, analyses and recommendations in written and oral presentations to stakeholders. (Business Communication Skills)
- Develop technological and quantitative skills, including those associated with statistics, data visualization and analysis, project management, social media, and those commensurate with their business specialization. (Technological Skills)

- Demonstrate interpersonal skills to collaborate within diverse teams, effectively engage with stakeholders in a professional manner, and develop leadership skills. (Interpersonal Skills)
- Explain and apply fundamental concepts in finance.
- Address corporate and investment issues by utilizing financial principles.
- Interpret and analyze financial data to evaluate firm performance.
- Apply financial tools and technologies to assist in real-life personal financial decision making and real estate investment.

Sample Four Year Plan

| First Year | | | |
|----------------------------------|-------|---|-------|
| Fall | Hours | Spring | Hours |
| MATH 1030 | | 3 BUS AD 1107 or MATH 1100 | 3 |
| ENGL 1100 | | 3 ECON 1001 | 3 |
| BUS AD 1000 or ENT 1100 | | 3 INFSYS 2800 | 3 |
| INFSYS 1800 | | 3 EXPLORE – Humanities and Fine Arts | 3 |
| EXPLORE – Humanities & Fine Arts | | 3 EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| INTDSC 1003 | 1 | | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 1105 | | 3 ACCTNG 2410 | 3 |
| ACCTNG 2400 | | 3 BUS AD 2900 | 3 |
| ECON 1002 | | 3 FINANCE 3500 | 3 |
| CORE – Communication Proficiency | | 3 SCMA 3301 | 3 |
| CORE – US History and Government | | 3 EXPLORE – Humanities & Fine Arts | 3 |
| | 15 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| SCMA 3300 | | 3 MKTG 3700 | 3 |
| MGMT 3600 | | 3 ENT 3100 | 3 |
| ENGL 3120 | | 3 Finance Elective | 3 |
| Finance Elective | | 3 Electives | 6 |
| Cultural Diversity Requirement | 3 | | |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| Finance Electives | | 6 MGMT 4219 & MGMT 4220 | 3 |
| Global Awareness Course | | 3 Finance Electives | 6 |
| Electives | | 6 Global Awareness Course | 3 |
| | | Electives | 2 |
| | 15 | | 14 |
| Total Hours: 120 | | | |

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Business Administration BS, Information Systems and Technology Emphasis

BSBA (IST emphasis) students will complement coursework in Business Administration with coursework in Information Systems and Technology

(IST) to understand how business processes, people, and organizational design when complemented with IST can solve business problems and enable competitive advantage.

General Education Requirements

All Business majors must meet the university general education requirements. As part of meeting the university's general education requirements, all Business majors must complete the prerequisite courses below :

| | | |
|----------------|--|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 | Basic Calculus | 3 |
| or BUS AD 1107 | Quantitative Methods for Business | |
| MATH 1105 | Basic Probability and Statistics | 3 |

Degree Requirements

All Business majors must meet College of Business G.P.A., good standing and credit requirements (p. 209) as outlined in the Bulletin.

Lower Division Business Core Requirements

| | | |
|--------------------|---|-----------|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| Total Hours | | 12 |

Upper Division Requirements

| | | |
|-----------|------------------|---|
| ENGL 3120 | Business Writing | 3 |
|-----------|------------------|---|

Upper Division Non-Business or Business Requirement

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; also available on our web site.

Upper Division Business Requirements

| | | |
|--|---|-----------|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
| FINANCE 3500 | Financial Management | 3 |
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 4219 | Strategic Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |
| A minimum of 15 additional hours of upper division approved business electives | | 15 |
| Total Hours | | 36 |

¹ Course is required for BS Accounting and all BS Business Administration majors.

Assessment Requirement

| | | |
|-----------|-----------------------------|---|
| MGMT 4220 | Business Assessment Testing | 0 |
|-----------|-----------------------------|---|

Emphasis Area Requirements

| | | |
|---|---|-----------|
| INFSYS 3830 | Data Programming | 3 |
| INFSYS 3848 | Introduction to Information Security | 3 |
| INFSYS 3862 | Artificial Intelligence Applications for Business | 3 |
| INFSYS 4800 | IT Leadership | 3 |
| INFSYS 4847 | IT Project Management | 3 |
| Elective | | 3 |
| One additional INFSYS course ¹ | | |
| Total Hours | | 18 |

¹ A course in a related-field may be taken with approval of the department chair.

Learning Outcomes

Upon completion of the program, graduates should be able to:

- Articulate and apply foundational knowledge associated with core business disciplines (accounting, finance, supply chain management, marketing, information technology, and management). (Functional Business Knowledge)
- (a) Identify business problems and opportunities, (b) analyze relevant strategic, tactical, and operational options through qualitative and quantitative methods in order to (c) make recommendations and provide the rationale behind decisions. (Decision Making Skills)
- Identify and evaluate global business factors, including the opportunities, constraints and risks of operating across various country environments. (Global Orientation)
- Identify legal/ethical issues, assess impact, and decide on a socially responsible course of action. (Ethical Orientation)
- Students will be able to effectively communicate business issues, analyses and recommendations in written and oral presentations to stakeholders. (Business Communication Skills)
- Develop technological and quantitative skills, including those associated with statistics, data visualization and analysis, project management, social media, and those commensurate with their business specialization. (Technological Skills)
- Demonstrate interpersonal skills to collaborate within diverse teams, effectively engage with stakeholders in a professional manner, and develop leadership skills. (Interpersonal Skills)
- Recognize challenges confronting the management of information systems
- Understand ethical, legal, privacy, and compliance issues relating to information systems
- Develop the foundations of business intelligence, cybersecurity, and enterprise systems
- Explain the analysis and design of information systems
- Synthesize data for managerial decisions

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|--|-------|
| Fall | Hours | Spring | Hours |
| MATH 1030 | | 3 BUS AD 1107 or MATH 1100 | 3 |
| ENGL 1100 | | 3 ECON 1001 | 3 |
| BUS AD 1000 or ENT 1100 | | 3 INFSYS 2800 | 3 |
| INFSYS 1800 | | 3 EXPLORE: Humanities and Fine Arts | 3 |
| EXPLORE: Humanities & Fine Arts | | 3 EXPLOER: Mathematics and Life/ Natural Sciences | 3 |
| INTDSC 1003 | 1 | | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 1105 | | 3 ACCTNG 2410 | 3 |
| ACCTNG 2400 | | 3 BUS AD 2900 | 3 |
| ECON 1002 | | 3 SCMA 3300 | 3 |
| INFSYS 3830 | | 3 INFSYS 3862 | 3 |
| CORE: Communication Proficiency | | 3 EXPLORE: Humanities and Fine Arts | 3 |
| | 15 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| SCMA 3301 | | 3 FINANCE 3500 | 3 |
| MGMT 3600 | | 3 MKTG 3700 | 3 |
| ENGL 3120 | | 3 INFSYS 4800 | 3 |
| CORE - U.S. History and Government | | 3 ENT 3100 | 3 |
| INFSYS 3848 | | 3 Cultural Diversity Requirement | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| INFSYS 4847 | | 3 MGMT 4219 & MGMT 4220 | 3 |
| Global Awareness Course | | 3 INFSYS 3XXX-4XXX Elective | 3 |
| Electives | 9 | Elective | 8 |
| | 15 | | 14 |
| Total Hours: 120 | | | |

Business Administration BS, International Business Emphasis

National markets are becoming increasingly integrated. The study of international business focuses on understanding the forces behind this globalization of markets and production.

General Education Requirements

All Business majors must meet the university general education requirements. As part of meeting the university's general education requirements, all Business majors must complete the prerequisite courses below :

| | | |
|-----------------------------|---|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 or BUS AD 1107 | Basic Calculus Quantitative Methods for Business | 3 |
| MATH 1105 | Basic Probability and Statistics | 3 |

Degree Requirements

All Business majors must meet College of Business G.P.A., good standing and credit requirements (p. 209) as outlined in the Bulletin.

Lower Division Business Core Requirements

| | | |
|-------------|---|----|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| Total Hours | | 12 |

Upper Division Requirements

| | | |
|-----------|------------------|---|
| ENGL 3120 | Business Writing | 3 |
|-----------|------------------|---|

Upper Division Non-Business or Business Requirement

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; also available on our web site.

Upper Division Business Requirements

| | | |
|--|---|----|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
| FINANCE 3500 | Financial Management | 3 |
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 4219 | Strategic Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |
| A minimum of 15 additional hours of upper division approved business electives | | 15 |
| Total Hours | | 36 |

¹ Course is required for BS Accounting and all BS Business Administration majors.

Assessment Requirement

| | | |
|-----------|-----------------------------|---|
| MGMT 4220 | Business Assessment Testing | 0 |
|-----------|-----------------------------|---|

Emphasis Area Requirements

Twelve (12) hours are required of all individuals seeking an emphasis in International Business.

| | | |
|--|--|---|
| Select two of the following courses. | | 6 |
| INTL BUS/MGMT 3680 | International Management | |
| INTL BUS/FINANCE 3580 | International Corporate Finance | |
| INTL BUS/MKTG 3780 | International Marketing | |
| Select two additional approved international business courses from the following. ¹ | | 6 |
| INTL BUS 3280 | The Law of International Business Transactions | |

| | |
|-----------------------|---|
| INTL BUS 3281 | Business in China |
| INTL BUS 3282 | Managing the Global Workforce |
| INTL BUS 3283 | International Business and Society |
| INTL BUS 3285 | Role of the Global Corporation |
| INTL BUS 3289 | Practicum in International Business |
| INTL BUS 3290 | Internship in International Business |
| INTL BUS 3299 | Independent Study in International Business |
| INTL BUS/FINANCE 3580 | International Corporate Finance |
| INTL BUS/FINANCE 3582 | International Investments |
| INTL BUS/MGMT 3680 | International Management |
| INTL BUS/MKTG 3780 | International Marketing |
| INTL BUS 4281 | Entrepreneurship in the Global Environment |
| INTL BUS 4289 | International Strategic Management |
| INTL BUS/LOG OM 4381 | Global Supply Chain Management |

Total Hours **12**

¹ Other than INTL BUS 3289.

Proficiency in a foreign language of international commerce (determined by the College of Business Administration) must be demonstrated - 13 credit hours in one approved language or satisfactory performance on the UMSL foreign language placement test.

Students must complete one of the following International Experience Requirements:

INTL BUS 4280 International Business Experience 0

1. Study abroad for three or more credits hours.¹
2. Complete an international internship approved by the International Business Institute (maximum of 3 credit hours).
3. Complete a minimum of one-year international experience within 5 years of entering the program in any of the following areas: Peace Corps, volunteer work with an organization, an international posting by a company or government agency and/or approved, significant international experience. Documentation is required for approval.

¹ International students in the IB Emphasis will meet their International Experience requirement through their study in the United States.

Learning Outcomes

Upon completion of the program, students will be able to:

- Articulate and apply foundational knowledge associated with core business disciplines (accounting, finance, supply chain management, marketing, information technology, and management). (Functional Business Knowledge)
- (a) Identify business problems and opportunities, (b) analyze relevant strategic, tactical, and operational options through qualitative and quantitative methods in order to (c) make recommendations and provide the rationale behind decisions. (Decision Making Skills)
- Identify and evaluate global business factors, including the opportunities, constraints and risks of operating across various country environments. (Global Orientation)

- Identify legal/ethical issues, assess impact, and decide on a socially responsible course of action. (Ethical Orientation)
- Students will be able to effectively communicate business issues, analyses and recommendations in written and oral presentations to stakeholders. (Business Communication Skills)
- Develop technological and quantitative skills, including those associated with statistics, data visualization and analysis, project management, social media, and those commensurate with their business specialization. (Technological Skills)
- Demonstrate interpersonal skills to collaborate within diverse teams, effectively engage with stakeholders in a professional manner, and develop leadership skills. (Interpersonal Skills)
- Develop language proficiency and effective communication skills in a chosen foreign language;
- Analyze cultural differences and environmental factors to develop competitive strategies globally;
- Evaluate political, legal, and ethical issues across different country markets;
- Assess alternative strategic options and make specific recommendations, such as global market entry and currency risk analysis.

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|---|-------|
| Fall | Hours | Spring | Hours |
| MATH 1030 | | 3 ECON 1001 | 3 |
| ENGL 1100 | | 3 BUS AD 1107 or MATH 1100 | 3 |
| BUS AD 1000 or ENT 1100 | | 3 INFSYS 2800 | 3 |
| INFSYS 1800 | | 3 EXPLORE – Humanities and Fine Arts | 3 |
| EXPLORE – Humanities & Fine Arts | | 3 EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| INTDSC 1003 ¹ | 1 | | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 1105 | | 3 ACCTNG 2410 | 3 |
| ECON 1002 | | 3 BUS AD 2900 | 3 |
| ACCTNG 2400 | | 3 SCMA 3301 | 3 |
| Foreign Language 1001 | | 5 Foreign Language 1002 | 5 |
| CORE – Communication Proficiency | 3 | | |
| | 17 | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| SCMA 3300 | | 3 FINANCE 3500 | 3 |
| MGMT 3600 | | 3 ENGL 3120 | 3 |
| MKTG 3700 | | 3 ENT 3100 | 3 |
| Foreign Language 2101 | | 3 INTL BUS Group 1 Elective | 3 |
| CORE – US History & Government | 3 | 3 INTL BUS Group 2 Elective | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| INTL BUS Group 1 Elective | | 3 INTL BUS 4280 | 0 |
| INTL BUS Group 2 Elective | | 3 MGMT 4219 & MGMT 4220 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 Junior/Senior Business Electives | 3 |
| Cultural Diversity Requirement | | 3 Business or Non-Business Electives | 7 |
| Electives | 3 | | |
| | 15 | | 13 |
| Total Hours: 120 | | | |

Business Administration BS, Management Emphasis

The study of management focuses on the behavior of individuals and groups in an organizational setting.

Admission Requirements

Students entering UMSL may declare themselves as Business majors in the College of Business Administration (COBA). They are advised by Business and may take Business courses as long as they maintain “good standing” status (see General Degree Requirements listed below) and have satisfied the prerequisites for the courses they propose to take.

Credit Hour Requirements

Student must complete a minimum number of hours in the following areas:

- 120 credit hours for the baccalaureate degree
- 48 credit hours of coursework offered by the College of Business
- 36 credit hours of upper-division coursework offered by the College of Business

Credit Hour Requirements for Transfer Students

- Students must complete a minimum of 60 hours from four-year, baccalaureate degree granting colleges or universities.
- A minimum of 50% of all business course work must be completed at UMSL.
- Students must complete a minimum of 21 graded hours in business courses.
- Students must complete their last 30 hours in residence at UMSL.

Credit for Lower Division Transfer Courses

Students seeking to use a lower division course to satisfy an upper division business requirement must validate the course being transferred. If successfully validated, the transfer course will waive the need to take the upper division equivalent course at UMSL, but the course transferred will be counted as lower division; it will not count toward the 36 upper division hours required in business.

GPA Requirements

Student must carry a minimum 2.3 GPA in the following areas in order to graduate. Grade modification may be used.

- Campus GPA
- College of Business Coursework GPA
- Major GPA
- Emphasis Area GPA

Grade Requirements

A minimum grade of C- is required for each course in the business core (except MGMT 4219); for each course which serves as a prerequisite for another course; and for each course in an emphasis area and/or major.

Satisfactory/Unsatisfactory Option

Majors may take no more than 9 satisfactory/unsatisfactory hours in the College. Satisfactory/Unsatisfactory grading is restricted to elective coursework.

Prerequisite Requirements

Business course prerequisites are enforced by the College of Business Administration and include a minimum campus grade point average of 2.0 as a condition for taking any upper division business course.

Good Standing

Students are allowed to take a maximum of 9 hours of upper-division Business classes before a “good standing” evaluation is applied to their academic records. In order to remain in good standing and continue to enroll in upper division Business courses, students must maintain a 2.3 campus and Business grade point average and must have completed the following cluster of courses (with a grade of C- or higher):

| | | |
|-----------------------------|---|---|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 or BUS AD 1107 | Basic Calculus Quantitative Methods for Business | 3 |
| MATH 1105 | Basic Probability and Statistics | 3 |

Additional Emphasis Areas

Emphasis areas may be added for up to two years following degree completion. Each additional degree from the College of Business Administration requires 15 unique hours taken at UMSL subsequent to completion of the prior business degree.

Emphasis Area Requirements

The study of management focuses on the behavior of individuals and groups in an organizational setting.

| | | |
|-------------------------------|---|----|
| MGMT 3611 | Advanced Management and Organizational Behavior | 3 |
| Select five of the following: | | 15 |
| MGMT 3612 | Professional Skills Development | |
| MGMT 3621 | Human Resource Management | |
| MGMT 3622 | Industrial and Labor Relations | |
| MGMT 3623/ PSYCH 3318 | Industrial and Organizational Psychology | |
| MGMT 3624 | Employee Training and Development | |
| MGMT 3625 | Leadership in Organizations | |
| MGMT/INTL BUS 3680 | International Management | |

| | |
|--------------|--|
| MGMT 3690 | Internship in Management |
| or MGMT 3699 | Independent Study in Management |
| MGMT 4614 | Entrepreneurship/Small Business Management |

Total Hours **18**

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Articulate and apply foundational knowledge associated with core business disciplines (accounting, finance, supply chain management, marketing, information technology, and management). (Functional Business Knowledge)
- (a) Identify business problems and opportunities, (b) analyze relevant strategic, tactical, and operational options through qualitative and quantitative methods in order to (c) make recommendations and provide the rationale behind decisions. (Decision Making Skills)
- Identify and evaluate global business factors, including the opportunities, constraints and risks of operating across various country environments. (Global Orientation)
- Identify legal/ethical issues, assess impact, and decide on a socially responsible course of action. (Ethical Orientation)
- Students will be able to effectively communicate business issues, analyses and recommendations in written and oral presentations to stakeholders. (Business Communication Skills)
- Develop technological and quantitative skills, including those associated with statistics, data visualization and analysis, project management, social media, and those commensurate with their business specialization. (Technological Skills)
- Demonstrate interpersonal skills to collaborate within diverse teams, effectively engage with stakeholders in a professional manner, and develop leadership skills. (Interpersonal Skills)
- Demonstrate competence in applying management principles and theories related to motivation, leadership, group process, decision-making, job design, and organizational development.
- Demonstrate proficiency in utilizing human resource principles and concepts in the processes of attracting, selecting, developing, motivating, evaluating and retaining employees.
- Demonstrate competence in applying leadership skills, principles and theories to promote individual, group, and organizational performance.
- Demonstrate the ability to apply principles and concepts related to cross-country differences, intercultural competence and diversity management to the strategy and operations of firms.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-----------|--|-----------|
| MATH 1030 | 3 | BUS AD 1107 or MATH 1100 | 3 |
| INTDSC 1003 | 1 | ECON 1001 | 3 |
| ENGL 1100 | 3 | INFSYS 2800 | 3 |
| BUS AD 1000 or ENT 1100 | 3 | EXPLORE – Humanities and Fine Arts | 3 |
| INFSYS 1800 | 3 | EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE – Humanities & Fine Arts | 3 | | |
| | 16 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|-------------|-------|-------------|-------|
| MATH 1105 | 3 | ACCTNG 2410 | 3 |
| ACCTNG 2400 | 3 | BUS AD 2900 | 3 |

| | | | |
|----------------------------------|-----------|----------------------------------|-----------|
| ECON 1002 | 3 | SCMA 3301 | 3 |
| CORE – Communication Proficiency | 3 | EXPLORE – Humanities & Fine Arts | 3 |
| CORE – US History & Government | 3 | ENT 3100 | 3 |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|--------------------------------|-----------|---------------|-----------|
| SCMA 3300 | 3 | FINANCE 3500 | 3 |
| MGMT 3600 | 3 | MKTG 3700 | 3 |
| ENGL 3120 | 3 | MGMT 3611 | 3 |
| Cultural Diversity Requirement | 3 | MGMT Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|-------------------------|-----------|-------------------------|-----------|
| MGMT Elective | 6 | MGMT 4219 & MGMT 4220 | 3 |
| Global Awareness Course | 3 | MGMT Electives | 6 |
| Electives | 6 | Global Awareness Course | 3 |
| | | Elective | 2 |
| | 15 | | 14 |

Total Hours: 120

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Business Administration BS, Marketing Emphasis

General Education Requirements

All Business majors must meet the university general education requirements. As part of meeting the university's general education requirements, all Business majors must complete the prerequisite courses below :

| | | |
|--------------------------|--|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 or BUS AD 1107 | Basic Calculus | 3 |
| MATH 1105 | Quantitative Methods for Business | 3 |
| | Basic Probability and Statistics | 3 |

Degree Requirements

All Business majors must meet College of Business G.P.A., good standing and credit requirements (p. 209) as outlined in the Bulletin.

Lower Division Business Core Requirements

| | | |
|-------------|--------------------------------------|---|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |

| | | |
|--------------------|---|-----------|
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| Total Hours | | 12 |

Upper Division Requirements

| | | |
|-----------|------------------|---|
| ENGL 3120 | Business Writing | 3 |
|-----------|------------------|---|

Upper Division Non-Business or Business Requirement

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; also available on our web site.

Upper Division Business Requirements

| | | |
|--|---|-----------|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
| FINANCE 3500 | Financial Management | 3 |
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 4219 | Strategic Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |
| A minimum of 15 additional hours of upper division approved business electives | | 15 |
| Total Hours | | 36 |

¹ Course is required for BS Accounting and all BS Business Administration majors.

Assessment Requirement

| | | |
|-----------|-----------------------------|---|
| MGMT 4220 | Business Assessment Testing | 0 |
|-----------|-----------------------------|---|

Emphasis Area Requirements

Marketing involves the activities needed to facilitate an exchange. This includes selling products, services, or ideas to both individual consumers and business buyers.

| | | |
|---|-----------------------|-----------|
| MKTG 3740 | Marketing Analysis | 3 |
| MKTG 4700 | Marketing Management | 3 |
| Select four additional upper division courses from the following: | | 12 |
| Marketing (MKTG) courses at the 3000-level or higher | | |
| MEDIA ST 3338 | Advertising Technique | |
| Total Hours | | 18 |

Marketing majors may choose to focus their electives in the area of digital and social media marketing and communications. This track is a group of departmental courses that will focus on the use of emerging technologies and platforms by which business use to communicate with and engage with their customers, prospects and vendors.

The Track in Digital and Social Media Marketing is comprised of the following courses:

| | | |
|-----------|--|---|
| MKTG 3721 | Introduction to Digital Marketing Strategies | 3 |
|-----------|--|---|

| | | |
|-----------|--|---|
| MKTG 3722 | Introduction to Social Media Marketing | 3 |
| MKTG 3710 | Consumer Behavior | 3 |
| MKTG 3720 | Advertising and Promotion | 3 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Articulate and apply foundational knowledge associated with core business disciplines (accounting, finance, supply chain management, marketing, information technology, and management). (Functional Business Knowledge)
- (a) Identify business problems and opportunities, (b) analyze relevant strategic, tactical, and operational options through qualitative and quantitative methods in order to (c) make recommendations and provide the rationale behind decisions. (Decision Making Skills)
- Identify and evaluate global business factors, including the opportunities, constraints and risks of operating across various country environments. (Global Orientation)
- Identify legal/ethical issues, assess impact, and decide on a socially responsible course of action. (Ethical Orientation)
- Students will be able to effectively communicate business issues, analyses and recommendations in written and oral presentations to stakeholders. (Business Communication Skills)
- Develop technological and quantitative skills, including those associated with statistics, data visualization and analysis, project management, social media, and those commensurate with their business specialization. (Technological Skills)
- Demonstrate interpersonal skills to collaborate within diverse teams, effectively engage with stakeholders in a professional manner, and develop leadership skills. (Interpersonal Skills)
- Students will be able to solve marketing related problems using qualitative and/or quantitative tools.
- Students will be able to demonstrate creativity in developing marketing communication plans (e.g., advertising, social media).
- Students will be able to develop marketing plans and execute marketing strategies.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-------|------------------------------------|-----------|
| MATH 1030 | | 3 BUS AD 1107 or MATH 1100 | 3 |
| ENGL 1100 | | 3 ECON 1001 | 3 |
| BUS AD 1000 or ENT 1100 | | 3 INFSYS 2800 | 3 |
| INFSYS 1800 | | 3 EXPLORE - Humanities & Fine Arts | 3 |
| EXPLORE - Humanities & Fine Arts | | 3 EXPLORE - Math & Sciences | 3 |
| INTDSC 1003 | | 1 | |
| | | 16 | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-------|------------------------------------|-----------|
| MATH 1105 | | 3 ACCTNG 2410 | 3 |
| ACCTNG 2400 | | 3 BUS AD 2900 | 3 |
| ECON 1002 | | 3 SCMA 3301 | 3 |
| CORE - Communication Proficiency | | 3 EXPLORE - Humanities & Fine Arts | 3 |
| CORE - US History & Government | | 3 Cultural Diversity Requirement | 3 |
| | | 15 | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|-----------|-------|----------------|-------|
| SCMA 3300 | | 3 FINANCE 3500 | 3 |

| | | | |
|-------------------------|-------|----------------------------|-------|
| MKTG 3700 | 3 | MGMT 3600 | 3 |
| ENGL 3120 | 3 | MKTG Elective | 3 |
| ENT 3100 | 3 | Global Awareness Course | 3 |
| Elective | 3 | Elective | 3 |
| 15 | | 15 | |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| MKTG 3740 | | 3 MGMT 4219 & MGMT 4220 | 3 |
| MKTG Electives | 6 | MKTG 4700 | 3 |
| Global Awareness Course | 3 | MKTG Elective | 3 |
| Elective | 3 | Electives | 5 |
| 15 | | 14 | |
| Total Hours: 120 | | | |

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Business Administration BS, Supply Chain Management Emphasis

General Education Requirements

All Business majors must meet the university general education requirements. As part of meeting the university's general education requirements, all Business majors must complete the prerequisite courses below :

| | | |
|-----------------------------|---|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 or BUS AD 1107 | Basic Calculus Quantitative Methods for Business | 3 |
| MATH 1105 | Basic Probability and Statistics | 3 |

Degree Requirements

All Business majors must meet College of Business G.P.A., good standing and credit requirements (p. 209) as outlined in the Bulletin.

Lower Division Business Core Requirements

| | | |
|--------------------|---|-----------|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| Total Hours | | 12 |

Upper Division Requirements

| | | |
|-----------|------------------|---|
| ENGL 3120 | Business Writing | 3 |
|-----------|------------------|---|

Upper Division Non-Business or Business Requirement

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; also available on our web site.

Upper Division Business Requirements

| | | |
|--|---|-----------|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
| FINANCE 3500 | Financial Management | 3 |
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 4219 | Strategic Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |
| A minimum of 15 additional hours of upper division approved business electives | | 15 |
| Total Hours | | 36 |

¹ Course is required for BS Accounting and all BS Business Administration majors.

Assessment Requirement

| | | |
|-----------|-----------------------------|---|
| MGMT 4220 | Business Assessment Testing | 0 |
|-----------|-----------------------------|---|

Emphasis Area Requirements

The study of supply chain management focuses on the whole supply chain from the acquisition of raw materials, through production or service delivery, to the point of consumption.

Twelve (12) credit hours are required of all individuals seeking an emphasis in Supply Chain Management:

| | | |
|--|---|---|
| SCMA 3320 | Advanced Supply Chain and Operations Management | 3 |
| Select three of the following courses: | | 9 |
| SCMA 3321 | Procurement | |
| SCMA 3345 | Predictive Analytics and Data Mining | |
| SCMA 3370/MKTG 3770 | Introduction to Transportation | |
| SCMA 3371 | | |
| SCMA 3376 | Transportation Security and Risk | |
| SCMA 3390 | Internship in Supply Chain and Analytics ¹ | |
| SCMA 3398 | Seminar in Supply Chain Management and Analytics | |
| SCMA 3399 | Independent Study in Supply Chain and Analytics | |
| SCMA 4322 | Lean Production in Manufacturing and Service Operations | |
| SCMA 4325 | Environmental Sustainability in Business Operations | |
| SCMA 4330 | Business Logistics | |
| SCMA 4331 | Applied Supply Chain Modeling | |
| SCMA 4347 | Introduction to Project Management | |

| | |
|--------------------|--|
| SCMA 4350 | Prescriptive Analytics and Optimization |
| SCMA/INTL BUS 4381 | Global Supply Chain Management |
| SCMA 4389 | Supply Chain Management Practicum ¹ |
| SCMA 4398 | Advanced Topics in Supply Chain and Analytics |

Total Hours **12**

¹ At most, only one of SCMA 3390 and SCMA 4389 may be counted towards the Supply Chain Management emphasis area.

Tracks

Students may combine selected courses from the list above, and other specified upper division business electives, to fulfill a designated track and acquire in-depth knowledge. Detailed information is available in the Office of Undergraduate Academic Advising. The specific tracks available include:

- Supply Chain Management
- Transportation
- Business Analytics

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Articulate and apply foundational knowledge associated with core business disciplines (accounting, finance, supply chain management, marketing, information technology, and management). (Functional Business Knowledge)
- (a) Identify business problems and opportunities, (b) analyze relevant strategic, tactical, and operational options through qualitative and quantitative methods in order to (c) make recommendations and provide the rationale behind decisions. (Decision Making Skills)
- Identify and evaluate global business factors, including the opportunities, constraints and risks of operating across various country environments. (Global Orientation)
- Identify legal/ethical issues, assess impact, and decide on a socially responsible course of action. (Ethical Orientation)
- Students will be able to effectively communicate business issues, analyses and recommendations in written and oral presentations to stakeholders. (Business Communication Skills)
- Develop technological and quantitative skills, including those associated with statistics, data visualization and analysis, project management, social media, and those commensurate with their business specialization. (Technological Skills)
- Demonstrate interpersonal skills to collaborate within diverse teams, effectively engage with stakeholders in a professional manner, and develop leadership skills. (Interpersonal Skills)
- Explain basic concepts in supply chain management related to areas such as purchasing, production, operations, logistics, integration and reverse supply chains.
- Apply descriptive, predictive and prescriptive analytics for decision-making in supply chains, such as demand planning, supply chain network design, production planning, inventory control and transportation.

- Analyze supply chain related problems and justify data-driven solutions with business acumen.

Sample Four Year Plan

| First Year | | | |
|----------------------------------|-----------|--|-----------|
| Fall | Hours | Spring | Hours |
| MATH 1030 | | 3 BUS AD 1107 or MATH 1100 | 3 |
| ENGL 1100 | | 3 ECON 1001 | 3 |
| BUS AD 1000 or ENT 1100 | | 3 INFSYS 2800 | 3 |
| INFSYS 1800 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities & Fine Arts | | 3 EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| INTDSC 1003 | 1 | | |
| | 16 | | 15 |

| Second Year | | | |
|----------------------------------|-----------|------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| MATH 1105 | | 3 ACCTNG 2410 | 3 |
| ACCTNG 2400 | | 3 BUS AD 2900 | 3 |
| ECON 1002 | | 3 SCMA 3301 | 3 |
| CORE - Communication Proficiency | | 3 EXPLORE - Humanities & Fine Arts | 3 |
| CORE - US History & Government | | 3 Cultural Diversity | 3 |
| | 15 | | 15 |

| Third Year | | | |
|------------|-----------|-----------------|-----------|
| Fall | Hours | Spring | Hours |
| SCMA 3300 | | 3 FINANCE 3500 | 3 |
| MGMT 3600 | | 3 MKTG 3700 | 3 |
| ENGL 3120 | | 3 SCMA 3320 | 3 |
| ENT 3100 | | 3 SCMA Elective | 3 |
| Elective | | 3 Elective | 3 |
| | 15 | | 15 |

| Fourth Year | | | |
|-----------------------------------|-----------|---------------------------|-----------|
| Fall | Hours | Spring | Hours |
| Global Awareness Course | | 3 MGMT 4219 & MGMT 4220 | 3 |
| SCMA Elective | | 3 Global Awareness Course | 3 |
| SCMA Elective | | 3 Electives | 8 |
| Business Elective 3000-4000 Level | 3 | | |
| Elective | 3 | | |
| | 15 | | 14 |

Total Hours: 120

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Sample Four Year Plan with Cybersecurity Certificate

| First Year | | | |
|------------------------------------|-----------|--------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| MATH 1030 | | 3 BUS AD 1107 or MATH 1100 | 3 |
| ENGL 1100 | | 3 ECON 1001 | 3 |
| BUS AD 1000 or ENT 1100 | | 3 INFSYS 2800 | 3 |
| INFSYS 1800 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Math and Sciences | 3 |
| INTDSC 1003 | 1 | | |
| | 16 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-------|--------------------------------------|-------|
| MATH 1105 | | 3 ACCTNG 2410 | 3 |
| ACCTNG 2400 | | 3 BUS AD 2900 | 3 |
| ECON 1002 | | 3 SCMA 3301 | 3 |
| CORE - Communication Proficiency | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| CORE - US History and Government | | 3 Cultural Diversity Requirement | 3 |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|--------------------------------|-------|-----------------|-------|
| SCMA 3300 | | 3 FINANCE 3500 | 3 |
| MGMT 3600 | | 3 MKTG 3700 | 3 |
| ENGL 3120 | | 3 SCMA 3320 | 3 |
| ENT 3100 | | 3 SCMA Elective | 3 |
| INFSYS 3848 (Global Asareness) | | 3 INFSYS 3858 | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------------------------|-------|---------------------|-------|
| INFSYS 3842 (Global Awareness) | | 3 MGMT 4219 or 4220 | 3 |
| SCMA Elective | | 3 INFSYS 3878 | 3 |
| SCMA Elective | | 3 Elective or minor | 8 |
| INFSYS 3866 | | 3 | |
| Elective or minor | | 3 | |
| | 15 | | 14 |

Total Hours: 120

Business Administration Graduate Certificate

This is an 18-hour program designed to accommodate individuals with an undergraduate/graduate degree in a non-business field seeking core business knowledge. The program emphasizes coursework designed to cover the major disciplines within the field of business. Upon completion, the student will have knowledge of common business theories, practices, and procedures.

Program Description

The Graduate Certificate in Business Administration is designed for individuals with an undergraduate/graduate degree in non-business fields. It provides students a focused exposure to core business functions and contemporary business administration frameworks. Upon successful completion, students will have the core knowledge necessary to articulate and apply business administration principles and practices across functional domains.

All 12 credit-hours taken as part of this certificate program transfer to the MBA degree program.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs.

Choose four of the following courses: 12

| | |
|-------------|-------------------------------------|
| ACCTNG 5400 | Financial and Managerial Accounting |
|-------------|-------------------------------------|

| | |
|-------------|--------------------------|
| BUS AD 5100 | Managerial Communication |
|-------------|--------------------------|

| | |
|-------------|--------------------------|
| BUS AD 5900 | Law, Ethics and Business |
|-------------|--------------------------|

| | |
|--------------|----------------------|
| FINANCE 6500 | Financial Management |
|--------------|----------------------|

| | |
|-----------|---------------------------------------|
| MGMT 5600 | Managing and Leading in Organizations |
|-----------|---------------------------------------|

| | |
|-------------|--------------------------------|
| INFSYS 5800 | Management Information Systems |
|-------------|--------------------------------|

| | |
|-----------|---------------------------------|
| MKTG 5700 | Integrated Marketing Strategies |
|-----------|---------------------------------|

| | |
|-----------|-------------------------|
| SCMA 5310 | Supply Chain Strategies |
|-----------|-------------------------|

| | |
|--------------------|-----------|
| Total Hours | 12 |
|--------------------|-----------|

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Apply theories and frameworks of business to analyze authentic contexts and business problems;
- Integrate core knowledge of and apply business administration principles and practices across the functional domains: finance, marketing, management, supply chain management and information systems.

Business Administration MBA

The Master of Business Administration (MBA) at the University of Missouri-St. Louis (UMSL) is a selective program designed to create business managers and leaders. The MBA at UMSL is fully accredited by the The Association to Advance Collegiate Schools of Business (AACSB) International, the premier accrediting body in collegiate business education.

The MBA program is designed for students with bachelor's degrees from accredited institutions in fields such as the sciences, engineering, humanities, arts or business.

Students pursuing a Graduate Certificate in Business Administration may transfer all certificate program courses toward the MBA.

For more information go to: <https://mba.umsl.edu>

For students pursuing an emphasis, the following areas are available:

- Accounting (p. 443)
- Business Analytics (p. 444)
- Finance (p. 446)
- Information Systems and Technology (p. 448)
- International Business (p. 449)
- Management (p. 450)
- Marketing (p. 451)
- Supply Chain Management (p. 452)

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.
- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.
- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the

Business Administration MBA, Accounting Emphasis

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Emphasis Area Requirements

Master of Business Administration (MBA) students seeking an emphasis in Accounting must complete a minimum of 9 hours of Accounting Electives beyond ACCTNG 5400 as follows:

| | | |
|--------------------|--|----------|
| ACCTNG 5404 | Professional Accountancy I | 3 |
| ACCTNG 5405 | Professional Accountancy II | 3 |
| ACCTNG 5411 | Cost Systems Analysis | 3 |
| or ACCTNG 5421 | Information Systems in Accounting | |
| or ACCTNG 5447 | Taxation of Individuals and Businesses | |
| Total Hours | | 9 |

Students that have completed equivalent courses to any of the above may choose:

| | | |
|--|--|---|
| ACCTNG 4401 | Financial Accounting and Reporting III | 3 |
| ACCTNG 4402 | Financial Accounting and Reporting IV | 3 |
| ACCTNG 4435 | Auditing | 3 |
| Any other 5000-level course except ACCTNG 5400 and ACCTNG 5401 | | |

Students with an undergraduate degree in accounting qualify to waive ACCTNG 5400 and ACCTNG 5401. These courses may be replaced with any upper level accounting course. A maximum of 15 hours in any functional area will count toward degree requirements. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.
- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.
- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.
- Understand the Accounting cycle from analysis of transaction through financial statements.
- Apply key financial accounting topics related to balance sheet and income statement accounts.
- Demonstrate appropriate concepts of managerial accounting.

Business Administration MBA, Business Analytics Emphasis

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior

coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Emphasis Area Requirements

Master of Business Administration (MBA) students seeking an emphasis in Business Analytics must complete SCMA 6345, SCMA 6350, and three additional hours from approved Business Analytics electives beyond SCMA 5310 (SCMA 5310 does not count toward the emphasis in Business Analytics). A maximum of 15 hours in any functional area will count toward the degree requirements. A student cannot receive an emphasis in both Operations Management and Logistics and Supply Chain Management for the same set of courses. An overlap of up to 3 credit hours from approved courses, other than SCMA 5300 and SCMA 5310 is allowed. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable.

List of approved Business Analytics electives for the emphasis:

| | | |
|--------------|--|-----|
| SCMA 5334 | Internship in Logistics and Supply Chain Management | 1 |
| SCMA 5354 | Simulation for Managerial Decision Making | 3 |
| SCMA 5389 | Supply Chain Management Practicum | 3 |
| SCMA 5399 | Individual Research in Logistics and Operations Management | 1-3 |
| SCMA 6330 | Business Logistics Systems | 3 |
| SCMA 6331 | Supply Chain Modeling | 3 |
| SCMA 6395 | Seminar in Logistics and Operations Management | 3 |
| BUS AD 5198 | Seminar in Business Administration ¹ | 3 |
| FINANCE 6503 | Computer Applications in Finance | 3 |
| FINANCE 6523 | Fixed Income Analysis | 3 |
| FINANCE 6524 | Portfolio Analysis and Management | 3 |

| | | |
|-------------|---|---|
| INFSYS 6830 | Data Programming for Business Intelligence | 3 |
| INFSYS 6833 | Decision Support Systems for Business Intelligence | 3 |
| INFSYS 6860 | Advanced Data Integration | 3 |
| INFSYS 6862 | Artificial Intelligence Applications for Business and Cybersecurity | 3 |
| MKTG 5740 | Marketing and Business Analytics | 3 |

¹ If topic is appropriate.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.
- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.
- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.
- Understand the central role of supply chain management in business, and its connections with other business functions internally (marketing, finance, information systems), and supply chain players externally.
- Build models and apply analytical methodologies: descriptive, predictive and prescriptive, for data-driven decision-making in supply chains including supply chain network design, demand planning, production and inventory control, resource allocation, scheduling and transportation.
- Communicate effectively about supply chain related issues and data-driven solutions with business acumen.

Business Administration MBA, Cybersecurity Emphasis

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior

coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Emphasis Area Requirements

Master of Business Administration (MBA) students seeking an emphasis in Cybersecurity must complete a minimum of 9 hours of approved Cybersecurity electives beyond INFSYS 5800 (INFSYS 5800 does not count toward the emphasis in Cybersecurity). A maximum of 15 hours in any functional area will count toward degree requirements. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable.

List of approved Cybersecurity electives for the emphasis:

| | | |
|-------------|---|---|
| INFSYS 6828 | Principles of Information Security | 3 |
| INFSYS 6836 | Management of Data Networks and Security | 3 |
| INFSYS 6858 | Advanced Cybersecurity Concepts | 3 |
| INFSYS 6862 | Artificial Intelligence Applications for Business and Cybersecurity | 3 |
| INFSYS 6864 | Applied Cryptography for Business Applications | 3 |
| INFSYS 6868 | Software Assurance | 3 |
| INFSYS 6878 | Management of Information Security | 3 |
| INFSYS 6888 | Capstone in Information Security | 3 |

A maximum of 15 hours in any functional area will count toward degree requirements. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable.

Business Administration MBA, Finance Emphasis

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply,

an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|-------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |

| | | |
|-----------|---------------------------------------|---|
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Emphasis Area Requirements

Master of Business Administration (MBA) students seeking an emphasis in Finance must complete a minimum of 9 hours of Finance electives beyond FINANCE 6500 (FINANCE 6500 does not count toward the emphasis in Finance). A maximum of 15 hours in any functional area will count toward degree requirements. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.
- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.

- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.
- Understand the technology governance role of the Chief Information Officer.
- Appreciate the impacts of IT on organizations, society, and the global economy.
- Prioritize and propose managerial practices to develop and deploy technological innovations that produce business advantage.
- Apply the core financial concepts, principles, and theories in valuation and wealth maximization.
- Demonstrate critical thinking and problem-solving skills to analyze data for informed decision-making.
- Apply analytic tools and modern technologies in solving real-world financial problems.

Business Administration MBA, Information Systems Emphasis

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Emphasis Area Requirements

Master of Business Administration (MBA) students seeking an emphasis in Information Systems and Technology must complete a minimum of 9 hours of Information Systems and Technology electives beyond INFSYS 5800 (INFSYS 5800 does not count toward the emphasis in Information Systems and Technology). A maximum of 15 hours in any functional area will count toward degree requirements. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.
- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.
- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.
- Understand the technology governance role of the Chief Information Officer.
- Appreciate the impacts of IT on organizations, society, and the global economy.
- Prioritize and propose managerial practices to develop and deploy technological innovations that produce business advantage.

Business Administration MBA, International Business Emphasis

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum

six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Emphasis Area Requirements

Master of Business Administration (MBA) students seeking an emphasis in International Business must complete a minimum of 9 credits from International Business courses or courses approved by the director of the International Business Institute. A maximum of 15 hours in any functional area will count toward degree requirements. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.
- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.
- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.
- Apply cultural knowledge in implementing and adapting management techniques in a foreign market.
- Evaluate and provide solutions for legal/ethical issues across country markets.
- Propose and criticize alternative strategic options and make specific recommendations for multinational firms.

Business Administration MBA, Management Emphasis

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Emphasis Area Requirements

Master of Business Administration (MBA) students seeking an emphasis in Management must complete a minimum of 9 hours of Management electives beyond MGMT 5600 (MGMT 5600 does not count toward the emphasis in Management). A maximum of 15 hours in any functional area will count toward degree requirements. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.

- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.
- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.
- Understand the processes involved in attracting, selecting, training, motivating, and retaining employees.
- Apply modern leadership theories to facilitate individual and group performance and motivation.
- Understand the impact of organizational processes on stakeholders within and outside of organizations.

Business Administration MBA, Marketing Emphasis

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis

area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Emphasis Area Requirements

Master of Business Administration (MBA) students seeking an emphasis in Marketing must complete MKTG 5701 and 6 additional hours of Marketing electives beyond MKTG 5700 (MKTG 5700 does not count toward the emphasis in Marketing). A maximum of 15 hours in any functional area will count toward degree requirements. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.
- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.
- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.
- Develop, analyze, and evaluate strategic and tactical marketing plans and programs and to assess marketing performance.
- Demonstrate proficiency in digital marketing, social media marketing and analytics.
- Describe how marketers can design and adapt their campaigns and strategies based on the study of consumer behavior.

Business Administration MBA, Supply Chain Management Emphasis

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior

coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

Emphasis Area Requirements

Master of Business Administration (MBA) students seeking an emphasis in Supply Chain Management (SCM) must complete SCMA 5320 and 6 additional hours of approved Supply Chain Management electives beyond SCMA 5310 (SCMA 5310 does not count toward the emphasis in Supply Chain Management). A maximum of 15 hours in any functional area will count toward the degree requirements. Only courses that are substantially different from courses taken for credit in a student's undergraduate program will be acceptable. Students must complete at least 30 credit hours to earn the MBA.

List of approved Supply Chain Management electives for the emphasis:

| | | |
|-----------|--|-----|
| SCMA 5322 | Lean Production | 3 |
| SCMA 5325 | Environmental Analysis and Sustainability in Business Operations | 3 |
| SCMA 5334 | Internship in Logistics and Supply Chain Management | 1 |
| SCMA 5381 | Global Supply Chain Management | 3 |
| SCMA 5389 | Supply Chain Management Practicum | 3 |
| SCMA 5399 | Individual Research in Logistics and Operations Management | 1-3 |
| SCMA 6321 | Strategic Sourcing | 3 |
| SCMA 6330 | Business Logistics Systems | 3 |
| SCMA 6331 | Supply Chain Modeling | 3 |
| SCMA 6338 | | |
| SCMA 6345 | Business Analytics and Data Mining | 3 |
| SCMA 6347 | LOM Project Management | 3 |
| SCMA 6350 | Management Science Methods | 3 |
| SCMA 6360 | Supply Chain Integration | 3 |

| | | |
|-------------|---|---|
| SCMA 6395 | Seminar in Logistics and Operations Management | 3 |
| BUS AD 5198 | Seminar in Business Administration ¹ | 3 |

¹ If the topic is appropriate.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.
- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.
- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.
- Understand the central role of supply chain management in business, and its connections with other business functions internally (marketing, finance, information systems) and supply chain players externally.
- Apply knowledge and concepts for decision-making in supply chain management including purchasing, operations, logistics, integration and global supply chains.
- Communicate effectively about supply chain related issues and data-driven solutions with business acumen.

Business Administration MBA Accelerated Master's Degree

The MBA accelerated master program in Business Administration provides an opportunity for students of recognized academic ability and educational maturity to complete the requirements for both degrees in 5 years of full-time study. Students majoring in the B.S. in Business Administration (BSBA) and B.S. in Accounting (BSAcc) degree programs are eligible for the Accelerated MBA. The program allows students to complete both the undergraduate and graduate degrees in Business Administration or the bachelor's degree in accounting and the graduate degree in Business Administration with a total of 141 credit hours instead of the typical 153 credit hours if the degrees were pursued separately.

Admission Requirements

Students will apply to accelerated master's for provisional status after they have completed 60 undergraduate credit hours with a grade point average of 3.0 or higher. After completion of the provisional period, upon recommendation of the Graduate Program Director, students can be granted graduate admission into the accelerated program, which involves admission to the Graduate School. After graduate admission, the student will be classified as a graduate student, will pay graduate tuition for all subsequent courses, and must continue taking courses in graduate status

until completion of the master's degree. Students must maintain a grade point average of 3.0 or higher throughout the combined program.

Students on provisional status may request enrollment in up to 12 credit hours of 4000/5000/6000 level coursework to count towards their graduate degree, while in undergraduate status, with the approval of their advisor and the Director of Graduate Business Programs.

Applicants are considered for graduate admission into the accelerated master's program if they meet the following criteria.

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Have met with a Graduate Business Programs academic advisor

Program Requirements

Up to 12 credit hours of graduate coursework may be counted both to meet the 120 credit hours required for the bachelor's degree and to meet the credit hour requirements of the MBA. The courses that will count toward both degrees must be approved by both the Undergraduate and Graduate Program Directors. All other requirements for the BSBA and BSACC degrees remain in effect.

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Business Administration MBA, Online Program

The UMSL Online MBA is a 33 hour, four semester cohort-based program designed to be completed in 16 months. Admission to this program is for the Fall semester only.

Degree Requirements

| | | |
|--------------|---|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| BUS AD 5100 | Managerial Communication | 3 |
| BUS AD 5900 | Law, Ethics and Business | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |

| | |
|--------------------|-----------|
| Electives | 6 |
| Total Hours | 33 |

Business Administration MBA, International Program

Admission Requirements

The admission standards for all Graduate Business Programs (master programs and graduate certificates) are the same. To be eligible to apply, an applicant must hold a bachelor's degree from an accredited college or university and show high promise of academic success.

Graduate Business Programs take a holistic approach when evaluating student applications. Grade point average (GPA), and professional experience are considered when making an admissions decision.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in MBA only after they have formally applied for admission through the Graduate School.

Degree Requirements

Depending on the student's previous background, programs will require a minimum of 30 hours. Coursework must be completed within a maximum six-year period. At least 2/3 of coursework must be taken while enrolled as an MBA candidate at UMSL.

All students must satisfy the following requirements in professional written and oral communication, business law and ethics/ and social responsibility, economics, and business statistics. The Graduate Business Office in collaboration with department chairs will determine whether a student satisfies these requirements. In general:

The Professional and Written Communications skills requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5100

The Business Law and Ethics/Social Responsibility requirements can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5900

The Economics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of BUS AD 5000
- Completion of Economics boot camp

The Statistics requirement can be satisfied by **any one of the following**:

- Evidence of prior coursework
- Completion of SCMA 5300
- Completion of Statistics boot camp

Assurance of Learning

All MBA students are required to participate in the BUS AD 6991 Graduate Business Assessment Testing class during their last semester. This learning assessment course is not for credit.

Business Core (18 credit hours)

The following courses or their equivalents are required of all degree candidates¹.

| | | |
|--------------|---------------------------------------|---|
| ACCTNG 5400 | Financial and Managerial Accounting | 3 |
| FINANCE 6500 | Financial Management | 3 |
| INFSYS 5800 | Management Information Systems | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |

¹ Students with prior business degrees take advanced courses in each of the functional areas listed in the Business Core, as advised by the Graduate Business Advisors assigned to the students. Based on a formal review and evaluation by the Graduate Business Programs Office, students may be granted waivers in the Business Core section. Waivers depend on the applicability of, and performance in, prior coursework. Regardless of the number of courses waived, all students must complete at least 30 credit hours to earn the MBA degree.

Strategic Management Required (3 credit hours)

Take one of the following²:

| | | |
|---------------|--|---|
| BUS AD 6990 | Strategy Formulation And Implementation | 3 |
| INTL BUS 5289 | International Business Strategies | 3 |
| MGMT 4614 | Entrepreneurship/Small Business Management | 3 |

² Students with a non-business undergraduate degree are required to take BUS AD 6990 to satisfy the Strategic Management requirement.

Electives (9 credit hours)

Students may choose to pursue an Emphasis Area to satisfy the 9 credit hour Electives requirement **or** pursue an MBA with no emphasis area. No course may be used for more than one emphasis area. If no emphasis area is chosen, students have the flexibility to customize their MBA by choosing from a large collection of elective graduate courses within the College of Business Administration, in consultation with their Graduate Business academic advisor.

International MBA Program

An international version of the MBA program also exists as an alternative to the Flex MBA program. This program is a two-year, full-time program. Students take courses the first year outside the U.S. at a partner university and then take courses the second year on the University of Missouri–St. Louis campus.

Degree Requirements

All participants in the International MBA program must meet the same general and core requirements as those in the Flex MBA program. In addition, the International MBA program may entail an internship (outside the U.S. for Americans and in the U.S. for all others). The program also requires proficiency in the language spoken at the destination university. Coursework at the partner-schools is typically in English.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate knowledge of core business content in accounting, finance, information systems, supply chain analytics, management, and marketing.
- Apply core business content and principles for effective business decision making.
- Demonstrate analytical skills to solve business problems and evaluate the conditions of corporations and markets.
- Effectively communicate business insights using oral and written formats.
- Identify legal/ethical issues and implications, and make informed decisions.
- Expand leadership skills to effectively engage with stakeholders in a professional manner.
- Demonstrate a global mindset needed to effectively navigate the interconnected nature of today's business environment.

Business Administration Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

This minor is available only to students seeking a baccalaureate degree outside the College of Business Administration.

| | | |
|-------------------------------|---|----|
| Select five of the following: | | 15 |
| ACCTNG 2400 | Fundamentals of Financial Accounting | |
| BUS AD 2900 | Legal Environment of Business | |
| FINANCE 3500 | Financial Management | |
| INFSYS 1800 | Computers and Information Systems | |
| SCMA 3301 | Introduction to Supply Chain Management | |
| MGMT 3600 | Management and Organizational Behavior | |
| MKTG 3700 | Principles of Marketing | |
| Total Hours | | 15 |

Business Administration PhD, Supply Chain and Analytics Emphasis

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the Ph.D. in Business Administration only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Admission decisions are based on past academic record, intellectual ability, GMAT or GRE scores, and career commitment. Applications are accepted from students who have baccalaureate or graduate degrees. Past graduate work may be credited toward degree requirements where appropriate. Applicants must submit:

- Official academic transcripts.
- Official GMAT or GRE results in fields approved by the College of Business Administration.

- A minimum of two letters of recommendation (at least one of which is from an individual with an earned doctorate).
- A statement of objectives for the course of study.
- A current resume or CV.

Applications will be accepted for Fall enrollment beginning in the previous Fall. The application deadline for all materials is the first week of February.

Graduate Assistantships

Stipends for research and teaching assistantships (20 hours per week) are awarded to full-time Ph.D. students on a competitive basis. Tuition is waived for graduate assistants.

Degree Requirements

The Ph.D. in the College of Business Administration requires a minimum of 62 course credit hours, including a minimum of 5 dissertation credit hours, beyond the baccalaureate degree. Courses are determined according to the chosen Emphasis Area. To ensure sufficient background for doctoral-level courses, students must demonstrate appropriate competence in quantitative reasoning, which is evidenced through completion of prior coursework or equivalent to be determined by the Ph.D. Program Director. Students must also demonstrate appropriate competence in managerial communication, which is evidenced through completion of BUS AD 5100 or equivalent to be determined by the Ph.D. Program Director.

Course Requirements

Specific course requirements are determined based on the chosen Emphasis Area within the Ph.D. in Business Administration. The Ph.D. in Business Administration program has required courses in four areas: Business & Research Foundations (Section I), Emphasis Area Foundations (Section II), Research Methods (Section III) and Doctoral Courses (Section IV). Electives in the program are included in Section V.

I. Business & Research Foundation Requirement: 15 credit hours (5 courses)

Students are required to take five Business & Research Foundations courses as advised by the emphasis area Ph.D. Coordinator. These five courses may be waived if students have completed the courses as part of an UMSL program or had equivalent graduate course work at an institution approved by the Graduate Business Programs Office and the emphasis area Ph.D. Coordinator.

| | | |
|--------------------------------------|---------------------------------------|-----------|
| SCMA 5300 | Business Analytics | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |
| INFSYS 6860 | Advanced Data Integration | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| Choose one of the following courses: | | 3 |
| MGMT 5600 | Managing and Leading in Organizations | |
| FINANCE 6500 | Financial Management | |
| ACCTNG 5400 | Financial and Managerial Accounting | |
| ECON 5100 | Econometric Theory and Methods | |
| Total Hours | | 15 |

II. Emphasis Area Foundation Courses (9 credit hours)

Students are required to take three emphasis area foundational courses as advised by the emphasis area Ph.D. Coordinator.

| | | |
|--------------------|--|----------|
| SCMA 5320 | Supply Chain and Operations Management | 3 |
| SCMA 6321 | Strategic Sourcing | 3 |
| SCMA 6330 | Business Logistics Systems | 3 |
| Total Hours | | 9 |

III. Research Methods (9 credit hours)

Students are required to take three emphasis area foundational courses as advised by the emphasis area Ph.D. Coordinator.

| | | |
|--------------------|------------------------------------|----------|
| SCMA 6331 | Supply Chain Modeling | 3 |
| SCMA 6345 | Business Analytics and Data Mining | 3 |
| SCMA 6350 | Management Science Methods | 3 |
| Total Hours | | 9 |

IV. Doctoral Courses (15 credit hours)

Students are required to take the following five courses.

| | | |
|--------------------|--|-----------|
| SCMA 7381 | | 3 |
| SCMA 7382 | Empirical Research Methods | 3 |
| SCMA 7383 | Advanced Optimization | 3 |
| SCMA 7390 | Research Seminar in Supply Chain and Analytics | 3 |
| SCMA 7393 | Special Topics in Supply Chain & Analytics | 3 |
| Total Hours | | 15 |

V. Electives (9 credit hours)

Students must take 9 credit hours of graduate-level elective courses, selected in consultation with their emphasis area Ph.D. Coordinator. If the three courses are selected in a thematic area outside the emphasis area, they are deemed to constitute a "Supporting Field" for the Ph.D.

VI. Other Requirements

- Upon completion of the coursework in Sections I-V, students enroll in BUS AD 7001 Doctoral Research, or BUS AD 7002 Dissertation Research. Students are advanced to candidacy by successfully completing a comprehensive examination in their area of emphasis. Students should take the comprehensive exam in the first semester after completing the coursework in Sections I-V.
- Students will be evaluated annually for satisfactory progress. Students deemed not to be making adequate progress are subject to the policies of the College of Business Administration regarding continuation of their assistantship. Students deemed not to be making adequate progress are subject to the policies of the Graduate School and the College of Business Administration regarding probation and dismissal from the program.
- Students are required to take a minimum of 5 credit hours total of BUS AD 7001 Doctoral Research, and BUS AD 7002 Dissertation Research and to defend a dissertation proposal within one year of advancement to candidacy.
- The following requirements are to be completed before or after admission to candidacy:

- Students are required to present one paper at a regional, national, or international conference, approved by the dissertation advisor or program advisor.
- Students are required to submit one paper, approved by the dissertation advisor or program advisor, to a refereed journal.
- At least two semesters of supervised teaching in the College of Business Administration are required of all doctoral students.
- Students are required to demonstrate competency in teaching during the first year in which they teach in the College of Business Administration. This requirement may be met by successfully completing one or more courses/programs.
- The degree is awarded upon successful completion and defense of the Ph.D. dissertation and satisfaction of all Graduate School requirements. The dissertation must be defended within three years of approval of a Ph.D. dissertation proposal.

Business Intelligence Graduate Certificate

The Graduate Certificate in Business intelligence (BI) prepares students to support better business decision-making by providing internal data and external data in a useful and usable format. Using BI, decision makers are able to examine the value of business processes and products while watching for competitive opportunities in the marketplace. BI technologies provide historical, descriptive, predictive, and prescriptive views of business operations. The BI Certificate blends analytics and information technology in a unique program during which students work on industry datasets and learn to appreciate the difficulties of large-scale, unstructured data as well as the need for nuanced solutions.

This 12 credit hour certificate program also counts toward the 30 credit hour Master of Science in Information Systems and Technology degree program requirements. Students may choose to combine this certificate with other courses and/or certificates to obtain the Master of Science in Information Systems and Technology degree.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs.

Required Courses

| | | |
|-------------|--|---|
| INFSYS 6830 | Data Programming for Business Intelligence | 3 |
| INFSYS 6833 | Decision Support Systems for Business Intelligence | 3 |

Electives

Choose two of the following courses: 6

| | |
|-------------|---|
| INFSYS 6849 | Data Warehouse Design and Implementation |
| INFSYS 6851 | Practicum in Business Intelligence |
| INFSYS 6860 | Advanced Data Integration |
| INFSYS 6862 | Artificial Intelligence Applications for Business and Cybersecurity |

| | |
|--------------------|------------------------------------|
| SCMA 6345 | Business Analytics and Data Mining |
| SCMA 6350 | Management Science Methods |
| Total Hours | 12 |

The required courses may be substituted with other courses with the approval of the Chair of the Information Systems and Technology Department.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Apply contemporary data programming techniques
- Structure and visualize data in useful and usable formats for business insights
- Utilize business intelligence technologies to provide historical, descriptive, predictive, and prescriptive views of business operations
- Communicate business intelligence insights to stakeholders

Career Counseling Graduate Certificate

The Career Counseling Graduate Certificate is for individuals and students who want to add an additional focus of career counseling to their academic credentials. The goals of the Graduate Certificate in Career Counseling are: (a) to provide an academic program to help counselors, career development professionals, and students increase their competency in supporting the career development of all their clients across various settings; (b) to provide a curriculum focused on helping counselors, career development professionals, and students apply knowledge and skill to practice in the areas of career assessment, career decision making, career counseling with PK-16 students and adults; (c) increase career development professionals' awareness of social justice issues and their impact on career development.

The Career Counseling Certificate may be pursued as a stand-alone credential or in conjunction with another mental health or related program (such as Master's in Education, Master's in Adult & Higher Education, Master's in Social Work, Ed.D. or the Ph.D. in Education, or Ph.D. in Clinical Psychology). With advance planning, all 12 credits may be applied to the Master's of Education in School or Clinical Mental Health Counseling degree at UMSL. Completion of the Career Counseling Certificate, however, does not guarantee acceptance into any other degree program (separate application required for admission).

The counseling degree coordinator will act as the program director for this graduate certificate.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate certificate in Career Counseling only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

In addition, to Graduate School admission requirements, the following requirements apply to the Career Counseling Graduate Certificate program:

Current “good standing” (non-probation) in an UMSL graduate mental health practitioner training program (counseling, social work, or psychology)

Or

All of the following criteria must be met:

1. Undergraduate degree with a GPA of 3.0 or better;
2. Enrollment in a graduate mental health practitioner or related training program or earned Master's degree in mental health field (or related);
3. Two letters of recommendation with at least one from a current or former college-level instructor (or someone with a graduate degree who can attest to the applicant's capacity to complete graduate-level work);
4. Two-page personal statement explaining the applicant's personal and professional goals.

Certificate Requirements

Core

| | | |
|-------------|--|---|
| CNS ED 6400 | Career Information and Development | 3 |
| CNS ED 6410 | Advanced Career and Leadership Development | 3 |
| CNS ED 6630 | Career Development in K-12 Schools | 3 |

Electives

3

| | |
|-------------|--|
| CNS ED 6220 | Counseling Individuals with Disabilities |
| CNS ED 6820 | Counseling Women Toward Empowerment |
| CNS ED 6830 | Counseling African American Clients |
| CNS ED 6840 | Sexual Orientation and Gender Diversity in Counseling |
| CNS ED 6850 | Social Class and Poverty Issues in Counseling |
| CNS ED 6870 | Counseling and Cultural Competence in a Global Society |
| CNS ED 7000 | Advanced Theories and Practice of Counseling |

Other CNS ED 6800-level courses as offered

Total Hours

12

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Demonstrate strategies to help clients develop skills to make life-work role transitions, acquire employability and job search skills, and evaluate career information resources.
- Analyze factors that influence clients' attitudes toward work and career decision-making processes particularly race, gender roles, family responsibilities, education and other cultural factors.
- Develop a collection of culturally-relevant resources to assist clients from various backgrounds in their career development and planning

Character and Citizenship Education Graduate Certificate

The three program goals of the Character and Citizenship Education (CCE) graduate certificate program are: (a) the understanding of theory and research in citizenship education as it relates to civic participation, concepts of democracy, the democratic purposes of education, and the development of civic identity and political thinking, attitudes, and engagement as well as the competence to apply this knowledge to analysis and design of practical programs in citizenship education; (b) the understanding of character development and character education in childhood and adolescence, including the empirical and conceptual study of the nature of how moral character develops, as well as how it can be fostered in schools by school reform, curriculum development, professional development, and practical pedagogical methods; and (c) the understanding of the connections between character and citizenship development and education.

The Sanford N. McDonnell Professor of Character Education and the Teresa M. Fischer Professor of Citizenship Education serve as program directors.

Admission Requirements

Requirements for admission to the CCE certificate program are current good standing in an UMSL graduate program or all three of the following:

1. Undergraduate degree with a GPA of 3.0 or better
2. Two letters of recommendation with at least one from a current or former college-level instructor
3. Two-page personal statement explaining the applicant's personal and professional goal

The CCE certificate may be pursued as a stand-alone credential or in conjunction with the Master's Degree in Education and/or the Ph.D. in Education. With advance planning, all 18 credit hours from the CCE certificate can be applied to these degrees. Completion of the CCE certificate, however, does not guarantee acceptance into any of those degree programs, which requires a separate application.

Credit Requirements

A minimum of 18 credit hours of graduate course work is required for the graduate certificate. Twelve of these hours must consist of the four core courses in character and citizenship education. A minimum of six additional hours are to be chosen from the list of electives. At least twelve hours must be completed in residence at UMSL.

Core

| | | |
|-------------|--|---|
| ED PSY 6217 | | 3 |
| ED PSY 6417 | Current Perspectives On Citizenship Education ¹ | 3 |
| ED PSY 6445 | Character Education And Development | 3 |
| ED PSY 6450 | Advanced Methods in Character Education ¹ | 3 |

Electives

Choose 6 hours from the following list of courses offered at the College of Education and the College of Arts and Sciences (with departmental permission)

| | | |
|-------------|------------------------|---|
| ED PSY 6111 | Educational Psychology | 6 |
|-------------|------------------------|---|

| | | |
|----------------------|---|-----------|
| ED PSY 6115 | Personality And Social Development | |
| ED PSY 6222 | Advanced Studies in Child and Adolescent Development | |
| ED PSY 6310 | Psychology Of Learning Processes | |
| ED REM 6730 | Educational Program Development and Evaluation | |
| P P ADM 6340 | Seminar in City Administration | |
| PHIL 5530 | Seminar in Social and Political Philosophy | |
| PHIL 5538 | Seminar in Ethical Theory | |
| POL SCI 6430 | Proseminar in American Politics | |
| POL SCI 6450 | | |
| POL SCI/P P ADM 6470 | Proseminar in Urban Politics | |
| PSYCH 5468 | Seminar: Cognitive and Affective Processes ² | |
| TCH ED 6200 | Building Character and Competence with Diverse Learners | |
| Total Hours | | 18 |

¹ Course-embedded capstone assessments occur in ED PSY 6417 and ED PSY 6450.

² Course instructor approval required.

Chemistry BA

The St. Louis metropolitan area has long been a major center for industrial chemistry, and in the past decade it has also become vibrant in life sciences research and development. A bachelor's degree in chemistry provides a student with the professional training needed to contribute to this dynamic industry. The B.A. degree provides a well-rounded academic background and includes a language requirement. Students who earn this degree are well prepared for a career in the chemical industry, graduate work in the chemical sciences, health sciences, medicine, business or law.

General Education Requirements

Students must satisfy the university and college general education requirements (p. 30). Courses in chemistry may be used to meet the university's mathematics and life/natural science requirement. The college's foreign language requirement fulfills the departmental requirements for B.A. candidates. B.S. degree candidates are not required to take a foreign language; however, the American Chemical Society (ACS) states that the study of a foreign language is recommended, especially for students planning to pursue graduate studies in chemistry.

Satisfactory/Unsatisfactory Restrictions

Chemistry majors may not take required chemistry, mathematics, or physics courses on a satisfactory/unsatisfactory basis.

Related Area Requirements

Bachelor of Arts and Bachelor of Science in Chemistry

Candidates for both degrees must also complete:

| | | |
|-----------|------------------------------------|---|
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |

| | | |
|--------------------|---|-----------|
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2111L | Mechanics and Heat Laboratory | 1 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory | 1 |
| Total Hours | | 25 |

Candidates must complete the following chemistry courses:

| | | |
|------------------------------|---|-----------|
| CHEM 1000 | Chemistry: The Central Science | 1 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2223 | Quantitative Analysis in Chemistry | 3 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| CHEM 3022 | Introduction to Chemical Literature | 1 |
| CHEM 3312 | Physical Chemistry I: Thermodynamics and Kinetics | 3 |
| CHEM 3322 | Physical Chemistry II: Quantum Chemistry and Spectroscopy | 3 |
| CHEM 3333 | Physical Chemistry Laboratory I | 2 |
| CHEM 3412 | Basic Inorganic Chemistry | 3 |
| CHEM 4897 | Seminar in Chemistry | 2 |
| Select one of the following: | | 2 |
| CHEM 3643 | Advanced Organic Chemistry Laboratory | |
| CHEM 4233 | Laboratory in Instrumental Analysis | |
| CHEM 4343 | Physical Chemistry Laboratory II | |
| CHEM 4433 | Inorganic Chemistry Laboratory | |
| CHEM 4733 | Biochemistry Laboratory | |
| Total Hours | | 38 |

No more than 45 hours in chemistry may be applied toward the degree. Each chemistry major must present a seminar and pass a comprehensive examination during the senior year. At least 12 credits at the 3000 level or higher must be completed at UMSL. The Department of Chemistry and Biochemistry may require students to pass a tracking test in order to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate proficiency at an in-depth level in organic chemistry and physical chemistry.
- Apply appropriate concepts and investigative and quantitative methods as used in all sub-disciplines of chemistry research.
- Critically evaluate existing scientific studies to integrate and apply that body of knowledge to the design of studies to test specific hypotheses addressing unsolved problems in the chemical and life sciences.
- Use computers and the required scientific software in data acquisition, processing, presentation or analysis, including statistical and regression analysis.

- Demonstrate basic skills associated with safely performing and properly documenting laboratory experiments in chemistry following a broad introduction of commonly used equipment and procedures.
- Demonstrate the ability to work either independently or as a part of a small team.
- Identify the need for information, procure the information from relevant scientific literature publications and databases, properly cite the information, and critically evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias.
- Effectively communicate orally, visually and in writing about the processes of the chemical sciences and the results of scientific inquiry.
- Follow ethical practices in research, experimental interpretation, presentation, citation and application of research.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|--|-------|--------------------------------------|-------|
| INTDSC 1003 ¹ | | 1 CHEM 1121 | 5 |
| CHEM 1000 | | 1 MATH 1800 | 5 |
| CHEM 1111 | | 5 EXPLORE - Humanities and Fine Arts | 3 |
| ENGL 1100 | | 3 EXPLORE – Social Sciences | 3 |
| MATH 1035 | | 2 | |
| CORE- US History and American Government | | 3 | |
| | 15 | | 16 |

Second Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-------|-----------------|-------|
| CHEM 2223 | | 3 CHEM 2622 | 3 |
| CHEM 2612 | | 3 CHEM 2633 | 2 |
| MATH 1900 | | 5 PHYSICS 2111 | 4 |
| CORE - Communication Proficiency | | 3 PHYSICS 2111L | 1 |
| | | MATH 2000 | 5 |
| | 14 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|-------------------------|-------|
| CHEM 3312 | | 3 CHEM 3322 | 3 |
| CHEM 3412 | | 3 CHEM 3333 | 2 |
| Foreign Language 1001 | | 5 PHYSICS 2112 | 4 |
| EXPLORE - Humanities and Fine Arts | | 3 PHYSICS 2112L | 1 |
| EXPLORE - Social Sciences | | 3 Foreign Language 1002 | 5 |
| | 17 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------------------------|-------|--------------------------------------|-------|
| CHEM 3022 | | 1 CHEM 4897 | 2 |
| CHEM 3643 or 4343 | | 2 EXPLORE - Social Sciences | 3 |
| Foreign Language 2101 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| ENGL 3160 | | 3 Elective or minor | 3 |
| Cultural Diversity Requirement | | 3 Elective or minor | 3 |
| Elective or minor | | 3 | |
| | 15 | | 14 |

Total Hours: 121

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical full-time student. Placement exam scores in math as well as the completion of coursework may change the plan. It should

not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in Chemistry

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Chemistry with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Chemistry BA, Biochemistry Emphasis

General Education Requirements

Students must satisfy the university and college general education requirements (p. 30). Courses in chemistry may be used to meet the university's mathematics and life/natural science requirement. The college's foreign language requirement fulfills the departmental requirements for B.A. candidates. B.S. degree candidates are not required to take a foreign language; however, the American Chemical Society (ACS) states that the study of a foreign language is recommended, especially for students planning to pursue graduate studies in chemistry.

Satisfactory/Unsatisfactory Restrictions

Chemistry majors may not take required chemistry, mathematics, or physics courses on a satisfactory/unsatisfactory basis.

Related Area Requirements

Candidates must complete:

| | | |
|---------------------------|--|-----|
| MATH 1100 or MATH 1800 | Basic Calculus Analytic Geometry and Calculus I | 3-5 |
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1011L | Basic Physics I Laboratory | 1 |

| | | |
|---------------|-----------------------------|-------|
| PHYSICS 1012 | Basic Physics II | 3 |
| PHYSICS 1012L | Basic Physics II Laboratory | 1 |
| Total Hours | | 11-13 |

Course Requirements

| | | |
|-------------|---|----|
| CHEM 1000 | Chemistry: The Central Science | 1 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2223 | Quantitative Analysis in Chemistry | 4 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| CHEM 3022 | Introduction to Chemical Literature | 1 |
| CHEM 3302 | Physical Chemistry for The Life Sciences | 3 |
| CHEM 3412 | Basic Inorganic Chemistry | 3 |
| CHEM 3643 | Advanced Organic Chemistry Laboratory | 2 |
| CHEM 4712 | Biochemistry | 3 |
| CHEM 4722 | Advanced Biochemistry | 3 |
| CHEM 4733 | Biochemistry Laboratory | 2 |
| CHEM 4897 | Seminar in Chemistry | 2 |
| Total Hours | | 42 |

No more than 45 hours in chemistry may be applied toward the degree. Each chemistry major must present a seminar and pass a comprehensive examination during the senior year.

At least 12 credits of chemistry at the 3000 level or higher must be completed at UMSL.

Sample Plan of Study

| | | | |
|---------------------------------------|-------|---|-------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | 1 | CHEM 1121 | 5 |
| CHEM 1000 | 1 | MATH 1800 or 1100 | 5 |
| CHEM 1111 | 5 | EXPLORE - Humanities and Fine Arts | 3 |
| ENGL 1100 | 3 | EXPLORE - Social Sciences | 3 |
| MATH 1035 | 2 | | |
| CORE - US History and Government | 3 | | |
| | 15 | | 16 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| CHEM 2223 | 3 | CHEM 2622 | 3 |
| CHEM 2612 | 3 | CHEM 2633 | 2 |
| PHYSICS 1011 | 3 | PHYSICS 1012 | 3 |
| PHYSICS 1011L | 1 | PHYSICS 1012L | 1 |
| FGN LANG 1001: Language and Culture I | 5 | FGN LANG 1002: Language and Culture II | 5 |
| | 15 | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| CHEM 3022 | 1 | CHEM 3302 | 3 |
| CHEM 3412 | 3 | CHEM 4722 | 3 |
| CHEM 4712 | 3 | EXPLORE - Social Sciences and Cultural Diversity (Choose one to fulfill both) | 3 |

| | | | |
|---|----|---------------------------|----|
| ENGL 3160 | 3 | EXPLORE - Social Sciences | 3 |
| FGN LANG 2101: Language and Culture III | 3 | Elective or minor | 3 |
| Elective or minor | 3 | | |
| | 16 | | 15 |

| | | | |
|------------------------------------|-------|------------------------------------|-------|
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| CHEM 3643 | 2 | CHEM 4897 | 2 |
| CHEM 4733 | 2 | EXPLORE - Humanities and Fine Arts | 3 |
| CORE - Communication Proficiency | 3 | EXPLORE - Social Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | | |
| | 16 | | 14 |

Total Hours: 121

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student pursuing the B.A. degree. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Chemistry BS

The St. Louis metropolitan area has long been a major center for industrial chemistry, and in the past decade it has also become vibrant in life sciences research and development. A bachelor's degree in chemistry provides a student with the professional training needed to contribute to this dynamic industry. The B.S. degree is THE professional degree in chemistry, and students who earn the B.S. degree are well prepared for a career in the chemical industry, graduate work in the chemical sciences, medicine, business or law. The department provides opportunities for undergraduates to become involved in ongoing research projects.

General Education Requirements

Students must satisfy the university and college general education requirements (p. 30). Courses in chemistry may be used to meet the university's mathematics and life/natural science requirement. The college's foreign language requirement fulfills the departmental requirements for B.A. candidates. B.S. degree candidates are not required to take a foreign language: however, the American Chemical Society (ACS) states that the study of a foreign language is recommended, especially for students planning to pursue graduate studies in chemistry.

Satisfactory/Unsatisfactory Restrictions

Chemistry majors may not take required chemistry, mathematics, or physics courses on a satisfactory/unsatisfactory basis.

Related Area Requirements

Bachelor of Arts and Bachelor of Science in Chemistry

Candidates for both degrees must also complete:

| | | |
|-----------|-----------------------------------|---|
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |

| | | |
|---------------|---|---|
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2111L | Mechanics and Heat Laboratory | 1 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory | 1 |

Total Hours **25**

This degree may be taken as a terminal degree by students intending to become professional chemists or for preparation for graduate work in chemistry or biochemistry. Students must choose to specialize in chemistry or biochemistry.

Core Courses

| | | |
|-----------|---|---|
| CHEM 1000 | Chemistry: The Central Science | 1 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2223 | Quantitative Analysis in Chemistry | 4 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| CHEM 3022 | Introduction to Chemical Literature | 1 |
| CHEM 3312 | Physical Chemistry I: Thermodynamics and Kinetics | 3 |
| CHEM 3322 | Physical Chemistry II: Quantum Chemistry and Spectroscopy | 3 |
| CHEM 3333 | Physical Chemistry Laboratory I | 2 |
| CHEM 3412 | Basic Inorganic Chemistry | 3 |
| CHEM 4897 | Seminar in Chemistry | 2 |

Total Hours **37**

Chemistry Option

In addition to the requirements above, the following chemistry courses are required:

| | | |
|-----------|---|---|
| CHEM 3643 | Advanced Organic Chemistry Laboratory | 2 |
| CHEM 4212 | Instrumental Analysis | 3 |
| CHEM 4233 | Laboratory in Instrumental Analysis | 2 |
| CHEM 4343 | Physical Chemistry Laboratory II | 2 |
| CHEM 4412 | Advanced Inorganic Chemistry | 3 |
| CHEM 4433 | Inorganic Chemistry Laboratory | 2 |
| CHEM 4662 | Introduction to Macromolecular, Supramolecular, and Nanoscale Chemistry | 1 |
| CHEM 4712 | Biochemistry | 3 |

Total Hours **18**

Students must also take two elective hours of advanced work in chemistry at the 3000 level or above. Students are encouraged to take CHEM 3905 Chemical Research, to fulfill the advanced elective requirement.

Biochemistry Option

In addition to the requirements above, the following chemistry and biology courses are required:

Chemistry

| | | |
|-----------|---|---|
| CHEM 3643 | Advanced Organic Chemistry Laboratory | 2 |
| CHEM 4212 | Instrumental Analysis | 3 |
| CHEM 4233 | Laboratory in Instrumental Analysis | 2 |
| CHEM 4662 | Introduction to Macromolecular, Supramolecular, and Nanoscale Chemistry | 1 |
| CHEM 4712 | Biochemistry | 3 |
| CHEM 4722 | Advanced Biochemistry | 3 |
| CHEM 4733 | Biochemistry Laboratory | 2 |

Select one of the following: **3**

| | |
|-----------|--------------------------------|
| CHEM 4772 | Physical Biochemistry |
| CHEM 4774 | Introduction to Bioinformatics |
| CHEM 3905 | Chemical Research (3 credits) |
| BIOL 4905 | Research (3 credits) |

Biology

| | |
|---------------------------|--|
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) |
| BIOL 2012 or BIOL 2482 | Genetics Microbiology |

Total Hours **19**

If either research option is chosen, the project must be in biochemistry and must include a written final report submitted to the Department of Chemistry and Biochemistry.

- B.S. degree students will demonstrate a clear understanding of the essential principles of the five foundational areas of chemistry and be able to apply them to solve chemical problems. The foundational areas of chemistry are specified as analytical, organic, inorganic, physical and biochemistry and include both the study of small molecules and macromolecules. B.A. degree students do not need to meet this outcome in biochemistry. Demonstrating understanding and application at the foundational level requires a thorough comprehension of basic chemical concepts from the introductory course sequence including stoichiometry, states of matter, molecular structure and bonding, thermodynamics, equilibria and kinetics. B.S. degree graduates will demonstrate proficiency in at least four of the foundational areas at an in-depth level. B.A. degree graduates will demonstrate proficiency at an in-depth level in organic chemistry and physical chemistry.
- Students will apply appropriate concepts and investigative and quantitative methods as used in all sub-disciplines of chemistry research.
- Students will critically evaluate existing scientific studies to integrate and apply that body of knowledge to the design of studies to test specific hypotheses addressing unsolved problems in the chemical and life sciences.
- Students will use computers and the required scientific software in data acquisition, processing, presentation or analysis, including statistical and regression analysis.

- Students will demonstrate basic skills associated with safely performing and properly documenting laboratory experiments in chemistry following a broad introduction of commonly used equipment and procedures. B.S. degree graduates will demonstrate skills in performing laboratory experiments using advanced and specialized instrumentation related to the areas of chemistry that are studied in depth. Students will demonstrate the ability to work either independently or as a part of a small team.
- Students will be able to identify the need for information, procure the information from relevant scientific literature publications and databases, properly cite the information, and critically evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias.
- Students will effectively communicate orally, visually and in writing about the processes of the chemical sciences and the results of scientific inquiry.
- Students will follow ethical practices in research, experimental interpretation, presentation, citation and application of research.

Sample Four Year Plan Chemistry BS

| First Year | | | |
|------------------------------------|-------|------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 | | 1 CHEM 1121 | 5 |
| CHEM 1000 | | 1 MATH 1800 | 5 |
| CHEM 1111 | | 5 CORE - Communication Proficiency | 3 |
| ENGL 1100 | | 3 EXPLORE -Social Sciences | 3 |
| MATH 1035 | | 2 | |
| CORE - US History and Government | | 3 | |
| | 15 | | 16 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| CHEM 2223 | | 3 CHEM 2622 | 3 |
| CHEM 2612 | | 3 CHEM 2633 | 2 |
| MATH 1900 | | 5 MATH 2000 | 5 |
| EXPLORE - Humanities and Fine Arts | | 3 PHYSICS 2111 | 4 |
| EXPLORE - Social Sciences | | 3 PHYSICS 2111L | 1 |
| | 17 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| CHEM 3022 | | 1 CHEM 3322 | 3 |
| CHEM 3312 | | 3 CHEM 3333 | 2 |
| CHEM 3412 | | 3 PHYSICS 2112 | 4 |
| CHEM 4712 | | 3 PHYSICS 2112L | 1 |
| EXPLORE - Humanities and Fine Arts | | 3 ENGL 3160 | 3 |
| Cultural Diversity Requirement | | 3 EXPLORE - Social Sciences | 3 |
| | 16 | | 16 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| CHEM 3643 | | 2 CHEM 3905 | 1 |
| CHEM 3905 | | 1 CHEM 4233 | 2 |
| CHEM 4212 | | 3 CHEM 4433 | 2 |
| CHEM 4343 | | 2 CHEM 4662 | 1 |
| CHEM 4412 | | 3 CHEM 4897 | 2 |
| EXPLORE - Humanities and Fine Arts | | 3 Elective or minor | 3 |
| | | Elective or minor | 1 |
| | 14 | | 12 |
| Total Hours: 121 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Chemistry BS, Biochemistry Track

| First Year | | | |
|---|-------|---|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 CHEM 1121 | 5 |
| CHEM 1000 | | 1 MATH 1800 | 5 |
| CHEM 1111 | | 5 CORE – Communicating Proficiency | 3 |
| ENGL 1100 | | 3 EXPLORE - Social Sciences | 3 |
| MATH 1035 | | 2 | |
| CORE - US History and American Government | | 3 | |
| | 15 | | 16 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| CHEM 2223 | | 3 CHEM 2622 | 3 |
| CHEM 2612 | | 3 CHEM 2633 | 2 |
| MATH 1900 | | 5 CHEM 3412 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 MATH 2000 | 5 |
| EXPLORE - Social Sciences | | 3 EXPLORE - Humanities and Fine Arts ² | 3 |
| | 17 | | 16 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| CHEM 3312 | | 3 CHEM 3322 | 3 |
| CHEM 3412 | | 3 CHEM 3333 | 2 |
| CHEM 4712 | | 3 PHYSICS 2112 | 4 |
| CHEM 4733 | | 2 PHYSICS 2112L | 1 |
| PHYSICS 2111 | | 4 ENGL 3160 | 3 |
| PHYSICS 2111L | | 1 | |
| | 16 | | 13 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| BIOL 1831 | | 5 BIOL 2012 | 3 |
| CHEM 3022 | | 1 CHEM 3905 | 2 |
| CHEM 3643 | | 2 CHEM 4233 | 2 |
| CHEM 3905 | | 1 CHEM 4662 | 1 |
| CHEM 4212 | | 3 CHEM 4722 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 CHEM 4897 | 2 |
| | | EXPLORE - Social Sciences | 3 |
| | 15 | | 16 |
| Total Hours: 124 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

² Course should also fulfill the Cultural Diversity Requirement.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are

encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in Chemistry

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Chemistry with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Chemistry Minor

Requirements for the Minor

Students may earn a minor in chemistry by completing the following program. The following five courses are required:

| | | |
|------------------------------|---|--------------|
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2223 | Quantitative Analysis in Chemistry | 4 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| Select one of the following: | | 2-3 |
| CHEM 2622 | Organic Chemistry II | |
| CHEM 3302 | Physical Chemistry for The Life Sciences | |
| CHEM 3312 | Physical Chemistry I: Thermodynamics and Kinetics | |
| CHEM 3412 | Basic Inorganic Chemistry | |
| CHEM 4712 | Biochemistry | |
| Total Hours | | 21-22 |

Courses taken for the minor may not be taken on a satisfactory/unsatisfactory basis. A GPA of at least 2.0 is required for the courses

presented for the minor. At least three courses toward the minor must be completed at UMSL.

Chemistry MS

Admission Requirements

Individuals with at least the equivalent of the B.A. degree in the natural sciences may be admitted to the Graduate School as candidates for the M.S. degree or as precandidates for the Ph.D. degree in chemistry. A student in the M.S. program may request to transfer to the Ph.D. program by petition to the department.

The department admissions committee considers applicants' grade point averages and normally requires above-average performance in all areas of chemistry as well as physics and mathematics, or other evidence of high aptitude for graduate work in chemistry. Applicants' letters of recommendation and academic programs are also considered. In some cases the committee may require successful completion of undergraduate course work at UMSL as a condition of enrollment as a regular student.

Students with bachelor's degrees in fields other than chemistry may be admitted to pursue graduate studies in chemistry, but they must make up background deficiencies, usually by taking undergraduate course work at UMSL.

Financial Support

Teaching assistantships are available to qualified applicants. Research assistantships and fellowships are available for advanced students. Departmental support is not normally available beyond the fifth year in the program. For further information, contact the Department of Chemistry & Biochemistry Graduate Admissions Committee.

Preliminary Advisement

Students who have been admitted for graduate work in chemistry will be contacted by the Director of Graduate Studies in order to develop a tentative plan of study which takes into consideration the student's background and interests. Entering students are required to demonstrate proficiency at the undergraduate level in four areas of chemistry (biochemistry, organic, inorganic, physical, and analytical).

Proficiency may be demonstrated in one of the following ways:

- Outstanding performance in recent undergraduate course work.
- Satisfactory performance in standardized placement examinations. These examinations are given twice a year, approximately one week before the beginning of the fall and winter semesters.
- Successful completion of assigned course work.

The ultimate choice of whether students may enroll in the M.S. or Ph.D. degree programs resides with the chemistry faculty.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL Bulletin (p. 45). Applications may be completed online

In addition to the Graduate School admission requirements, the following requirements apply to the MS in Chemistry program:

- BS or BA in a scientific discipline is required, although other degrees will be considered for strong candidates. The admission committee will evaluate previous coursework to determine potential for success.
- Minimum of 3.00 GPA on 4.0 scale. Students whose GPA is 2.75 to 2.99 may be admitted under some circumstances.
- Two Letters of Recommendation.
- Official transcripts from all universities attended.
- The Graduate Record Examination General Test is NOT required, but may add value to the application.
- International students are required to document English proficiency by providing scores from an internationally accepted standardized examination prior to admission decision.

Degree Requirements

30 hours are required to earn a Master of Science in Chemistry and the advanced curriculum can be customized for each student. Students may choose to focus their coursework in a few, some, or all chemical disciplines including organic, inorganic, biochemical, physical, and analytical chemistry.

Master of Science without Thesis

Students may be enrolled part-time to complete the degree without a thesis. Of the required 30 hours, 15 credits must be at the 5000 level and 3 must be earned by taking 3 separate semesters of CHEM 6897, Colloquium.

Master of Science with Thesis

Students selecting this option must be enrolled full-time for at least two consecutive semesters. During this time, students are expected to enroll in CHEM 6905, Graduate Research in Chemistry, and conduct their thesis research. Of the required 30 credits, 15 must be taken at the 5000 level and 3 must be earned by taking 3 separate semesters of CHEM 6897, Colloquium.

Master of Science Degrees for Doctoral Students

Doctoral students may receive a Master's degree in their program for work completed towards the doctoral degree. To receive a Master's degree, doctoral students must complete 30 credit hours of courses, with at least 15 of these credit hours in courses numbered at or above the 5000 level. No more than 3 hours in CHEM 6897, 3 hours from a combination of CHEM 6487, CHEM 6687, CHEM 6787, CHEM 6812, CHEM 6822 and CHEM 6832, and 6 hours of CHEM 6905 may be applied.

The non-dissertation courses presented for the M.S. degree may not include any of the following courses:

| | | |
|-----------|---|---|
| CHEM 4212 | Instrumental Analysis | 3 |
| CHEM 4233 | Laboratory in Instrumental Analysis | 2 |
| CHEM 4302 | Survey of Physical Chemistry with Applications to the Life Sciences | 3 |
| CHEM 4343 | Physical Chemistry Laboratory II | 2 |
| CHEM 4412 | Advanced Inorganic Chemistry | 3 |
| CHEM 4433 | Inorganic Chemistry Laboratory | 2 |
| CHEM 4712 | Biochemistry | 3 |
| CHEM 4733 | Biochemistry Laboratory | 2 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate an advanced conceptual understanding of several chemistry sub-disciplines including organic, inorganic, physical, biological and analytical chemistry
- Demonstrate an understanding of important principles that underlie techniques used in chemical and biochemical research, thereby possessing the ability to analyze and interpret data, and make conclusions.
- Explain phenomena by means of accepted chemical principles, theories or laws in particular areas of the chemical sciences with a high degree of sophistication.
- Demonstrate knowledge of chemical nomenclature, structure, and function and be able to effectively communicate this information to both scientists and the public.
- Formulate hypotheses based on an advanced knowledge of chemistry and the current published literature.
- Demonstrate a mastery of literature resources and published findings in chemistry for the preparation of papers, reports, or summaries within a particular subfield of chemistry.

Chemistry MS Accelerated Master's Degree

The Department of Chemistry & Biochemistry offers an Accelerated MS degree program that allows students to simultaneously earn their BS and their MS in Chemistry. Students accepted to the Accelerated MS degree program will be permitted to count up to 9 credits toward both degrees.

Students are encouraged to work closely with their Chemistry & Biochemistry undergraduate advisor and the Accelerated MS advisor to ensure that courses are timed appropriately to maximize their benefits. It is strongly recommended that students meet with the Accelerated MS advisor as soon as possible, ideally before their junior year.

Students in the Accelerated MS program will complete the MS through the non-thesis coursework path. The thesis MS and Professional Science MS programs cannot be combined with this program.

Eligibility

Students need to have fulfilled the core curriculum requirements for the Bachelor of Science in Chemistry degree below prior to applying for the Accelerated MS program.

Related Area Courses

| | | |
|---------------|---|---|
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2111L | Mechanics and Heat Laboratory | 1 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory | 1 |

Chemistry Courses

| | | |
|-----------|--------------------------------|---|
| CHEM 1000 | Chemistry: The Central Science | 1 |
|-----------|--------------------------------|---|

| | | |
|-----------|---|---|
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2223 | Quantitative Analysis in Chemistry | 4 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| CHEM 3302 | Physical Chemistry for The Life Sciences | 3 |
| CHEM 3312 | Physical Chemistry I: Thermodynamics and Kinetics | 3 |
| CHEM 3322 | Physical Chemistry II: Quantum Chemistry and Spectroscopy | 3 |
| CHEM 3333 | Physical Chemistry Laboratory I | 2 |
| CHEM 3412 | Basic Inorganic Chemistry | 3 |
| CHEM 3643 | Advanced Organic Chemistry Laboratory | 2 |

Admission Requirements

Provisional Admission

Applicants are considered for provisional admission if they meet the following criteria.

- Earned 60 hours as an undergraduate
- Have a minimum GPA of 3.0 with a B or better in all core courses listed above
- Have approval from both their Chemistry undergraduate advisor and Chemistry MS Program Director

It is recommended to apply for provisional status as a junior, preferably in the first semester of junior year.

Graduate course options for Provisional students are listed below.

Courses completed by undergraduate students who have been provisionally admitted to the Accelerated MS program can count towards both their BS and MS degrees. Courses in this phase will be charged at the undergraduate tuition rate; however, these courses will have "graduate status" to count toward the master's degree. Courses must be approved before the semester starts. Any 4000-level course taken before admission to the Accelerated MS program will apply to the undergraduate requirements.

Seniors who have earned more than 105 credit hours cannot be considered for the Accelerated MS degree program.

Graduate Admission

Applicants are considered for graduate admission with the following criteria:

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Submitted at least one positive recommendation letter from an UMSL Chemistry faculty member
- Submitted to the Chemistry Graduate Admissions Director a statement of purpose explaining why an advanced degree

in Chemistry is of interest and why the applicant merits consideration

- Have met with the Chemistry Accelerated MS advisor

Based on the above information, the Chemistry undergraduate advisor, Accelerated MS advisor, and Graduate Admissions Director will determine whether the student can apply for graduate admission. Final decisions concerning graduate admission are made by the Graduate School Director and the Graduate School. Students admitted to the graduate program must take graduate courses until the completion of the MS degree.

Completing the BS and MS Degrees

To finish the Chemistry BS degree, a student must also complete the following requirements.

| | | |
|--|---|---|
| Two credit hours of advanced elective work | | 2 |
| CHEM 4233 | Laboratory in Instrumental Analysis | 2 |
| CHEM 4343 | Physical Chemistry Laboratory II | 2 |
| CHEM 4433 | Inorganic Chemistry Laboratory | 2 |
| CHEM 4612 | Introduction to Macromolecular, Supramolecular, and Nanoscale Chemistry | 1 |
| CHEM 4712 | Biochemistry | 3 |
| CHEM 4897 | Seminar in Chemistry | 2 |
| CHEM 5212 | Advanced Instrumental Analysis | 3 |
| CHEM 5412 | Advanced Graduate Inorganic Chemistry | 3 |

Courses for Both BS and MS Credit

The following Chemistry courses can count toward both the Chemistry BS and Chemistry MS degree, up to a maximum of 9 credit hours.

| | | |
|------------------------------|---|---|
| CHEM 4433 | Inorganic Chemistry Laboratory | 2 |
| CHEM 5212 | Advanced Instrumental Analysis | 3 |
| CHEM 5412 | Advanced Graduate Inorganic Chemistry | 3 |
| Choose one of the following: | | 1 |
| CHEM 6487 | Problem Seminar in Inorganic Chemistry | |
| CHEM 6687 | Problem Seminar in Organic Chemistry | |
| CHEM 6787 | Problem Seminar in Biochemistry | |
| CHEM 5396 | Directed Readings in Physical Chemistry | |

Total Hours **9**

Other courses may be allowed upon approval of the Graduate Program Director.

Required and elective courses for the MS degree are shown below.

Required

| | | |
|-----------|--|---|
| CHEM 6897 | Chemistry Colloquium (must take 3 times) | 3 |
|-----------|--|---|

Electives **18**

| | | |
|-----------|---|--|
| CHEM 5302 | Foundations of Physical Chemistry | |
| CHEM 5396 | Directed Readings in Physical Chemistry | |

| | | |
|--------------------|---|-----------|
| CHEM 5462 | Organometallic Chemistry of the Transition Elements | |
| CHEM 5494 | Special Topics in Inorganic Chemistry | |
| CHEM 5602 | Advanced Organic Chemistry I - Physical Organic | |
| CHEM 5612 | Advanced Organic Chemistry II - Reactions And Synthesis | |
| CHEM 5652 | Spectroscopic Identification of Organic Compounds | |
| CHEM 5694 | Special Topics in Organic Chemistry | |
| CHEM 5722 | Advanced Graduate Biochemistry | |
| CHEM 5772 | Advanced Physical Biochemistry | |
| CHEM 5774 | Bioinformatics | |
| CHEM 5794 | Special Topics in Biochemistry | |
| CHEM 6487 | Problem Seminar in Inorganic Chemistry | |
| CHEM 6687 | Problem Seminar in Organic Chemistry | |
| CHEM 6787 | Problem Seminar in Biochemistry | |
| CHEM 6905 | Graduate Research in Chemistry (up to 5 hours may be taken) | |
| Total Hours | | 21 |

Awarding of Degrees

The undergraduate degree may be awarded when the student meets the requirements for the BS degree, including at least 120 total credit hours, completion of the Chemistry core, elective, and laboratory requirements, and completion of the associated requirements. The student must work with the undergraduate advisor and/or the Accelerated MS advisor to apply to graduate. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin in the semester following the awarding of the undergraduate degree.

The graduate degree will be awarded when the student meets the requirements for the MS degree, which is 30 credit hours of coursework at the graduate level. Required and elective courses for the MS degree are shown above. The student must work with the Accelerated MS advisor and Graduate Program Director to apply to graduate.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Chemistry MS, BS Biochemistry Emphasis Accelerated Master's Degree

The Department of Chemistry & Biochemistry offers an Accelerated MS degree program that allows students to simultaneously earn their BS with the Biochemistry Option and MS in Chemistry with a Biochemistry Emphasis. Students accepted to the Accelerated MS degree program will be permitted to count up to 9 credits toward both degrees.

Students are encouraged to work closely with their Chemistry & Biochemistry undergraduate advisor and the Accelerated MS advisor to ensure that courses are timed appropriately to maximize their benefits.

It is strongly recommended that students meet with the Accelerated MS advisor as soon as possible, ideally before their junior year.

Students in the Accelerated MS program will complete the MS through the non-thesis coursework path. The thesis MS and Professional Science MS programs cannot be combined with this program.

Eligibility

Students need to have fulfilled the core curriculum requirements for the Bachelor of Science in Chemistry with the Biochemistry Option degree below prior to applying for the Accelerated MS program.

Related Area Courses

| | | |
|---------------|--|---|
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2111L | Mechanics and Heat Laboratory | 1 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory | 1 |
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |

Chemistry Courses

| | | |
|-----------|---|---|
| CHEM 1000 | Chemistry: The Central Science | 1 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2223 | Quantitative Analysis in Chemistry | 4 |
| CHEM 2612 | Organic Chemistry I | 3 |
| CHEM 2622 | Organic Chemistry II | 3 |
| CHEM 2633 | Organic Chemistry Laboratory | 2 |
| CHEM 3302 | Physical Chemistry for The Life Sciences | 3 |
| CHEM 3312 | Physical Chemistry I: Thermodynamics and Kinetics | 3 |
| CHEM 3322 | Physical Chemistry II: Quantum Chemistry and Spectroscopy | 3 |
| CHEM 3333 | Physical Chemistry Laboratory I | 2 |
| CHEM 3412 | Basic Inorganic Chemistry | 3 |
| CHEM 3643 | Advanced Organic Chemistry Laboratory | 2 |

Admission Requirements

Provisional Admission

Applicants are considered for provisional admission if they meet the following criteria.

- Earned 60 hours as an undergraduate
- Have a minimum GPA of 3.0 with a B or better in all core courses listed above
- Have approval from both their Chemistry undergraduate advisor and Chemistry MS Program Director

It is recommended to apply for provisional status as a junior, preferably in the first semester of junior year.

Graduate course options for provisional students are listed below. Courses completed by undergraduate students who have been provisionally admitted to the Accelerated MS program can count towards both their BS and MS degrees. Courses in this phase will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. Courses must be approved before the semester starts. Any 4000-level course taken before admission to the Accelerated MS program will apply to the undergraduate requirements.

Seniors who have earned more than 105 credit hours cannot be considered for the Accelerated MS degree program.

Graduate Admission

Applicants are considered for graduate admission with the following criteria.

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Submitted at least one positive recommendation letter from an UMSL Chemistry faculty member
- Submitted to the Chemistry Graduate Admissions Director a statement of purpose explaining why an advanced degree in Chemistry is of interest and why the applicant merits consideration
- Have met with the Chemistry Accelerated MS advisor

Based on the above information, the Chemistry undergraduate advisor, Accelerated MS advisor and Graduate Admissions Director will determine whether the student can apply for graduate admission. Final decisions concerning graduate admission are made by the Graduate Admissions Director and the Graduate School. Students admitted to the graduate program must take graduate courses until the completion of the MS degree.

Completing the BS and MS Degrees

To finish the Chemistry with a Biochemistry Option BS degree, a student must also complete the following requirements.

| | | |
|--|---|---|
| Two credit hours of advanced elective work | | 2 |
| BIOL 2012 | Genetics | 3 |
| CHEM 4233 | Laboratory in Instrumental Analysis | 2 |
| CHEM 4612 | Introduction to Macromolecular, Supramolecular, and Nanoscale Chemistry | 1 |
| CHEM 4712 | Biochemistry | 3 |
| CHEM 4733 | Biochemistry Laboratory | 2 |
| CHEM 4897 | Seminar in Chemistry | 2 |
| CHEM 5212 | Advanced Instrumental Analysis | 3 |
| CHEM 5722 | Advanced Graduate Biochemistry | 3 |

Courses for Both BS and MS Credit

The following Chemistry courses can count toward both the Chemistry BS and Chemistry MS degree, up to a maximum of 9 credit hours.

| | | |
|-----------|--------------------------------|---|
| CHEM 4733 | Biochemistry Laboratory | 2 |
| CHEM 5212 | Advanced Instrumental Analysis | 3 |

| | | |
|--------------------|---------------------------------|----------|
| CHEM 5722 | Advanced Graduate Biochemistry | 3 |
| CHEM 6787 | Problem Seminar in Biochemistry | 1 |
| Total Hours | | 9 |

Other courses may be allowed upon approval of the Graduate Program Director.

Required and elective courses for the MS degree are shown below.

Required

| | | |
|-----------|--|---|
| CHEM 6897 | Chemistry Colloquium (must take 3 times) | 3 |
|-----------|--|---|

Electives 18

| | |
|-----------|--|
| CHEM 5302 | Foundations of Physical Chemistry |
| CHEM 5396 | Directed Readings in Physical Chemistry |
| CHEM 5462 | Organometallic Chemistry of the Transition Elements |
| CHEM 5494 | Special Topics in Inorganic Chemistry |
| CHEM 5602 | Advanced Organic Chemistry I - Physical Organic |
| CHEM 5612 | Advanced Organic Chemistry II - Reactions And Synthesis |
| CHEM 5652 | Spectroscopic Identification of Organic Compounds |
| CHEM 5694 | Special Topics in Organic Chemistry |
| CHEM 5722 | Advanced Graduate Biochemistry |
| CHEM 5772 | Advanced Physical Biochemistry |
| CHEM 5774 | Bioinformatics |
| CHEM 5794 | Special Topics in Biochemistry |
| CHEM 6487 | Problem Seminar in Inorganic Chemistry |
| CHEM 6687 | Problem Seminar in Organic Chemistry |
| CHEM 6787 | Problem Seminar in Biochemistry |
| CHEM 6905 | Graduate Research in Chemistry (up to five hours may be taken) |

Awarding of Degrees

The undergraduate degree may be awarded when the student meets the requirements for the BS degree, including at least 120 total credit hours, completion of the Chemistry core, elective, and laboratory requirements, and completion of the associated requirements. The student must work with the undergraduate advisor and/or the Accelerated MS advisor to apply to graduate. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin he following semester.

The graduate degree will be awarded when the student meets the requirements for the MS degree, which is 30 credit hours of coursework at the graduate level. Required and elective courses for the MS degree are shown below. The student must work with the Accelerated MS advisor and Graduate Program Director to apply to graduate.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the

graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Chemistry MS, Professional Science Emphasis

Admission Requirements

Individuals with at least the equivalent of the B.A. degree in the natural sciences may be admitted to the Graduate School as candidates for the M.S. degree or as precandidates for the Ph.D. degree in chemistry. A student in the M.S. program may request to transfer to the Ph.D. program by petition to the department.

The department admissions committee considers applicants' grade point averages and normally requires above-average performance in all areas of chemistry as well as physics and mathematics, or other evidence of high aptitude for graduate work in chemistry. Applicants' letters of recommendation and academic programs are also considered. In some cases the committee may require successful completion of undergraduate course work at UMSL as a condition of enrollment as a regular student.

Students with bachelor's degrees in fields other than chemistry may be admitted to pursue graduate studies in chemistry, but they must make up background deficiencies, usually by taking undergraduate course work at UMSL.

Financial Support

Teaching assistantships are available to qualified applicants. Research assistantships and fellowships are available for advanced students. Departmental support is not normally available beyond the fifth year in the program. For further information, contact the Department of Chemistry & Biochemistry Graduate Admissions Committee.

Preliminary Advisement

Students who have been admitted for graduate work in chemistry will be contacted by the Director of Graduate Studies in order to develop a tentative plan of study which takes into consideration the student's background and interests. Entering students are required to demonstrate proficiency at the undergraduate level in four areas of chemistry (biochemistry, organic, inorganic, physical, and analytical).

Proficiency may be demonstrated in one of the following ways:

- Outstanding performance in recent undergraduate course work.
- Satisfactory performance in standardized placement examinations. These examinations are given twice a year, approximately one week before the beginning of the fall and winter semesters.
- Successful completion of assigned course work.

The ultimate choice of whether students may enroll in the M.S. or Ph.D. degree programs resides with the chemistry faculty.

Degree Requirements

This option requires a minimum of 32 hours, of which 16 credit hours must be at or above the 5000 level. Students must take 21 credit hours of chemistry, 9 hours in business, and 2 credits hours of internship or practicum. A maximum of 3 credits of CHEM 6897 may be applied toward the required minimum of number of chemistry credits (21 hours).

The courses presented for the Master's degree (professional science emphasis) may not include any of the following:

| | | |
|-----------|---|------|
| CHEM 4212 | Instrumental Analysis | 3 |
| CHEM 4233 | Laboratory in Instrumental Analysis | 2 |
| CHEM 4302 | Survey of Physical Chemistry with Applications to the Life Sciences | 3 |
| CHEM 4343 | Physical Chemistry Laboratory II | 2 |
| CHEM 4412 | Advanced Inorganic Chemistry | 3 |
| CHEM 4433 | Inorganic Chemistry Laboratory | 2 |
| CHEM 4712 | Biochemistry | 3 |
| CHEM 4733 | Biochemistry Laboratory | 2 |
| CHEM 6487 | Problem Seminar in Inorganic Chemistry | 1 |
| CHEM 6687 | Problem Seminar in Organic Chemistry | 1-3 |
| CHEM 6787 | Problem Seminar in Biochemistry | 1 |
| CHEM 6812 | Introduction to Graduate Study in Chemistry | 1 |
| CHEM 6822 | Introduction to Graduate Research in Chemistry | 1 |
| CHEM 6905 | Graduate Research in Chemistry | 1-10 |

Emphasis Area Requirements

Elective Courses in Business (9 credit hours required)

| | | |
|-------------|--|---|
| MGMT 3623 | Industrial and Organizational Psychology | 3 |
| BUS AD 5000 | Economics for Managers | 3 |
| BUS AD 5100 | Managerial Communication | 3 |
| MGMT 5600 | Managing and Leading in Organizations | 3 |
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| BUS AD 5900 | Law, Ethics and Business | 3 |

Required Internship or Practicum (2 credit hours required)

| | | |
|--------------|--|---|
| CHEM 5798 | | 2 |
| or CHEM 5799 | | |

There are no distribution requirements for the Masters in Chemistry (Professional Science Emphasis).

Chemistry PhD

Admission Requirements

Individuals with at least the equivalent of the B.A. degree in the natural sciences may be admitted to the Graduate School as candidates for the M.S. degree or as precandidates for the Ph.D. degree in chemistry. A student in the M.S. program may request to transfer to the Ph.D. program by petition to the department.

The department admissions committee considers applicants' grade point averages and normally requires above-average performance in all areas of chemistry as well as physics and mathematics, or other evidence of high aptitude for graduate work in chemistry. Applicants' letters of recommendation and academic programs are also considered. In some cases the committee may require successful completion of undergraduate course work at UMSL as a condition of enrollment as a regular student.

Students with bachelor's degrees in fields other than chemistry may be admitted to pursue graduate studies in chemistry, but they must make up background deficiencies, usually by taking undergraduate course work at UMSL.

Financial Support

Teaching assistantships are available to qualified applicants. Research assistantships and fellowships are available for advanced students. Departmental support is not normally available beyond the fifth year in the program. For further information, contact the Department of Chemistry & Biochemistry Graduate Admissions Committee.

Preliminary Advisement

Students who have been admitted for graduate work in chemistry will be contacted by the Director of Graduate Studies in order to develop a tentative plan of study which takes into consideration the student's background and interests. Entering students are required to demonstrate proficiency at the undergraduate level in four areas of chemistry (biochemistry, organic, inorganic, physical, and analytical).

Proficiency may be demonstrated in one of the following ways:

- Outstanding performance in recent undergraduate course work.
- Satisfactory performance in standardized placement examinations. These examinations are given twice a year, approximately one week before the beginning of the fall and winter semesters.
- Successful completion of assigned course work.

The ultimate choice of whether students may enroll in the M.S. or Ph.D. degree programs resides with the chemistry faculty.

Doctoral Degree Requirements

Within one year of initial enrollment, incoming doctoral students must demonstrate proficiency in four of the following five areas: biochemistry, organic, inorganic, physical, and analytical chemistry. A minimum of 60 credit hours is required, including research hours.

Comprehensive Exam Committee

Before the end of the second regular semester of study, the doctoral student and his/her research advisor will select a comprehensive exam committee. The student should prepare Graduate School form D-1, which should be signed by the research advisor and the Director of Graduate Studies, and filed with the graduate school.

In the Department of Chemistry & Biochemistry, the comprehensive exam committee also serves as a mentoring committee for the student. The committee will meet with the student at the end of each spring semester to review progress in coursework and research. A written report summarizing their assessment and recommendations will be provided to the student and the Director of Graduate Studies.

Comprehensive Examinations

Each student seeking the Ph.D. degree must successfully complete a comprehensive examination prior to advancement to candidacy. The comprehensive exam is typically taken when formal coursework has been completed, but it must be completed before the start of the fifth regular semester.

The comprehensive exam consists of writing an original research proposal and an oral defense that will be evaluated by the student's committee. The student will select a topic that is not directly related to the expected research area. The research advisor must approve the topic. The specific format for the proposal is described in the Department of Chemistry & Biochemistry Handbook of Graduate Studies.

Dissertation Proposal

Doctoral students must prepare and defend a Dissertation Proposal before the student has completed the equivalent of 6 regular semesters of full-time study. The proposal should be defended within six months following successful completion of the Comprehensive Examination.

The Dissertation Proposal includes both a written and oral component. Both components will be evaluated by the student's Comprehensive Examination committee. The written proposal will be submitted to the Comprehensive Examination committee and will be presented as a seminar to the Department. After the seminar, the student will defend the proposal before the Comprehensive Examination committee.

Advancement to Candidacy

In addition to general Graduate School requirements for advancement to candidacy, students must complete the following:

1. 18 hours of non-dissertation work.

This may not include:

| | | |
|-----------|---|-----|
| CHEM 4212 | Instrumental Analysis | 3 |
| CHEM 4233 | Laboratory in Instrumental Analysis | 2 |
| CHEM 4302 | Survey of Physical Chemistry with Applications to the Life Sciences | 3 |
| CHEM 4343 | Physical Chemistry Laboratory II | 2 |
| CHEM 4412 | Advanced Inorganic Chemistry | 3 |
| CHEM 4433 | Inorganic Chemistry Laboratory | 2 |
| CHEM 4712 | Biochemistry | 3 |
| CHEM 4733 | Biochemistry Laboratory | 2 |
| CHEM 6487 | Problem Seminar in Inorganic Chemistry | 1 |
| CHEM 6687 | Problem Seminar in Organic Chemistry | 1-3 |
| CHEM 6787 | Problem Seminar in Biochemistry | 1 |
| CHEM 6812 | Introduction to Graduate Study in Chemistry | 1 |
| CHEM 6822 | Introduction to Graduate Research in Chemistry | 1 |
| CHEM 6897 | Chemistry Colloquium | 1 |

At least 9 of the 18 credits of non-dissertation coursework must be at the 5000 level. Courses in areas other than chemistry may be included with prior departmental approval.

2. Successfully pass a Comprehensive Examination.
3. Successfully present and defend a dissertation proposal.
4. Submit the proposal for approval to the Graduate School.
5. Be in good standing.

Seminar Requirement

Students must enroll in CHEM 6897, Chemistry Colloquium, each semester they are in residence. In their final semester in the program, each student will present an "exit seminar" to the Department describing the results of their dissertation research.

Dissertation

One copy of the dissertation must be submitted upon completion of the graduate research problem.

Probation and Dismissal

Students are dismissed from the Ph.D. program if they fail to pass their Comprehensive Examination or otherwise fail to meet the academic and professional standards set forth by the Graduate School and the Department of Chemistry and Biochemistry.

Child Advocacy Studies Minor

The undergraduate minor in Child Advocacy Studies (CAST) is an interdisciplinary program requiring 12 credits of training in Child Advocacy Studies. The CAST minor encompasses a group of courses focused on children, youth, and traumatic stress. The CAST minor is appropriate for students who want to explore working in a variety of professional settings with children and adolescents, many of whom may have experienced trauma.

Most courses required by the minor in Child Advocacy Studies have prerequisites. Some students may satisfy prerequisites by virtue of their prior curriculum. When this is not the case, students are responsible for satisfying the prerequisites. All required courses must be taken in residence at UM-St. Louis.

| | | |
|--------------------|--|-----------|
| CAST 1000 | Introduction to Child Advocacy Studies | 3 |
| CAST 2100 | Communication in Child Advocacy | 3 |
| CAST 2275 | The Ethics, Values, and Policy of Child Advocacy | 3 |
| CAST/PSYCH 3290 | Traumatic Stress in Childhood and Adolescence | 3 |
| Total Hours | | 12 |

Learning Outcomes

- Demonstrate the ethical behavior and values of their discipline in the context of traumatic stress.
- Integrate the current fund of traumatic stress knowledge into their professional role.
- Generate effective responses to traumatic stress and child maltreatment using trauma-informed decision-making processes.
- Create trauma-sensitive relationships with diverse consumers.
- Interact effectively with professionals across multiple disciplines.
- Communicate effectively with the community about traumatic stress and child maltreatment.

Child Advocacy Studies Undergraduate Certificate

The undergraduate Certificate Program in Child Advocacy Studies (CAST) is an interdisciplinary program requiring 17 credits of training in Child

Advocacy Studies. The CAST certificate encompasses a group of courses focused on children, youth, and traumatic stress. The CAST certificate is appropriate for students who want to specialize in working in a variety of professional settings with children and adolescents, many of whom may have experienced trauma.

Most courses required by the Certificate Program in Child Advocacy Studies have prerequisites. Some students may satisfy prerequisites by virtue of their prior curriculum. When this is not the case, students are responsible for satisfying the prerequisites. All students must take at least one course outside their home department. All required courses must be taken in residence at UM-St. Louis.

| | | |
|--------------------|--|-----------|
| CAST/PSYCH 3290 | Traumatic Stress in Childhood and Adolescence | 3 |
| CAST 3295 | Service Learning Projects in Child Advocacy (or comparable course with CAST program director approval) | 2 |
| CAST 4398 | Child Maltreatment: A Multidisciplinary Approach | 3 |
| CAST 4428 | Foundations of Practice in Child Advocacy | 3 |
| CAST 4498 | Forensic Investigation of Child Abuse | 3 |
| CAST 4598 | Child Abuse Assessment and Intervention | 3 |
| Total Hours | | 17 |

Learning Outcomes

Upon completion of the program, certificate earners should be able to:

- Demonstrate the ethical behavior and values of their discipline in the context of traumatic stress.
- Integrate the current fund of knowledge about traumatic stress into their professional role.
- Generate effective responses to traumatic stress and child maltreatment using trauma-informed decision-making processes.
- Create trauma-sensitive relationships with diverse consumers.
- Use knowledge to increase consumer access to trauma-informed services.
- Formulate service strategies that reduce the impact of trauma and promote well-being.
- Interact effectively with professionals across multiple disciplines.
- Produce trauma-sensitive written and verbal communication consistent with discipline standards.
- Recommend trauma-informed policy changes within their work setting.

Civil Engineering BSCIE

Admission

Students are admitted to the upper-division program after they have completed an acceptable pre-engineering program. The pre-engineering program can be taken at University of Missouri-St. Louis or at community colleges in the area. Normally, admission is granted to persons who have completed the pre-engineering program with a minimum grade point average of 2.5 over all their mathematics, chemistry, physics, and introductory (statics and dynamics) engineering courses. Students with

less than a 2.5 grade point average, but at least a C, in all their science, engineering and mathematics courses may be admitted on a conditional basis.

For more information, please contact the program advisor at (314) 516-7018.

Degree Requirements

A program of 132 semester hours is required for the Bachelor of Science in Civil Engineering.

Majors must complete the University General Education (p. 30) and Graduation (p. 16) requirements, the Pre-Engineering Requirements, the Core Engineering Requirements, and Major Requirements.

A minimum grade of C- is necessary to meet the prerequisite requirement for any course.

General Education and Graduation Requirements

The following courses fulfill general education and graduation requirements and are required of Civil Engineering majors:

| | | |
|--|---|-----------|
| PHIL 2259 | Engineering Ethics | 3 |
| PHIL 3380 | Philosophy of Science | 3 |
| HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | 3 |
| or HIST 1002 | American Civilization 1865 to Present (MOTR HIST 102) | |
| Three additional Social Science courses ¹ | | 9 |
| Total Hours | | 18 |

¹ One Social Science course must satisfy the Cultural Diversity Requirement. Humanities and social sciences electives must meet both the University of Missouri-St. Louis General Education Requirements and the Humanities and Social Sciences Requirements of the Joint Undergraduate Engineering Program. Check with your advisor for details.

Pre-Engineering Requirements

Students seeking to major in engineering are first designated as 'Undeclared with an interest in Engineering majors' until they have completed Math 1800 Analytical Geometry & Calculus I. Upon successful completion of Math 1800 with a grade of C or better, students will be allowed to declare pre-engineering as their major. Math 1800 must be completed successfully within two attempts.

| | | |
|---------------|---|---|
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 2020 | Introduction to Differential Equations | 3 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| GEOL 1001 | General Geology | 3 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2111L | Mechanics and Heat Laboratory | 1 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |

| | | |
|---------------|---|---|
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory | 1 |
| ENGR 2310 | Statics | 3 |
| ENGR 2320 | Dynamics | 3 |
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |

Total Hours **45**

Engineering Core Requirements

| | | |
|---------------|---------------------------|---|
| CMP SCI 1250 | Introduction to Computing | 3 |
| J E COMM 2000 | Engineering Studio I | 1 |
| ENGL 3130 | Technical Writing | 3 |

Total Hours **7**

Civil Engineering Major Requirements

| | | |
|-----------------------------|---|---|
| J C ENGR 2160 | Surveying | 3 |
| J C ENGR 1430 | Introduction to Engineering Design: CAD & GIS | 2 |
| J C ENGR 3210 | Computer Methods of Engineering Analysis | 2 |
| J C ENGR 3410 | Structural Analysis | 3 |
| J C ENGR 3420 | Structural Design | 3 |
| J C ENGR 3360 | Civil Engineering Materials Lab | 1 |
| J C ENGR 3430 | Civil Engineering Design CAD & GIS | 2 |
| J C ENGR 3460 | Transportation Engineering | 3 |
| J C ENGR 3760 | Hydraulic Engineering | 3 |
| J C ENGR 4190 | Soil Mechanics | 3 |
| J C ENGR 4200 | Soil Exploration and Testing | 1 |
| J C ENGR 4600 | Highway and Traffic Engineering | 3 |
| J C ENGR 4640 | Foundation Engineering | 3 |
| J C ENGR 4670 | Structural Design Projects | 3 |
| or J C ENGR 4910 | Hydrology and Hydraulic Design Project | |
| J C ENGR 4730 | Construction Operations and Management | 3 |
| J C ENGR 4740 | Economic Decisions in Engineering | 3 |
| J C ENGR 4950 | Fundamentals of Civil Engineering Review | 1 |
| J C ENGR 4990 | Senior Civil Engineering Seminar | 1 |
| J M ENGR 2410 | Mechanics of Deformable Bodies | 3 |
| J M ENGR 3360 | Material Science for J C ENGR | 3 |
| J M ENGR 3700 | Fluid Mechanics | 3 |
| J M ENGR 3721 | Fluid Mechanics Laboratory | 1 |
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| Civil Engineering Electives | | 6 |

Total Hours **62**

Graduation Requirements

In addition to the requirements of the University of Missouri-St. Louis that apply to all candidates for undergraduate degrees, the student must earn a minimum campus grade point average of 2.0 and a minimum grade point average of 2.0 for all engineering courses attempted at the University of Missouri-St. Louis.

Upon completion of the program, graduates will have an ability to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- Communicate effectively with a range of audiences
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- Acquire and apply new knowledge as needed, using appropriate learning strategies

Sample Graduation Plans

Water Resources/Environmental Engineering Track- Four Year Plan

First Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|------------------------|-------|-------------------|-------|-------------|-------|
| MATH 1800 | | 5 MATH 1900 | | 5 MATH 2000 | 5 |
| CHEM 1111 | | 5 PHYSICS 2111 | | 4 ENGR 2310 | 3 |
| ENGL 1100 | | 3 PHYSICS 2111L | 1 | | |
| ENGR 1010 ¹ | | 1 GEOL 1001 | 3 | | |
| | | HIST 1001 or 1002 | 3 | | |
| | 14 | | 16 | | 8 |

Second Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|--|-------|-----------------|-------|-----------------------------|-------|
| ENGR 2320 | | 3 J C ENGR 2160 | | 3 J C ENGR 3360 | 1 |
| MATH 2020 | | 3 J C ENGR 3210 | | 2 J M ENGR 3360 | 3 |
| PHYSICS 2112 | | 4 J E COMM 2000 | | 1 EXPLORE - Social Sciences | 3 |
| PHYSICS 2112L | | 1 J M ENGR 2410 | 3 | | |
| EXPLORE – Social Sciences ² | | 3 J M ENGR 3700 | 3 | | |
| | | CMP SCI 1250 | 3 | | |
| | 14 | | 15 | | 7 |

Third Year

| Fall | Hours | Spring | Hours |
|---------------|-------|-----------------|-------|
| J C ENGR 1430 | | 2 J C ENGR 3420 | 3 |
| J C ENGR 3410 | | 3 J C ENGR 3430 | 2 |
| J C ENGR 4600 | | 3 J C ENGR 3760 | 3 |
| J C ENGR 4740 | | 3 J C ENGR 4190 | 3 |
| MATH 1320 | | 3 J C ENGR 4200 | 1 |
| J M ENGR 3721 | | 1 PHIL 2259 | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---------------|-------|-----------------|-------|
| J C ENGR 3520 | | 3 J C ENGR 3460 | 3 |
| J C ENGR 4640 | | 3 J C ENGR 4910 | 3 |
| J C ENGR 4730 | | 3 J C ENGR 4950 | 1 |
| J C ENGR 4830 | | 3 ENGL 3130 | 3 |
| J C ENGR 4990 | | 1 PHIL 3380 | 3 |

| | |
|---------------------------|----|
| EXPLORE - Social Sciences | 3 |
| 13 | 16 |

Total Hours: 133

¹ Course does not count toward 132 credit hours for degree.

² Course should also satisfy the Cultural Diversity Requirement.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Water Resources/Environmental Engineering Track- Five Year Plan

First Year

| Fall | Hours | Spring | Hours |
|------------------------|-------|--|-------|
| MATH 1800 | | 5 MATH 1900 | 5 |
| CHEM 1111 | | 5 GEOL 1001 | 3 |
| ENGL 1100 | | 3 HIST 1001 or 1002 | 3 |
| ENGR 1010 ¹ | | 1 EXPLORE - Social Sciences ² | 3 |
| | 14 | | 14 |

Second Year

| Fall | Hours | Spring | Hours |
|---------------------------|-------|---------------------------|-------|
| MATH 2000 | | 5 MATH 2020 | 3 |
| PHYSICS 2111 | | 4 PHYSICS 2112 | 4 |
| PHYSICS 2111L | | 1 PHYSICS 2112L | 1 |
| PHIL 2259 | | 3 ENGR 2310 | 3 |
| EXPLORE - Social Sciences | | 3 PHIL 3380 | 3 |
| | | EXPLORE - Social Sciences | 3 |
| | 16 | | 17 |

Third Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|---------------|-------|-----------------|-------|-----------------|-------|
| J E COMM 2000 | | 1 J C ENGR 2160 | | 3 J M ENGR 3360 | 3 |
| J M ENGR 2410 | | 3 J C ENGR 3210 | | 2 J C ENGR 3360 | 1 |
| J C ENGR 1430 | | 2 J C ENGR 3460 | 3 | | |
| ENGR 2320 | | 3 J M ENGR 3700 | 3 | | |
| CMP SCI 1250 | | 3 MATH 1320 | 3 | | |
| | 12 | | 14 | | 4 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---------------|-------|-----------------|-------|
| J C ENGR 3410 | | 3 J C ENGR 3420 | 3 |
| J M ENGR 3721 | | 1 J C ENGR 3430 | 2 |
| J C ENGR 4600 | | 3 J C ENGR 3760 | 3 |
| J C ENGR 4740 | | 3 J C ENGR 4190 | 3 |
| ENGL 3130 | | 3 J C ENGR 4200 | 1 |
| | 13 | | 12 |

Fifth Year

| Fall | Hours | Spring | Hours |
|---------------|-------|-----------------|-------|
| J C ENGR 4830 | | 3 J C ENGR 4910 | 3 |
| J C ENGR 3520 | | 3 J C ENGR 4950 | 1 |
| J C ENGR 4990 | | 1 | |
| J C ENGR 4640 | | 3 | |
| J C ENGR 4730 | | 3 | |
| | 13 | | 4 |

Total Hours: 133

¹ Course does not count toward 132 credit hours for degree
² Course should also satisfy the Cultural Diversity Requirement.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Structural Engineering Track - Four Year Plan

| First Year | | | | | |
|--|-------|-----------------------------|-------|-----------------------------|-------|
| Fall | Hours | Spring | Hours | Summer | Hours |
| MATH 1800 | | 5 MATH 1900 | | 5 MATH 2000 | 5 |
| CHEM 1111 | | 5 PHYSICS 2111 | | 4 ENGR 2310 | 3 |
| ENGL 1100 | | 3 PHYSICS 2111L | | 1 | |
| ENGR 1010 ¹ | | 1 GEOL 1001 | | 3 | |
| | | HIST 1001 or 1002 | | 3 | |
| | 14 | | 16 | | 8 |
| Second Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| MATH 2020 | | 3 J E COMM 2000 | | 1 J M ENGR 3360 | 3 |
| PHYSICS 2111 | | 4 CMP SCI 1250 | | 3 J C ENGR 3360 | 1 |
| PHYSICS 2111L | | 1 J C ENGR 2160 | | 3 EXPLORE - Social Sciences | 3 |
| | | | | | |
| ENGR 2320 | | 3 J M ENGR 2410 | | 3 | |
| EXPLORE - Social Sciences ² | | 3 J C ENGR 3210 | | 2 | |
| | | J M ENGR 3700 | | 3 | |
| | 14 | | 15 | | 7 |
| Third Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| J C ENGR 1430 | | 2 J C ENGR 3420 | | 3 | |
| J C ENGR 3410 | | 3 J C ENGR 3430 | | 2 | |
| J C ENGR 4600 | | 3 J C ENGR 3760 | | 3 | |
| J C ENGR 4740 | | 3 J C ENGR 4190 | | 3 | |
| MATH 1320 | | 3 J C ENGR 4200 | | 1 | |
| | | PHIL 2259 | | 3 | |
| | 14 | | 15 | | |
| Fourth Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| J C ENGR 4630 | | 3 J C ENGR 3460 | | 3 | |
| J C ENGR 4640 | | 3 J C ENGR 4660 | | 3 | |
| J C ENGR 4730 | | 3 J C ENGR 4670 | | 3 | |
| J C ENGR 4990 | | 1 J C ENGR 4950 | | 1 | |
| J M ENGR 3721 | | 1 PHIL 3380 | | 3 | |
| ENGL 3130 | | 3 EXPLORE - Social Sciences | | 3 | |
| | 14 | | 16 | | |
| Total Hours: 133 | | | | | |

¹ Course does not count toward 132 credit hours for the degree.
² Course should also satisfy the Cultural Diversity Requirement.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are

encouraged to meet with their advisor each semester. All requirements are subject to change.

Structural Engineering Track - Five Year Plan

| First Year | | | | | |
|---------------------------|-------|--|-------|-----------------|-------|
| Fall | Hours | Spring | Hours | | |
| MATH 1800 | | 5 MATH 1900 | | 5 | |
| CHEM 1111 | | 5 GEOL 1001 | | 3 | |
| ENGL 1100 | | 3 HIST 1001 or 1002 | | 3 | |
| ENGR 1010 ¹ | | 1 EXPLORE - Social Sciences ² | | 3 | |
| | 14 | | 14 | | |
| Second Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| MATH 2000 | | 5 MATH 2020 | | 3 | |
| PHYSICS 2111 | | 4 PHYSICS 2112 | | 4 | |
| PHYSICS 2111L | | 1 PHYSICS 2112L | | 1 | |
| PHIL 2259 | | 3 ENGR 2310 | | 3 | |
| EXPLORE - Social Sciences | | 3 PHIL 3380 | | 3 | |
| | | EXPLORE - Social Sciences | | 3 | |
| | 16 | | 17 | | |
| Third Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| J E COMM 2000 | | 1 J C ENGR 2160 | | 3 J M ENGR 3360 | 3 |
| J C ENGR 1430 | | 2 J C ENGR 3210 | | 2 J C ENGR 3360 | 1 |
| J M ENGR 2410 | | 3 J C ENGR 3460 | | 3 | |
| ENGR 2320 | | 3 J M ENGR 3700 | | 3 | |
| CMP SCI 1250 | | 3 MATH 1320 | | 3 | |
| | 12 | | 14 | | 4 |
| Fourth Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| J C ENGR 3410 | | 3 J C ENGR 3420 | | 3 | |
| J M ENGR 3721 | | 1 J C ENGR 3430 | | 2 | |
| J C ENGR 4600 | | 3 J C ENGR 3760 | | 3 | |
| J C ENGR 4740 | | 3 J C ENGR 4190 | | 3 | |
| ENGL 3130 | | 3 J C ENGR 4200 | | 1 | |
| | 13 | | 12 | | |
| Fifth Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| J C ENGR 4630 | | 3 J C ENGR 4660 | | 3 | |
| J C ENGR 4990 | | 1 J C ENGR 4670 | | 3 | |
| J C ENGR 4640 | | 3 J C ENGR 4950 | | 1 | |
| J C ENGR 4730 | | 3 | | | |
| | 10 | | 7 | | |
| Total Hours: 133 | | | | | |

¹ Course does not count toward 132 credit hours for degree.
² Course should also satisfy the Cultural Diversity Requirement.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Civil Engineering Minor

Minor in Civil Engineering

Admission to the Joint Engineering program is required. A minimum of 18 credit hours in Joint Civil Engineering courses and Engineering courses are required.

Required Courses

| | | |
|---------------|--------------------------------|---|
| ENGR 2310 | Statics | 3 |
| J M ENGR 2410 | Mechanics of Deformable Bodies | 3 |
| J M ENGR 3700 | Fluid Mechanics | 3 |

Take at least three courses from one of the tracks below: **9**

Structures

| | |
|---------------|--|
| J C ENGR 2160 | Surveying |
| J M ENGR 3360 | Material Science for J C ENGR |
| J C ENGR 3410 | Structural Analysis |
| J C ENGR 3420 | Structural Design |
| J C ENGR 4630 | Design of Steel Structures |
| J C ENGR 4660 | Advanced Design of Concrete Structures |

Water Resources/Environmental

| | |
|---------------|---|
| J C ENGR 3520 | Water and Wastewater Treatment |
| J C ENGR 3760 | Hydraulic Engineering |
| J C ENGR 4830 | Fundamentals of Surface Water Hydrology and Environmental Engineering |
| J C ENGR 4740 | Economic Decisions in Engineering |

Transportation

| | |
|---------------|---------------------------------|
| J C ENGR 2160 | Surveying |
| J C ENGR 3460 | Transportation Engineering |
| J C ENGR 4600 | Highway and Traffic Engineering |

Geotechnical

| | |
|---------------|-----------------------------------|
| GEOL 1001 | General Geology |
| J C ENGR 2160 | Surveying |
| J M ENGR 3360 | Material Science for J C ENGR |
| J C ENGR 4190 | Soil Mechanics |
| J C ENGR 4640 | Foundation Engineering |
| J C ENGR 4740 | Economic Decisions in Engineering |

Construction Management

| | |
|---------------|--|
| J C ENGR 2160 | Surveying |
| J C ENGR 4720 | Legal Aspects of Construction |
| J C ENGR 4730 | Construction Operations and Management |
| J C ENGR 4740 | Economic Decisions in Engineering |

Total Hours **18**

College Access, Student Success and Student Services Leadership Graduate Certificate

| | | |
|---------------|---|---|
| HIGHERED 6474 | Understanding the Psychosocial Development of Emerging Adults | 3 |
|---------------|---|---|

| | | |
|--------------------|--|-----------|
| or CAST 4398 | Child Maltreatment: A Multidisciplinary Approach | |
| HIGHERED 6475 | College Access and Career Preparation for the Emerging Adult | 3 |
| HIGHERED 6476 | Organization and Administration of Higher Education | 3 |
| HIGHERED 6478 | Enrollment Management and Student Retention | 3 |
| Total Hours | | 12 |

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Analyze and evaluate policies related to K-12 student achievement, college access, student retention and workforce preparation and the intersection of these variables with K-12 and postsecondary institution practices to support student success.
- Compare and contrast organizational perspectives and analyze their applicability to organizational activity.
- Demonstrate professional practices that promote inclusion, equity and social justice.
- Articulate and apply learning and development theories to program development, advising and planning in diverse practice settings in order to support student success.
- Demonstrate high-quality interpersonal skills, including academic and professional writing and presentation skills.

Communication BA

The BA in Communication is a flexible degree program that students can tailor to meet personal, professional, or academic goals through elective courses in interpersonal, mass, strategic, and visual communication. Students explore how messages are constructed, delivered, and perceived by audiences. Whether the intent is to inform, influence, or entertain, students will use research and theory to improve message effectiveness and achieve desired outcomes in interpersonal and mass-mediated communication. In addition, students can find a creative outlet in courses that focus on content creation and its consequences and significance.

Students majoring in communication must complete a minimum of 36 credit-hours in communication courses. Students may complete either a general communication degree or they may select one of four different emphasis areas as a focus for their studies: Interpersonal Communication, Mass Communication, Applied Visual Communication, or Strategic Communication. To complete the degree with one of these emphases, the student must complete the 21 credit-hour core and at least 15 hours of electives from within the selected emphasis area. In addition, the skills and knowledge applied in the required Practicum/Internship should be consistent with the selected emphasis area. Students seeking a general communication degree must complete the 21 credit-hour core and can select elective courses from any combination of the emphasis areas.

General Education Requirements

Majors must satisfy the university and college general education requirements. The college's foreign language requirement may be taken in any language. Communication courses may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

At least 18 credit hours must be taken at UMSL. Furthermore, at least 12 credit hours of the communication courses completed must be numbered 3000-4999 for students seeking a general communication degree, as well as for students pursuing an emphasis area. All students must earn a C or better in each of the required core courses of the major and maintain a 2.0 grade point average in all of the courses applied to the communication degree.

Required Courses

| | | |
|--------------|---|---|
| COMM 1030 | Interpersonal Communication I (MOTR COMM 120) | 3 |
| COMM 1050 | Introduction to Mass Communication | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2332 | Intercultural Communication | 3 |
| COMM 2235 | Professional Communication | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| COMM 4920 | Practicum in Applied Communication | 3 |
| or COMM 4950 | Internship in Applied Communication | |

Total Hours

21

Learning Outcomes

- Adapt communication strategies to different situations and audiences
- Evaluate and interpret media, information, and data effectively
- Produce high-quality communications
- Apply interpersonal skills to a variety of situations, audiences, and professional environments
- Use communication theories to take diverse perspectives and excel in a variety of professional environments
- Evolve with changing technologies

Sample Four Year Plan

| | | | |
|--------------------------------|-------|------------------------------------|-------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | 1 | COMM 2231 | 3 |
| ENGL 1100 | 3 | EXPLORE - Math and Sciences | 3 |
| COMM 1030 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| COMM 1050 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| CORE - Mathematics Proficiency | 3 | Elective or minor | 3 |
| CORE - US History & Government | 3 | | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 2235 | 3 | COMM 2332 | 3 |
| EXPLORE - Math and Sciences | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| CORE - Information Literacy | 3 | EXPLORE - Math and Sciences | 3 |
| Foreign Language 1001 | 5 | Foreign Language 1002 | 5 |
| | 14 | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 3330 | 3 | COMM 3000 level elective | 3 |
| ENGL 3100 | 3 | COMM Elective, Any Level | 3 |
| Foreign Language 2101 | 3 | Elective or minor | 3 |
| Cultural Diversity Course | 3 | Elective or minor | 3 |

| | | | |
|--------------------------|-------|--------------------------|-------|
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 1950 | 1 | COMM 4920 or 4950 | 3 |
| COMM 3XXX Elective | 3 | COMM Elective, Any Level | 3 |
| COMM Elective, Any Level | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | | |
| | 16 | | 15 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Communication BA, Applied Visual Communication Emphasis

This emphasis area covers digital audiovisual media production, helping students master the art of telling stories and effectively communicating information through digital media. Students receive practical instruction in areas such as camera work, location shooting, digital video editing, directing, and performance for the camera, typically in small, applied skills courses. This coursework is complemented by instruction in areas such as interpersonal, intercultural, and professional communication that help students gain jobs, advance in the workplace, and better connect with diverse audiences.

Career Outlook

New graduates often enter this career path as video editors or camera operators. According the U.S. Bureau of Labor Statistics, employment in these occupations is expected to grow faster than average, in part because of increasing demand for audio-visual media on internet-only platforms such as streaming services. The job outlook for more experienced positions in the field, such as producers and directors, is also robust. Successful alumni have gone

Students majoring in communication must complete a minimum of 36 credit-hours in communication courses. Students may complete either a general communication degree or they may select one of four different emphasis areas as a focus for their studies: Interpersonal Communication, Mass Communication, Applied Visual Communication, or Strategic Communication. To complete the degree with one of these emphases, the student must complete the 21 credit-hour core and at least 15 hours of electives from within the selected emphasis area. In addition, the skills and knowledge applied in the required Practicum/Internship should be consistent with the selected emphasis area. Students seeking a general communication degree must complete the 21 credit-hour core and can select elective courses from any combination of the emphasis areas.

General Education Requirements

Majors must satisfy the university and college general education requirements. The college's foreign language requirement may be taken in any language. Communication courses may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

At least 18 credit hours must be taken at UMSL. Furthermore, at least 12 credit hours of the communication courses completed must be numbered 3000-4999 for students seeking a general communication degree, as well as for students pursuing an emphasis area. All students must earn a C or better in each of the required core courses of the major and maintain a 2.0 grade point average in all of the courses applied to the communication degree.

Required Courses

| | | |
|---------------------------|---|-----------|
| COMM 1030 | Interpersonal Communication I (MOTR COMM 120) | 3 |
| COMM 1050 | Introduction to Mass Communication | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2332 | Intercultural Communication | 3 |
| COMM 2235 | Professional Communication | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| COMM 4920 or COMM 4950 | Practicum in Applied Communication Internship in Applied Communication | 3 |
| Total Hours | | 21 |

Emphasis Area Requirements

The applied visual communication emphasis area offers hands-on learning related to media production, focusing on developing skills to convey information and tell stories through time-based digital media. 15 credits are needed.

Choose five of the following courses:

| | |
|--------------------|--------------------------|
| MEDIA ST 1070 | Introduction to Cinema |
| MEDIA ST 2113 | Media Production I |
| THEATR 2020 | Acting for the Camera |
| MEDIA ST 2210 | Video Production I |
| MEDIA ST 3310 | Video Production II |
| MEDIA ST 3313 | Advanced Video Editing |
| MEDIA ST 2225 | |
| MEDIA ST 3113 | Media Production II |
| THEATR 4020 | Directing for the Camera |
| Total Hours | 15 |

Learning Outcomes

- Recognize and apply the fundamental principles of effective visual communication
- Design, implement, and critique media content based on appropriate production, design, and aesthetic principles
- Light, block and record digital video footage in studio and location settings
- Edit digital footage into a coherent narrative or persuasive message, including the addition of titles and graphic effects

- Produce work that contributes knowledge and creativity with effective communication skills in all forms of media: written, visual, and oral
- Effectively work in groups as both leaders and collaborators

Sample Four Year Plan

| First Year | | | |
|---|-------|---|-----------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 COMM 2231 | 3 |
| COMM 1030 | | 3 EXPLORE: Mathematics & Life/Natural Sciences | 3 |
| COMM 1050 | | 3 EXPLORE: Humanities & Fine Arts | 3 |
| ENGL 1100 | | 3 EXPLORE: Humanities & Fine Arts | 3 |
| CORE: Mathematics Proficiency | | 3 Elective or minor | 3 |
| CORE: US History & Government | | 3 | |
| | | 16 | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 2235 | | 3 COMM 2332 | 3 |
| CORE: Information Literacy | | 3 EXPLORE: Humanities & Fine Arts | 3 |
| EXPLORE: Mathematics & Life/Natural Sciences | | 3 EXPLORE: Mathematics & Life/Natural Sciences | 3 |
| FGN LANG 1001 | | 5 FGN LANG 1002 | 5 |
| | | 14 | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 3330 | | 3 COMM XXXX: Applied Visual Communication Emphasis Course | 3 |
| ENGL 3100 | | 3 COMM XXXX: Applied Visual Communication Emphasis Course | 3 |
| FGN LANG 2102 | | 3 COMM XXXX: Applied Visual Communication Emphasis Course | 3 |
| Cultural Diversity Requirement | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | 15 | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 1950 | | 1 COMM 4920 or 4950 | 3 |
| COMM XXXX: Applied Visual Communication Emphasis Course | | 3 Elective or minor | 3 |
| COMM XXXX: Applied Visual Communication Emphasis Course | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 | |
| | | 16 | 15 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Communication BA, Interpersonal Communication Emphasis

The Interpersonal Communication emphasis area focuses on communication processes in personal relationships. Students in this emphasis area will master the ability to communicate meaningfully with colleagues, clients, and loved ones in a variety of settings. Strong interpersonal skills are needed in almost any type of job and can truly transform your career and your life. Our faculty members are actively engaged in research and our students benefit from first-hand knowledge not currently offered at other institutions. Many faculty members have been recognized for excellence or innovation in teaching.

Students majoring in communication must complete a minimum of 36 credit-hours in communication courses. Students may complete either a general communication degree or they may select one of four different emphasis areas as a focus for their studies: Interpersonal Communication, Mass Communication, Applied Visual Communication, or Strategic Communication. To complete the degree with one of these emphases, the student must complete the 21 credit-hour core and at least 15 hours of electives from within the selected emphasis area. In addition, the skills and knowledge applied in the required Practicum/Internship should be consistent with the selected emphasis area. Students seeking a general communication degree must complete the 21 credit-hour core and can select elective courses from any combination of the emphasis areas.

General Education Requirements

Majors must satisfy the university and college general education requirements. The college's foreign language requirement may be taken in any language. Communication courses may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

At least 18 credit hours must be taken at UMSL. Furthermore, at least 12 credit hours of the communication courses completed must be numbered 3000-4999 for students seeking a general communication degree, as well as for students pursuing an emphasis area. All students must earn a C or better in each of the required core courses of the major and maintain a 2.0 grade point average in all of the courses applied to the communication degree.

Required Courses

| | | |
|---------------------------|---|-----------|
| COMM 1030 | Interpersonal Communication I (MOTR COMM 120) | 3 |
| COMM 1050 | Introduction to Mass Communication | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2332 | Intercultural Communication | 3 |
| COMM 2235 | Professional Communication | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| COMM 4920 or COMM 4950 | Practicum in Applied Communication Internship in Applied Communication | 3 |
| Total Hours | | 21 |

Emphasis Area Requirements

The interpersonal emphasis area focuses on communication between individuals and the impact of verbal and nonverbal communication on personal relationships. 15 credits are needed.

Up to six credit hours of Special Topics Courses, Directed Readings courses, and Supervised Research courses offered by the Communication and Media Department can be applied to the emphasis area if the specific topic of the course is relevant to the emphasis area.

Choose five of the following courses:

| | | |
|-------------|---|----|
| COMM 1369 | Introduction to Health Communication | |
| COMM 2230 | Small Group Communication (MOTR COMM 125) | |
| COMM 2240 | Persuasive Communication | |
| COMM 3130 | Communication in Family, Dating, and Marriage | |
| COMM 3337 | Communication and Gender | |
| COMM 3368 | Advanced Health Communication | |
| COMM 4500 | Seminar in Fundamental Communication Theory | |
| COMM 4650 | Seminar in Fundamental Interpersonal Communication Theory | |
| Total Hours | | 15 |

Learning Outcomes

- Explore the roles that communication plays in personal and professional relationships
- Evaluate situations and apply interpersonal communication strategies that will be effective to achieve one's goals
- Apply theories and models of interpersonal communication phenomena to complex, real-life experiences
- Recognize and adapt to different cultures and perspectives
- Sharpen one's self- and other-awareness in order to successfully navigate conflict, manage teamwork, and enhance interpersonal relationships

First Year

| Fall | Hours | Spring | Hours |
|--------------------------------|-------|---|-------|
| INTDSC 1003 ¹ | | 1 COMM 2231 | 3 |
| COMM 1030 | 3 | EXPLORE - Mathematics & Life/Natural Sciences | 3 |
| COMM 1050 | 3 | EXPLORE - Humanities & Fine Arts | 3 |
| ENGL 1100 | 3 | EXPLORE - Humanities & Fine Arts | 3 |
| CORE - Mathematics Proficiency | 3 | Elective or minor | 3 |
| CORE - US History & Government | 3 | | |
| 16 | | 15 | |

Second Year

| Fall | Hours | Spring | Hours |
|--|-------|--|-------|
| COMM 2235 | | 3 COMM 2332 | 3 |
| CORE - Information Literacy | 3 | EXPLORE - Humanities & Fine Arts | 3 |
| EXPLORE - Mathematics & Natural Sciences | 3 | EXPLORE - Mathematics & Natural Sciences | 3 |
| FGN LANG 1001 | 5 | FGN LANG 1002 | 5 |
| 14 | | 14 | |

Third Year

| Fall | Hours | Spring | Hours |
|--------------------|-------|--|-------|
| COMM 3330 | | 3 COMM XXXX: Interpersonal Communication Emphasis Course | 3 |
| ENGL 3100 | | 3 COMM XXXX: Interpersonal Communication Emphasis Course | 3 |
| FGN LANG 2101 | | 3 COMM XXXX: Interpersonal Communication Emphasis Course | 3 |
| Cultural Diversity | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--|-------|---------------------|-------|
| COMM 1950 | | 1 COMM 4920 | 3 |
| COMM XXXX: Interpersonal Communication Emphasis Course | | 3 Elective or minor | 3 |
| COMM XXXX: Interpersonal Communication Emphasis Course | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 | |
| | 16 | | 15 |

Total Hours: 120

INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Communication BA, Mass Communication Emphasis

This emphasis area focuses on forms of communication that seek to reach broad audiences, such as news, movies, entertainment programming, video games, advertising, and social media. Courses address business strategies behind these forms of mass communication, how they are created, and how they affect individuals and society. Students pursuing this emphasis area gain a deeper understanding of some of the most fascinating and influential institutions in today's society.

Students majoring in communication must complete a minimum of 36 credit-hours in communication courses. Students may complete either a general communication degree or they may select one of four different emphasis areas as a focus for their studies: Interpersonal Communication, Mass Communication, Applied Visual Communication, or Strategic Communication. To complete the degree with one of these emphases, the student must complete the 21 credit-hour core and at least 15 hours of electives from within the selected emphasis area. In addition, the skills and knowledge applied in the required Practicum/Internship should be consistent with the selected emphasis area. Students seeking a general communication degree must complete the 21 credit-hour core and can select elective courses from any combination of the emphasis areas.

General Education Requirements

Majors must satisfy the university and college general education requirements. The college's foreign language requirement may be taken in

any language. Communication courses may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

At least 18 credit hours must be taken at UMSL. Furthermore, at least 12 credit hours of the communication courses completed must be numbered 3000-4999 for students seeking a general communication degree, as well as for students pursuing an emphasis area. All students must earn a C or better in each of the required core courses of the major and maintain a 2.0 grade point average in all of the courses applied to the communication degree.

Required Courses

| | | |
|--------------|---|---|
| COMM 1030 | Interpersonal Communication I (MOTR COMM 120) | 3 |
| COMM 1050 | Introduction to Mass Communication | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2332 | Intercultural Communication | 3 |
| COMM 2235 | Professional Communication | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| COMM 4920 | Practicum in Applied Communication | 3 |
| or COMM 4950 | Internship in Applied Communication | |

Total Hours**21**

Emphasis Area Requirements

The Mass Communication emphasis area focuses on the effects of mass media and the processes through which users create, distribute, and interpret these messages. 15 credits are needed.

Up to six credit hours of Special Topics Courses, Directed Readings courses, and Supervised Research courses offered by the Communication and Media Department can be applied to the emphasis area if the specific topic of the course is relevant to the emphasis area.

Choose five of the following courses:

| | |
|---------------|--|
| MEDIA ST 1070 | Introduction to Cinema |
| COMM 1369 | Introduction to Health Communication |
| MEDIA ST 2235 | Media Theory |
| COMM 3355 | Dangerous Messages |
| MEDIA ST 3355 | Media Law and Regulation |
| MEDIA ST 3356 | Global Media Systems and Trends |
| COMM 3368 | Advanced Health Communication |
| COMM 4500 | Seminar in Fundamental Communication Theory |
| COMM 4700 | Seminar in Fundamental Mass Communication Theory |

Total Hours**15**

Learning Outcomes

- Learn how media industries, such as television, film, video games, radio, recorded music, and advertising, function as businesses and as forms of creative expression
- Understand how the growth of digital technology and social media have affected and changed media industries

- Appreciate how media content plays a role in socialization and learning
- Explore ways in which media content and technologies impact people's behaviors, thoughts, and emotions
- Recognize the various ways individuals interact with media, what needs media fulfill for them, and how this affects their experience with media

Sample Four Year Plan

| First Year | | | |
|---|-------|---|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | 1 | COMM 2231 | 3 |
| COMM 1030 | 3 | EXPLORE: Mathematics & Natural Sciences | 3 |
| COMM 1050 | 3 | EXPLORE: Humanities & Fine Arts | 3 |
| ENGL 1100 | 3 | EXPLORE: Humanities & Fine Arts | 3 |
| CORE: Mathematics Proficiency | 3 | Elective or minor | 3 |
| CORE: US History & Government | 3 | | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 2235 | 3 | COMM 2332 | 3 |
| CORE: Information Literacy | 3 | EXPLORE: Humanities and Fine Arts | 3 |
| EXPLORE: Mathematics & Natural Sciences | 3 | EXPLORE: Math & Sciences | 3 |
| FGN LANG 1001 | 5 | FGN LANG 1002 | 5 |
| | 14 | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 3330 | 3 | COMM XXXX: Mass Communication Emphasis Course | 3 |
| ENGL 3100 | 3 | COMM XXXX: Mass Communication Emphasis Course | 3 |
| FGN LAN 2101 | 3 | COMM XXXX: Mass Communication Emphasis Course | 3 |
| Cultural Diversity | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 1950 | 1 | COMM 4920 | 3 |
| COMM XXXX: Mass Communication Emphasis Course | 3 | Elective or minor | 3 |
| COMM XXXX: Mass Communication Emphasis Course | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | | |
| | 16 | | 15 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Communication BA, Strategic Communication Emphasis

Strategic Communication aims to persuade and inform. Corporations, nonprofits, government agencies, and small businesses use strategic communication tactics to deliver messages to the public in order to encourage individuals to take action. It is an interdisciplinary approach that can incorporate elements from public relations, advertising, health, and organizational communication. Courses in this emphasis area target the skills students need to communicate with audiences through writing, content development, and strategic messaging. Professions that may apply strategic communication principles include advertising, public relations or any profession that communicates with the public for a specific purpose.

Students majoring in communication must complete a minimum of 36 credit-hours in communication courses. Students may complete either a general communication degree or they may select one of four different emphasis areas as a focus for their studies: Interpersonal Communication, Mass Communication, Applied Visual Communication, or Strategic Communication. To complete the degree with one of these emphases, the student must complete the 21 credit-hour core and at least 15 hours of electives from within the selected emphasis area. In addition, the skills and knowledge applied in the required Practicum/Internship should be consistent with the selected emphasis area. Students seeking a general communication degree must complete the 21 credit-hour core and can select elective courses from any combination of the emphasis areas.

General Education Requirements

Majors must satisfy the university and college general education requirements. The college's foreign language requirement may be taken in any language. Communication courses may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

At least 18 credit hours must be taken at UMSL. Furthermore, at least 12 credit hours of the communication courses completed must be numbered 3000-4999 for students seeking a general communication degree, as well as for students pursuing an emphasis area. All students must earn a C or better in each of the required core courses of the major and maintain a 2.0 grade point average in all of the courses applied to the communication degree.

Required Courses

| | | |
|--------------|---|---|
| COMM 1030 | Interpersonal Communication I (MOTR COMM 120) | 3 |
| COMM 1050 | Introduction to Mass Communication | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2332 | Intercultural Communication | 3 |
| COMM 2235 | Professional Communication | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| COMM 4920 | Practicum in Applied Communication | 3 |
| or COMM 4950 | Internship in Applied Communication | |

Total Hours

21

Emphasis Area Requirements

The strategic communication emphasis area deals with public and inter-organizational communication intended to serve a specific company goal or purpose. It is an interdisciplinary emphasis that can incorporate areas from public relations, advertising, and organizational communication. 15 credits are needed.

Up to six credit hours of Special Topics Courses, Directed Readings courses, and Supervised Research courses offered by the Communication and Media Department can be applied to the emphasis area if the specific topic of the course is relevant to the emphasis area.

Choose five of the following courses:

| | | |
|---------------|--|----|
| MEDIA ST 1100 | Introduction to Advertising | |
| COMM 1150 | Introduction to Public Relations | |
| COMM 1369 | Introduction to Health Communication | |
| MEDIA ST 2080 | Advertising Copywriting | |
| COMM 2180 | Public Relations Writing | |
| MEDIA ST 2180 | | |
| COMM 2240 | Persuasive Communication | |
| MEDIA ST 3025 | Current Issues in Strategic Communication | |
| COMM 3150 | Crisis, Disaster, and Risk Communication | |
| MEDIA ST 3150 | Feature Writing | |
| MEDIA ST 3338 | Advertising Technique | |
| COMM 3355 | Dangerous Messages | |
| MEDIA ST 3355 | Media Law and Regulation | |
| COMM 3368 | Advanced Health Communication | |
| COMM 3370 | Social Media in Public Relations | |
| COMM 4100 | Communication Campaigns | |
| COMM 4500 | Seminar in Fundamental Communication Theory | |
| COMM 4600 | Seminar in Fundamental Organizational Communication Theory | |
| Total Hours | | 15 |

Learning Outcomes

- Create high-quality print, digital, and video products
- Design high-impact messages tailored to specific audiences
- Learn the fundamental skills necessary to be competitive in the ever-changing communication field
- Interpret and apply strategic communication principles to design, research, and plan strategic communication campaigns
- Compose written materials in a clear and concise format following the appropriate style utilizing the best communication channel
- Create ethically sound, legally and socially responsible strategic communication tactics

Four Year Plan

| First Year | | | |
|--|-------|--|-----------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 COMM 2231 | 3 |
| COMM 1030 | | 3 EXPLORE: Mathematics & Life/Natural Sciences | 3 |
| COMM 1050 | | 3 EXPLORE: Humanities & Fine Arts | 3 |
| ENGL 1100 | | 3 EXPLORE: Humanities & Fine Arts | 3 |
| CORE: Mathematics Proficiency | | 3 Elective or minor | 3 |
| CORE: US History & Government | | 3 | |
| | | 16 | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 2235 | | 3 COMM 2332 | 3 |
| CORE: Information Literacy | | 3 EXPLORE: Humanities & Fine Arts | 3 |
| EXPLORE: Mathematics & Life/Natural Sciences | | 3 EXPLORE: Mathematics & Life/Natural Sciences | 3 |
| FGN LANG 1001 | | 5 FGN LANG 1002 | 5 |
| | | 14 | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 3330 | | 3 COMM XXXX: Strategic Communication Emphasis Course | 3 |
| ENGL 3100 | | 3 COMM XXXX: Strategic Communication Emphasis Course | 3 |
| FGN LANG 2101 | | 3 COMM XXXX: Strategic Communication Emphasis Course | 3 |
| Cultural Diversity Requirement | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | 15 | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| COMM 1950 | | 1 COMM 4920 | 3 |
| COMM XXXX: Strategic Communication Emphasis Course | | 3 Elective or minor | 3 |
| COMM XXXX: Strategic Communication Emphasis Course | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 | |
| | | 16 | 15 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Communication BA/MA Dual Degree Program

The 2+3 Combined BA/MA program in Communication provides an opportunity for students of recognized academic ability and educational maturity to complete the requirements for both degrees in 5 years of full-time study. When all the requirements of the B.A./M.A. program

have been completed, students will be awarded both the B.A. and M.A. degrees.

The combined program requires a minimum of 135 credit hours of which at least 30 must be at the graduate level. In qualifying for the BA, students must meet all University and College requirements.

Student should apply to the Department for admission to the 2+3 combined degree program in Communication during the semester they will complete 60 undergraduate credit hours. A cumulative grade point average of 3.25 or higher. Students will be admitted to the 2+3 program under provisional status until they have completed 15 hours in that program with a grade point average of 3.0 or higher. After completion of the provisional period, with the recommendation of the Graduate Director, students can be granted full admission into the 2+3 program. Students must maintain a grade point average of 3.0 or higher throughout the combined program. Students who officially withdraw from the Combined Program who have successfully completed all the requirements for the B.A. degrees will be awarded the B.A. degree.

Core Requirements for the Communication BA Major

| | | |
|---------------------------|---|---|
| COMM 1030 | Interpersonal Communication I (MOTR COMM 120) | 3 |
| COMM 1050 | Introduction to Mass Communication | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| COMM 2332 | Intercultural Communication | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| COMM 4950 or COMM 4920 | Internship in Applied Communication Practicum in Applied Communication | 3 |

Core Requirements for the Communication MA

| | | |
|------------------------------|---|---|
| COMM 6500 | Seminar in Communication Theory | 3 |
| COMM 6510 | Advanced Communication Research Methods I | 3 |
| Choose 3 from the following: | | 9 |
| COMM 6600 | Seminar in Strategic Communication in Organizations | |
| COMM 6630 | Seminar in Interpersonal Communication | |
| COMM 6700 | Seminar in Mass Communication | |
| COMM 6800 | Seminar in Health Communication | |

All of the Masters coursework must be taken under graduate status. However, with advance permission (Graduate Form C-1), students may take up to 6 credit hours of 5000/6000 level courses while still classified as an undergraduate. No 4000-level courses taken as an undergraduate may be applied to the Master's degree. This means all combined section classes must be taken as graduate courses in order to count for the graduate degree. These 6 hours will be treated by the Graduate School as "undergraduate status" and they may be counted toward a master's degree. Up to 15 credit hours of graduate courses can be applied to the undergraduate degree.

Communication MA

Admission Requirements

Applicants must have a baccalaureate in communication or a related discipline by the end of the semester in which they apply. The minimum cumulative GPA required for regular admission to the graduate program in communication is 3.25 on a 4-point scale. In addition, three letters of recommendation, at least two of which address the applicant's potential to succeed in graduate studies in communication, are also required. Finally, international students who are non-native speakers of English must obtain a TOEFL iBT score of 100 to be considered for admission. Applicants with GPAs that do not meet the admission criterion may elect to submit other materials, such as scores on the Graduate Record Exam (GRE), to offset these deficiencies. Contact the Graduate Program Director for more information.

Degree Requirements

The MA in Communication requires either 30 or 36 credit hours of coursework, depending on the exit project. Candidates approved for a thesis or internship will complete at least 30 semester hours of approved study, at least 21 of which must be taken in courses offered by the department. Candidates completing the non-thesis, non-internship option must complete 36 semester hours of approved study, 27 of which must be taken in courses offered by the department. However, students who choose this option may be eligible to waive up to 6 hours if justified by prior coursework or professional experience. Please contact the Graduate Program Coordinator for additional details.

All students complete a 15 credit-hour core. This includes two required courses focusing on the fundamental theories and basic research methods within the field. To complete the core, students will select at least three of four "applications" courses dealing with communication processes within a particular context.

Required Courses:

| | | |
|--|---|---|
| COMM 6500 | Seminar in Communication Theory | 3 |
| COMM 6510 | Advanced Communication Research Methods I | 3 |
| Choose three of the following four applications courses: | | 9 |
| COMM 6600 | Seminar in Strategic Communication in Organizations | |
| COMM 6630 | Seminar in Interpersonal Communication | |
| COMM 6700 | Seminar in Mass Communication | |
| COMM 6800 | Seminar in Health Communication | |

Total Hours **15**

Students who choose the internship or thesis option must identify a prospective committee, including a chairperson and two additional committee members, who will consult in development of an appropriate exit project. The expectation for each internship varies by project and committee, but submission of an essay in which the coursework and internship experiences are integrated is typically required. Internship exit projects and theses must be approved by the student's committee and assigned a grade by the advisor. Students who complete a thesis or internship must complete no less than a 3 hour internship or 6 credit hour thesis.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Graduates will be able to interpret and evaluate academic and industry-oriented research reports and findings.
- Graduates will be able to evaluate and use scientific research and tested models of communication processes to identify, develop, and implement plans to achieve specific communication goals and apply them to real-world settings.
- Graduates will be able to produce effective messages and select appropriate channels to achieve specific outcomes within complex work environments.
- Graduates will be able to evaluate the implications of communication processes and develop messages and strategies that are consistent with ethical principles.

Communication MA Accelerated Master's Degree

The Department of Communication and Media offers an Accelerated MA program that provides an opportunity for students of recognized academic ability and educational maturity to complete requirements of both the BA and MA degrees in as few as ten semesters.

The combined program requires a minimum of 138 credit hours, of which at least 30 must be at the graduate level. Students accepted to the Accelerated MA degree program will be permitted to count up to 12 credit hours at the 5000-level or higher toward both the BA and the MA. In qualifying for the BA, students must meet all University and College requirements. Students are encouraged to work closely with the Graduate Program Director and undergraduate academic advisor to ensure that required courses are timed appropriately.

After completion of the undergraduate degree requirements, with the recommendation of the Graduate Program Director, students can apply to the graduate program. Students must maintain a grade point average of 3.25 or higher throughout the combined program. Students who officially withdraw from the Accelerated Master's program that have successfully completed all the requirements for their undergraduate degree will be awarded the BA; however, any graduate credits they took as an undergraduate will not count towards a later master's degree.

Eligibility

Students need to have fulfilled the core requirements of the BA prior to applying for the Accelerated MA program, with the exception of COMM 4950/COMM 4920.

Provisional Admission

Applicants are considered for provisional admission if they meet the following criteria.

- Earned 60 hours as an undergraduate
- Have completed the core curriculum requirements of the BA in Communication, with the exception of COMM 4950/COMM 4920
- Have a minimum GPA of 3.25
- Have met with the Graduate Program Director and an undergraduate academic advisor

Graduate Admission

Students can apply for graduate admission in the final semester of undergraduate status. Students should meet with the Graduate Program

Director each semester. Students are considered for graduate admission if they meet the following criteria:

- Are in their final semester of undergraduate status
- Have a minimum GPA of 3.25 since being granted provisional status
- Have met with the Graduate Program Director and their undergraduate academic advisor

Final decisions concerning formal admission are made by the Graduate School in consultation with the Graduate Program Director. Students admitted to the graduate program must take graduate courses until completing the master's degree.

Program Requirements

Core Requirements for the Communication BA Major

| | | |
|---------------------------|---|---|
| COMM 1030 | Interpersonal Communication I (MOTR COMM 120) | 3 |
| COMM 1050 | Introduction to Mass Communication | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| COMM 2332 | Intercultural Communication | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| COMM 4950 or COMM 4920 | Internship in Applied Communication Practicum in Applied Communication | 3 |

Core Requirements for the Communication MA

| | | |
|----------------------------------|---|---|
| COMM 6500 | Seminar in Communication Theory | 3 |
| COMM 6510 | Advanced Communication Research Methods I | 3 |
| Complete three of the following: | | 9 |
| COMM 6600 | Seminar in Strategic Communication in Organizations | |
| COMM 6630 | Seminar in Interpersonal Communication | |
| COMM 6700 | Seminar in Mass Communication | |
| COMM 6800 | Seminar in Health Communication | |

Students who have been provisionally admitted to the program may take up to 12 credit hours of 5000/6000 level courses while still classified as an undergraduate with provisional graduate status. No 4000-level courses taken as an undergraduate may be applied to the master's degree. This means that all combined-section classes must be taken at the graduate level to count toward the graduate degree.

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the

graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Communication Minor

Coursework for a minor in Communication consists of 15 semester hours of the core requirements for the major. Credit hours in and/or COMM 3395 may be substituted for credit hours listed below with written consent of the communication department chairperson.

Core Requirements:

| | | |
|--------------------|---|-----------|
| COMM 1030 | Interpersonal Communication I (MOTR COMM 120) | 3 |
| COMM 1050 | Introduction to Mass Communication | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2332 | Intercultural Communication | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| Total Hours | | 15 |

At least 9 of the 15 hours required for the minor must be taken at UMSL.

Students must earn at least a C for all communication courses applied to the minor. A minimum GPA of 2.5 is required in the minor.

Computer Programming Education Undergraduate Certificate

The undergraduate certificate in Computer Programming Education is an 18 credit hour program. It is designed to provide secondary school science teachers with training needed to implement a range of computer programming related courses in their schools. A minimum GPA of 2.5 is required for admission.

A minimum of four courses must be taken in residence in the Department of Mathematics and Computer Science at UMSL. Courses may be substituted with the permission of the program director.

Core Courses

| | | |
|--------------|-----------------------------------|---|
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 2250 | Programming and Data Structures | 3 |
| CMP SCI 2261 | Object-Oriented Programming | 3 |
| ED TECH 3420 | Computer Programming and Pedagogy | 1 |

Electives **6**

Choose two of the following:

| | |
|--------------|---|
| CMP SCI 2700 | Computer Organization and Architecture |
| CMP SCI 2750 | Linux Environment and Programming |
| CMP SCI 3010 | Web Full Stack Development |
| CMP SCI 3702 | Introduction to Cyber Threats and Defense |
| CMP SCI 4010 | Web Development with Java |
| CMP SCI 4011 | Web Development with Advanced JavaScript |

| | | |
|--------------------|---|-----------|
| CMP SCI 4020 | Introduction to Android Apps: Android Fundamentals | |
| CMP SCI 4220 | Introduction to iOS Programming and Apps | |
| CMP SCI 4222 | iOS Apps | |
| CMP SCI 4610 | Database Management Systems | |
| INFSYS 3844 | Developing Business Applications in .NET | |
| Total Hours | | 18 |

Computer Programming Undergraduate Certificate

The undergraduate certificate in Computer Programming is a five-course (15 credit hour) program. It is designed to provide a quick, yet broad training in technologies leading to secure and interesting careers in computer programming or education. Students majoring or minoring in Computer Science may not earn this certificate. A minimum GPA of 2.5 is required for admission.

A minimum of three courses must be taken from UMSL. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the department chair or email info@arch.edu.

Required Courses

| | | |
|--------------|---------------------------------|---|
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 2250 | Programming and Data Structures | 3 |
| CMP SCI 2261 | Object-Oriented Programming | 3 |

Electives

Choose two of the following courses: **6**

| | |
|--------------|--|
| CMP SCI 2700 | Computer Organization and Architecture |
| CMP SCI 2750 | Linux Environment and Programming |
| CMP SCI 3010 | Web Full Stack Development |
| CMP SCI 3130 | Design and Analysis of Algorithms |
| CMP SCI 3702 | Introduction to Cyber Threats and Defense |
| CMP SCI 4010 | Web Development with Java |
| CMP SCI 4011 | Web Development with Advanced JavaScript |
| CMP SCI 4020 | Introduction to Android Apps: Android Fundamentals |
| CMP SCI 4200 | Python for Scientific Computing and Data Science |
| CMP SCI 4220 | Introduction to iOS Programming and Apps |
| CMP SCI 4222 | iOS Apps |
| CMP SCI 4610 | Database Management Systems |
| INFSYS 3844 | Developing Business Applications in .NET |

Total Hours **15**

Computer Science Accelerated Master's Degree

The Department of Computer Science offers the Accelerated MS degree in Computer Science available to departmental undergraduate majors. Students may join the program and work toward MS in Computer Science regardless of the departmental BS program (BS in Computer Science; BS in Computing Technology; BS in Cybersecurity, Computer Science Emphasis; BS in Data Science and Analysis, Computer Science emphasis).

A student accepted to the Accelerated MS in Computer Science degree program can double count up to 12 credit hours toward both their BS degree and the MS in Computer Science degree, reducing the total credits required to earn both degrees by up to 12 credits. The student must still complete their BS requirements, as well as entry and graduation requirements for the MS in Computer Science program. In the program, the student can also complete the BS first and continue the MS in Computer Science program part-time, after transitioning to work. To gain the dual benefits, the student should begin working with a designated advisor before BS graduation, preferably at least a year ahead.

Admission Requirements

Provisional Admission

An applicant is considered for provisional admission if they meet the following criteria.

- Working toward one of the departmental BS programs with at least 60 credits completed.
- Completed at least the following Computer Science courses:
 - CMP SCI 1250
 - CMP SCI 2250
 - CMP SCI 2261
 - CMP SCI 2700
 - CMP SCI 2750
- Have a minimum GPA of 3.0.
- Have met with the program advisor as listed.

After provisional admission, but while in provisional standing, the student continues working toward their BS program but can take courses, including graduate-level courses, to count toward both degrees, while still paying undergraduate tuition rates. These courses must be approved in advance to count toward both degrees.

Graduate Admission

A student in the final semester of their undergraduate degree program can apply for admission to the graduate school for admission to the MS in Computer Science. An applicant must meet the following criteria for formal admission.

- Are in their final semester in undergraduate status
- Maintained a GPA of a minimum of 3.0 in the provisional status
- Submitted to the Graduate Director for MS in Computer Science a 1 – 2 page statement of purpose briefly explaining what and why they intend to study.
- Meet the entry requirements for admission to the MS degree in Computer Science other than having received the BS degree

The Graduate Program Director, in consultation with the Undergraduate Director, will determine whether the student can apply for graduate admission. Final decisions concerning graduate admission are made by the Graduate School in consultation with the Program Director. Students admitted at this stage are conferred graduate status and must continue taking graduate courses until the completion of the MS degree.

Awarding of Degrees

The student works both toward completion of their undergraduate degree and the MS in Computer Science, with up to 12 credit hours counting toward both programs and thus reducing the total credit for both programs by up to 12 credits.

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the MS degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Computer Science BS

The B.S. in Computer Science combines the depth and breadth of traditional computer science studies with practical exposure to a wide variety of tools and technologies. This program is designed for those interested in software and computer systems. It provides students a solid foundation in computing and mathematics, and facilitates specializations offered through electives and certificates such as Artificial Intelligence, Cybersecurity, Data Science, Mobile Apps and Computing, and Internet and Web. In addition, students develop practical skills for working in groups and technical reading and writing. Students completing this degree have also gained professional and ethical perspectives and are well prepared for a challenging career or further graduate studies in Computer Science. The entire program can be completed in the evening, and most courses can also be completed online.

General Education Requirements

All department majors must satisfy the university and appropriate school or college general education requirements.

Satisfactory/Unsatisfactory Restrictions

Courses required for a major program or a certificate cannot be taken on a satisfactory/unsatisfactory basis.

Computer Science Courses

Courses required for a major program or a certificate must be completed with a grade of C- or better. At least four courses numbered 3000 or above must be taken in residence for a major program. Students must have a minimum of 2.0 grade point average in the CMP SCI courses.

All prerequisite courses must be passed with a grade of C- or better unless explicitly stated otherwise.

Students who are ready to begin their program with CMP SCI 2250, Programming and Data Structures, but lack proper credit or transfer for the prerequisite CMP SCI 1250, Introduction to Computing, will be granted

credit for CMP SCI 1250 once they complete CMP SCI 2250 with a grade of C- or better. Interested students must reach out to their faculty advisor.

Courses that are prerequisites for higher-level courses may not be taken for credit if the higher-level course has been satisfactorily completed.

Degree Requirements in Computer Science

Candidates for the B. S. Computer Science degree must complete the following work:

1) Computer Science Core

| | | |
|--------------|---|---|
| CMP SCI 1000 | Computer Science Experiences | 1 |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 2250 | Programming and Data Structures | 3 |
| CMP SCI 2261 | Object-Oriented Programming | 3 |
| CMP SCI 2700 | Computer Organization and Architecture | 3 |
| CMP SCI 2751 | File Systems, Operations, and Tools | 3 |
| CMP SCI 3010 | Web Full Stack Development | 3 |
| CMP SCI 3130 | Design and Analysis of Algorithms | 3 |
| CMP SCI 3260 | C/C++ for Advanced Programming | 3 |
| CMP SCI 4250 | Programming Languages | 3 |
| CMP SCI 4280 | Program Translation Project | 3 |
| CMP SCI 4500 | Introduction to the Software Profession | 3 |
| CMP SCI 4760 | Operating Systems | 3 |

2) Computer Science Electives

Select four more elective computer science courses, numbered above 3000. 12

3) Mathematics and Statistics

| | | |
|-----------|--|---|
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2450 | Elementary Linear Algebra | 3 |
| MATH 3000 | Discrete Structures | 3 |

4) Additional Skills

| | | |
|-----------|-------------------|---|
| ENGL 3130 | Technical Writing | 3 |
|-----------|-------------------|---|

Total Hours 71

There are no related area requirements for majors in Computer Science

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply logical reasoning, algorithmic and mathematical principles, and computer science theory to understand and solve a wide variety of computational problems
- Analyze computing problems, their size and scope, and input-output requirements
- Analyze, evaluate, and compare alternative solutions to computing problems, with particular reference to computational complexity, scalability, and usability
- Compare multiple general-purpose programming languages and select and use the appropriate languages for specific applications

- Design, implement (code) and document solutions to computational problems
- Create software systems following specific design and performance requirements within practical constraints
- Implement Internet applications on client and server sides
- Work effectively in teams to design, implement and evaluate solutions to computational problems
- Effectively communicate computer science concepts and solutions, verbally and in writing
- Recognize and promote the professional, social, ethical and legal issues and responsibilities in the computing / software profession

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-------|--------------------------------------|-------|
| INTDSC 1003 ¹ | | 1 CMP SCI 1250 | 3 |
| ENGL 1100 | | 3 MATH 1800 | 5 |
| MATH 1030 | | 3 CORE – US History & Government | 3 |
| MATH 1035 | | 2 EXPLORE – Social Sciences | 3 |
| EXPLORE – Humanities & Fine Arts | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE – Social Sciences | | 3 | |
| | 15 | | 17 |

Second Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|------------------------------------|-------|
| CMP SCI 2250 | | 3 CMP SCI 2261 | 3 |
| CMP SCI 2700 | | 3 CMP SCI 2750 | 3 |
| MATH 1320 | | 3 CMP SCI 3010 | 3 |
| MATH 1900 | | 5 MATH 3000 | 3 |
| EXPLORE – Humanities and Fine Arts | | 3 CORE – Communication Proficiency | 3 |
| | 17 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|-------------------------------|-------|--------------------------------|-------|
| CMP SCI 3130 | | 3 CMP SCI 4760 | 3 |
| CMP SCI 4250 | | 3 CMP SCI 3000+ level elective | 3 |
| CMP SCI 3000+ Elective Course | | 3 CMP SCI 3000+ level elective | 3 |
| MATH 2450 | | 3 EXPLORE – Social Sciences | 3 |
| ENGL 3130 | | 3 Elective or minor | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------------------------|-------|--------------------------------|-------|
| CMP SCI 4500 | | 3 CMP SCI 4280 | 3 |
| CMP SCI 3000+ level elective | | 3 CMP SCI 3000+ level elective | 3 |
| Cultural Diversity Requirement | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 1 |
| | 15 | | 13 |

Total Hours: 122

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Computer Science BS/MS Dual Degree Program

BS and MS Dual Degree in Computer Science

The Integrated BS/MS ("2+3") dual degree program involves dual credit for qualified undergraduate Computer Science students. It allows the students to concurrently earn credit for some graduate courses while working on their undergraduate degree, reducing the total hours needed for the subsequent MS degree by up to 12 credit hours.

Entry Requirements

Undergraduate majors can apply for provisional admission to this program if:

1. They have completed at least 60 credit hours of coursework.
2. Their overall GPA is 3.0 or higher.
3. Non-CS majors must at the same time become CS majors.

Upon acceptance to the program in the provisional status, the student continues to work toward his/her undergraduate degree in computer science.

After completion of a minimum of 90 hours and no more than 30 hours away from the undergraduate degree, a provisionally admitted student applies for formal admission to the graduate program. At this point, the student must meet the entry requirements for admission to the M.S. degree in Computer Science.

Degree Requirements

After acceptance into the program, the student continues to complete his/her undergraduate degree. The student is reclassified as a graduate student from the next semester and must pay graduate fees. The student will be assigned a graduate adviser to help optimize the transition to the graduate program. The student continues taking the undergraduate courses but is also allowed to take courses reserved for graduate students. The student completes all the courses to fulfill the requirements to complete his/her M.S. degree in Computer Science – but must also complete the undergraduate requirements. Up to 12 credit hours can be counted towards both the undergraduate and graduate degrees, substantially reducing the hours needed to complete the graduate program by itself.

A student may file for and receive the undergraduate degree at any time when all the requirements are completed, before or in the same semester in which the Master's degree is completed. A student must still complete all the requirements to get a B.S. degree, regardless of whether the student files for the degree or not. A student may choose to finish the studies just with a B.S.

Computer Science Minor

All courses presented for this minor must be completed with a grade of C- or better.

The requirements for the minor are:

| | | |
|--------------|---------------------------------|---|
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 2250 | Programming and Data Structures | 3 |

Select three additional computer science courses numbered 2000 or above. 9

Total Hours 15

A minimum of two computer science courses numbered above 2000 must be taken in residence in the Department of Computer Science at UMSL.

Learning Outcomes

Upon completion of a Minor in Computer Science at the University of Missouri St. Louis, students will be able to:

- Identify and interpret the basic computational issues in problem solving
- Apply the tools and techniques necessary for programming practice
- Use at least two general-purpose programming languages for solving computational problems
- Design, implement (code) and document solutions to computational problems

Computer Science MS

The M.S. degree in Computer Science has two different options to choose from, offering a wide range of career opportunities. In addition to the traditional option, we offer an option that allows students to incorporate a certificate, following specific interests, into this M.S. program. All graduates will have a broad computing background and will be exposed to a wide range of technologies. They will also be prepared for teamwork, independent research, and technical reporting and presentations. The program can be taken part-time or full-time and can be completed in the evening with many courses available online or in a hybrid format.

Admission Requirements

Applicants apply through and must meet the Graduate School requirements plus the following additional departmental GPA and foundation requirements. Those admitted, for whom we could not determine some foundations or with GPA deficiencies, can be admitted with restrictions - see the restrictions section.

Applicants with relevant full-time training and/or experience can apply for up to 6 proficiency transfer credits toward the degree in CMP SCI 5991 regardless of their undergraduate degree.

GPA

Applicants must have a minimum of a 3.0 (out of 4.0) GPA to be considered for admission. This can be an undergraduate GPA or some later GPA. Applicants with a GPA of 2.75-2.99 will be considered but must provide additional evidence, which can be a combination of GRE, reference letters, and/or relevant experience and should all be presented in the Statement of Intent. Applicants below 2.75 will only be considered if supplemented by lengthy related experience, as demonstrated in the Statement of Intent.

Foundations

Applicants will be evaluated for proficiency in the following areas. This can be prior coursework on transcripts or non-academic training/relevant experience. Applicants are advised to refer to these items below and offer relevant information in the Statement of Intent.

Computer Science

1. At least two different modern general-purpose programming languages.
2. Object-oriented programming, concepts, and terminology
3. Basic dynamic data structures such as strings, lists, stacks, queues, and trees
4. Design and analysis of algorithms
5. Mathematical foundation for computer science (discrete structures) with topics such as sets, logic, functions, and relations

Mathematics

1. A calculus course
2. A probability and statistics course

Restrictions

An applicant missing or not adequately demonstrating in the Letter of Intent some of the above requirements may be admitted on restricted status. The GPA restriction will be lifted after a successful semester. The foundation restrictions may be lifted after the applicant provides the graduate director evidence of proficiency which can be transcripts or additional non-academic training, or otherwise the admitted student will have to pass appropriate undergraduate courses to lift the remaining restrictions.

Degree Requirements

Candidates for the M.S. degree in Computer Science must complete 30 credit hours of coursework in Computer Science (CMP SCI).

- Up to 6 credit hours of related coursework can be completed outside of CMP SCI, based on the student's interest with permission of the Graduate Director
- Up to 10 credit hours can be transferred into the program
- Up to 12 credits hours from 4000-level courses completed with at least a B- can be used in the program
- At least 3 credit hours must be at the 6000-level
- Students with relevant prior full-time training and/or experience of a minimum of one year can apply for up to 6 proficiency transfer credit hours in CMP SCI 5991

Core Courses

| | | |
|--------------|---|---|
| CMP SCI 4250 | Programming Languages | 3 |
| CMP SCI 5130 | Advanced Data Structures and Algorithms | 3 |
| CMP SCI 5500 | Software Engineering | 3 |
| CMP SCI 5710 | Modern Computing | 3 |

Additional Requirements

| | |
|---------------------------|-----------|
| CMP SCI 6000-level course | 3-6 |
| Electives ¹ | 12-15 |
| Colloquia ² | 0 |
| Total Hours | 30 |

¹ Electives can count towards graduate certificates.

² A student must attend at least five seminars or colloquia.

Students finding an internship/co-op opportunity can enroll in a credit course CMP SCI 5900 for up to 3 credit hours to be counted as an elective.

Computing Technology BS

The B.S. in Computing Technology is designed for those interested in broad and deep computing education but without some traditional advanced courses. This program is designed for students who want to focus on technologies, tools, and applications and transition to fulfilling careers. Students completing this degree can also further specialize by completing one of the certificates and find in-demand careers in many related areas such as cybersecurity, networks, internet programming, software and mobile apps development, data science, AI, graphics, or pursue additional graduate studies. The program can be completed in the evening, and most courses can also be completed online.

General Education Requirements

All department majors must satisfy the university and appropriate school or college general education requirements.

Satisfactory/Unsatisfactory Restrictions

Courses required for a major program or a certificate cannot be taken on a satisfactory/unsatisfactory basis.

Computer Science Courses

Courses required for a major program or a certificate must be completed with a grade of C- or better. At least four courses numbered 3000 or above must be taken in residence for a major program. Students must have a minimum of 2.0 grade point average in the CMP SCI courses.

All prerequisite courses must be passed with a grade of C- or better unless explicitly stated otherwise.

Students who are ready to begin their program with CMP SCI 2250, Programming and Data Structures, but lack proper credit or transfer for the prerequisite CMP SCI 1250, Introduction to Computing, will be granted credit for CMP SCI 1250 once they complete CMP SCI 2250 with a grade of C- or better. Interested students must reach out to their faculty advisor.

Courses that are prerequisites for higher-level courses may not be taken for credit if the higher-level course has been satisfactorily completed.

Candidates for the B. S. Computing Technology degree must complete the following courses:

Core

| | | |
|-----------------|---|---|
| CMP SCI 1000 | Computer Science Experiences | 1 |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 2250 | Programming and Data Structures | 3 |
| CMP SCI 2261 | Object-Oriented Programming | 3 |
| CMP SCI 2700 | Computer Organization and Architecture | 3 |
| CMP SCI 2751 | File Systems, Operations, and Tools | 3 |
| CMP SCI 3010 | Web Full Stack Development | 3 |
| CMP SCI 3702 | Introduction to Cyber Threats and Defense | 3 |
| or CMP SCI 3780 | Software Security | |
| CMP SCI 4010 | Web Development with Java | 3 |
| CMP SCI 4500 | Introduction to the Software Profession | 3 |
| CMP SCI 4610 | Database Management Systems | 3 |

| | | |
|---|--|--------------|
| INFSYS 3820 | Introduction to Systems Administration | 3 |
| INFSYS 3844 | Developing Business Applications in .NET | 3 |
| Computer Science Electives | | |
| Select six CMP SCI courses, numbered 2000 and above. May use up to two INFSYS courses as part of this requirement with permission of the department chair.) | | 18 |
| Mathematics and Statistics | | |
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| MATH 3000 | Discrete Structures | 3 |
| MATH 1100 or MATH 1800 | Basic Calculus Analytic Geometry and Calculus I | 3-5 |
| Additional Skills | | |
| ENGL 3130 | Technical Writing | 3 |
| Total Hours | | 67-69 |

There are no related area requirements for majors in Computing Technology.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply algorithmic principles to solve a variety of computational problems
- Analyze computing problems, their size and scope, and input-output requirements
- Compare alternative solutions to computing problems
- Use multiple general-purpose programming languages for solving computational problems
- Design, implement (code) and document solutions to computational problems, especially for business applications
- Design, evaluate, and manage information technology infrastructure in an organization
- Create secure software systems that meet specified needs
- Work effectively in teams to design and implement solutions to computational problems
- Effectively communicate computing technology concepts and solutions, verbally and in writing
- Recognize and promote the professional, social, ethical and legal issues and responsibilities in the computing / software profession

Sample Four Year Plan

| | | | |
|------------------------------------|--------------|--|--------------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | 1 | CMP SCI 1250 | 3 |
| CMP SCI 1000 | 1 | MATH 1800 | 5 |
| ENGL 1100 | 3 | CORE - American History and Government | 3 |
| MATH 1030 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| MATH 1035 | 2 | EXPLORE - Social Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | | |
| EXPLORE - Social Sciences | 3 | | |
| | 16 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| CMP SCI 2250 | 3 | CMP SCI 2261 | 3 |

| | | | |
|--------------------------------|-----------|----------------------------------|-----------|
| CMP SCI 2700 | 3 | CMP SCI 2750 | 3 |
| MATH 1320 | 3 | CMP SCI 3010 | 3 |
| MATH 3000 | 3 | CORE - Communication Proficiency | 3 |
| Cultural Diversity Requirement | 3 | EXPLORE - Social Sciences | 3 |
| | 15 | | 15 |

Third Year

| | | | |
|------------------------------------|--------------|-------------------------------------|--------------|
| Fall | Hours | Spring | Hours |
| CMP SCI 4010 | 3 | INFSYS 3868 | 3 |
| CMP SCI 3000-level course | 3 | CMP SCI 3702 | 3 |
| INFSYS 3844 | 3 | CMP SCI or INFSYS 3000-level course | 3 |
| ENGL 3130 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | Elective or minor | 3 |
| | 15 | | 15 |

Fourth Year

| | | | |
|-------------------------------------|--------------|---------------------------|--------------|
| Fall | Hours | Spring | Hours |
| CMP SCI 4610 | 3 | CMP SCI 4500 | 3 |
| CMP SCI or INFSYS 3000-level course | 3 | CMP SCI 3000-level course | 3 |
| CMP SCI 3000-level course | 3 | CMP SCI 3000-level course | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 1 |
| | 15 | | 13 |

Total Hours: 121

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Corporate Controllershship Graduate Certificate

Program Description

The Graduate Certificate in Corporate Controllershship provides students with the skills to succeed in corporate financial management. Topics emphasized include cost behavior and control, budgeting, forecasting, financial analysis, and business analytics.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs. All 12 credit hours taken as part of this certificate transfer to the MBA degree program.

Required Course

| | | |
|-------------|-----------------------|---|
| ACCTNG 5411 | Cost Systems Analysis | 3 |
|-------------|-----------------------|---|

Electives

| | | |
|--|----------------------------------|---|
| Select three of the following courses: | | 9 |
| ACCTNG 5402 | Professional Accounting Research | |

| | |
|-----------------------------|--|
| or ACCTNG 5406 | Research and Professional Writing in Accounting |
| ACCTNG 5412 | Graduate Topics in Management Accounting: Controllershship |
| ACCTNG 4441 | Advanced Federal Income Tax: Business Taxation |
| ACCTNG 5443/ INFSYS 6833 | Decision Support Systems for Business Intelligence |
| ACCTNG 5444/ SCMA 6345 | |
| Total Hours | |
| 12 | |

Corporate Financial Reporting Graduate Certificate

The Graduate Certificate in Corporate Financial Reporting is designed for individuals seeking expertise in corporate accounting and financial reporting. This certificate is ideal for persons ultimately seeking positions such as Manager of Financial Reporting, Chief Accounting Officer, Director of Investor Relations, and Chief Financial Officer.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs.

All 12 credit hours taken as part of this certificate transfer to the MBA degree program.

Required Courses

| | | |
|-------------------------------|---|---|
| ACCTNG 4401 | Financial Accounting and Reporting III | 3 |
| ACCTNG 4402 | Financial Accounting and Reporting IV | 3 |
| ACCTNG 5402 or ACCTNG 5406 | Professional Accounting Research Research and Professional Writing in Accounting | 3 |

Elective

| | | |
|--------------------------------------|---|---|
| Select one of the following courses: | | 3 |
| ACCTNG 5403 | Graduate Topics: Business Analysis and Reporting | |
| ACCTNG 5412 | Graduate Topics in Management Accounting: Controllershship | |
| ACCTNG 5451 | Accounting and Auditing in Governmental and Not-for-Profit Entities | |

Total Hours **12**

Counseling and Human Services Minor

Students completing this minor will understand careers in counseling and other human service-related fields and assess their fit for those careers,

gain awareness of communication and listening skills required of helping professionals, and appreciate important systemic considerations in mental health work. This minor will help students conceptualize the strengths and needs of diverse individuals and communities, the impact of their own intersecting identities on their interactions with other people, and how to communicate with others using skills in empathy, active listening, and conflict resolution.

The minor in counseling is open to any undergraduate student at UMSL. It is especially relevant for students majoring in the social sciences or any other field requiring strong communication skills and awareness of cultural diversity and advocacy. Additionally, each of the three required courses in the minor is open to any undergraduate student. In other words, students can take any of the undergraduate CNS ED classes in the minor without being enrolled in the minor.

The focus of the program is on academic preparation, not clinical practice. Students in this minor will be trained and positioned to work in bachelor's-level mental health service positions. Students who want to become clinical mental health counselors or school counselors can choose to seek licensure and/or certification after completing their master's degree in counseling. This minor would offer strong preparation to help students be successful in UMSL's counseling master's programs or to work or study in other helping professions such as psychology or social work.

The Minor in Counseling and Human Services requires 15 credits hours, including counseling core classes.

Students must earn a minimum grade of C- in each course in the minor and attain a 2.0 grade point average for all courses in the minor. All courses in the minor must be on a graded basis. A minimum of 9 credit hours included in the minor must be taken in residence at UMSL.

Required Courses

| | | |
|-------------|---|---|
| CNS ED 2000 | Introduction to the Helping Professions | 3 |
| CNS ED 2030 | Cultural Diversity and Social Advocacy | 3 |
| CNS ED 3200 | Interpersonal Skills in Helping Relationships | 3 |

Electives

Choose two of the following:

College of Education

| | |
|--------------|----------------------------------|
| EDUC 2002 | Social Entrepreneurship |
| ED PSY 2212 | Child and Adolescent Development |
| SPEC ED 3318 | Inclusive Classrooms |

Child Advocacy Studies

| | |
|-----------|---|
| CAST 2100 | Communication in Child Advocacy |
| CAST 2300 | Ethics and Values in Child Advocacy |
| CAST 3650 | Culture and Child Advocacy |
| CAST 4498 | Forensic Investigation of Child Abuse |
| CAST 4598 | Child Abuse Assessment and Intervention |

Gender Studies

| | |
|---------|--------------------------------|
| GS 2102 | Introduction To Gender Studies |
|---------|--------------------------------|

Psychological Sciences

| | |
|------------|---|
| PSYCH 2205 | Human Sexuality: Psychological Perspectives |
|------------|---|

| | |
|------------------------|--|
| PSYCH 2230 | Psychology of Gender |
| PSYCH 2245 | Psychological Disorders |
| PSYCH/GS 3232 | Psychology of Trauma |
| PSYCH/GERON 3280 | Psychology of Death and Dying |
| PSYCH 3340 | Clinical Issues of Childhood |
| PSYCH 4250 | Stereotyping, Prejudice, and Discrimination |
| PSYCH/GERON 4376 | Mental Health and Aging |
| Social Work | |
| SOC WK 2000 | Social Work and Social Issues |
| SOC WK 2200 | Social Welfare as a Social Institution |
| SOC WK 3100 | Social Work Practice with Individuals |
| SOC WK 3210 | Social Issues and Social Policy Development |
| SOC WK 3510 | Human Behavior in the Social Environment |
| SOC WK/PSYCH/CAST 4398 | Child Maltreatment: A Multidisciplinary Approach |
| SOC WK 4610 | Intimate Partner Violence |
| Total Hours | 15 |

Learning Outcomes

Demonstrate effective skills in interacting with individuals and groups and working with diverse populations. (Interpersonal/Helping Skills)

Articulate the needs of individuals and communities with diverse backgrounds in order to engage with social advocacy in a responsible way. (Social Justice and Advocacy)

Differentiate between mental health professions and how they support the mental health needs of individuals and groups and use this understanding to reflect upon the student's career journey. (Career and professional awareness)

Counseling MEd, Clinical Mental Health Emphasis

Mission

The Clinical Mental Health Counseling Program of the Department of Education Sciences and Professional Programs prepares professional counselors, including mental health, career, addictions, couples/family, and child and adolescent counselors, to serve the mental health needs of culturally diverse individuals, groups, couples, and families in need. The program's outreach extends to schools, colleges and universities, community based organizations, business and industry, as well as independent practice. The program strives to develop a culturally diverse student population and to draw students from local, regional, national, and international locations.

Purpose

The M.Ed. in Clinical Mental Health Counseling program prepares clinical mental health counselors for positions in community colleges, universities, employment agencies, vocational rehabilitation agencies, probation and parole work, juvenile detention, alcoholism and drug abuse clinics, career planning and placement centers, community mental health agencies, family and children services, and various federally funded public service projects. Additionally, graduates are employed in career development,

and business and industry positions, especially in training and personnel areas. Others have moved into roles calling for research and evaluation skills. The program is designed to fulfill entry-level program standards of preparation. It also is intended to enable program graduates to apply for the Missouri License for Professional Counselors.

Admission

In addition to meeting the general admission requirements of the Graduate School, applicants to the M.Ed. must complete the program supplemental application, have two completed references on file, have an undergraduate GPA of 3.0, and upon admission will take CNS ED 6010, Theories of Counseling, in their first semester. Admissions will be conducted twice a year. The deadlines for application are March 1 for the fall semester and October 1 for the spring semester.

| | |
|-------------|---|
| CNS ED 6010 | Theories of Counseling |
| CNS ED 6020 | Ethical and Professional Issues in Counseling |
| CNS ED 6060 | Helping-Relationship Skills |
| CNS ED 6270 | School Counseling Practicum |
| CNS ED 6280 | School Counseling Internship |
| CNS ED 6370 | Clinical Mental Health Counseling Practicum I |
| CNS ED 6380 | Clinical Mental Health Counseling Internship |

Students admitted to the M.Ed. degree programs in counseling as "restricted graduate students" (see the "graduate study" rules in this Bulletin) must attain a 3.0 GPA in the 12 hours of course work at UMSL. Restricted students must include the following courses in the first 12 hours of coursework: CNS ED 6010: Theories of Counseling and CNS ED 6020: Ethical and Professional Issues in Counseling. A student on restricted status earning any grade less than a B- in either of these courses but still maintaining a 3.0 GPA, will be allowed to repeat the course one time and must earn a grade of B- or better to be fully admitted.

Master of Education: Emphasis in Clinical Mental Health Counseling

The clinical mental health counseling emphasis prepares professionals for work in community settings, universities, and businesses. Graduates are eligible for the Missouri Licensed Professional Counselor and National Certified Counselor credentials.

Core Curriculum (CNS ED)

| | | |
|-------------|--|---|
| CNS ED 6010 | Theories of Counseling | 3 |
| CNS ED 6020 | Ethical and Professional Issues in Counseling | 3 |
| CNS ED 6030 | Foundations for Multicultural Counseling | 3 |
| CNS ED 6040 | Group Procedures in Counseling | 3 |
| CNS ED 6050 | Individual Inventory | 3 |
| CNS ED 6060 | Helping-Relationship Skills | 3 |
| CNS ED 6070 | Psychopathology and Diagnosis | 3 |
| CNS ED 6300 | Foundations of Clinical Mental Health Counseling | 3 |
| CNS ED 6370 | Clinical Mental Health Counseling Practicum I | 3 |

| | | |
|--|--|---|
| CNS ED 6380 | Clinical Mental Health Counseling Field Experience | 6 |
| CNS ED 6400 | Career Information and Development | 3 |
| CNS ED 6500 | Introduction to Systems Theory for Couples and Family Counseling | 3 |
| CNS ED 6700 | Introduction to Addictive Behaviors and Addiction Counseling | 3 |
| One course from the advanced multicultural cognate which includes: | | 3 |
| CNS ED 6810 | Integrating Religion and Spirituality in Counseling | |
| CNS ED 6820 | Counseling Women Toward Empowerment | |
| CNS ED 6830 | Counseling African American Clients | |
| CNS ED 6840 | Sexual Orientation and Gender Diversity in Counseling | |
| CNS ED 6850 | Social Class and Poverty Issues in Counseling | |
| CNS ED 6860 | Human Sexuality in Counseling | |

Psychological Foundations and Human Development

The following course is required:

| | | |
|-------------|--|---|
| ED PSY 6210 | Life-Span: Individual and Family Development | 3 |
|-------------|--|---|

Educational Research and Evaluation Methods

The following course is required:

| | | |
|-------------|---|---|
| ED REM 6710 | Educational Research Methods and Design | 3 |
|-------------|---|---|

Electives and Area of Specialization

9

Electives and coursework in an area of specialization should be selected in consultation with the adviser. Areas of specialization are not required but may be chosen. They include career counseling, addictions/substance abuse counseling, child and adolescent counseling, couples and family counseling, and others.

Comprehensive Examination (Capstone Experience)¹

Total Hours **60**

¹ Please consult with the Department office for requirements and dates of this examination.

Learning Outcomes

The Master of Education in Counseling programs prepare professionals to work in educational settings - elementary, middle, or high schools - as school counselors or in clinical settings - clinics, community mental health centers, or private practice - as clinical mental health counselors. Counselors have professional preparation in the theory and practice of counseling, treatment planning, and career development.

The candidate learning outcomes of the school and clinical mental health counseling programs are to:

- Demonstrate awareness and behavior consistent with an understanding and appreciation of diversity issues.
- Apply helping relationship skills to establish therapeutic alliances and to achieve counseling goals with clients in diverse counseling settings.

- Utilize counseling ethical standards to guide professional practice and ethical decision-making.
- Assess client status and goals within relevant treatment contexts (e.g., school, clinic, community) and identify interventions based on research and best practice.
- Identify and apply appropriate theories to conceptualize client cases and inform counseling practice to achieve therapeutic goals.
- Articulate the ways in which mental health and career needs intersect for clients across the lifespan.
- Use developmentally appropriate trauma-informed approaches to address the needs of clients and systems.

Counseling MEd, School Counseling Emphasis

Mission

The School Counseling Program of the Department of Education Sciences and Professional Programs prepares professional school counselors to serve the academic, career, and personal/social needs of culturally diverse students in the elementary, middle, and secondary schools. The Counseling Program strives to develop a culturally diverse student population and to draw students from local, regional, national, and international locations.

Purpose

The M.Ed. in School Counseling degree prepares students to work as school counselors in public or private elementary, middle, or high school settings. Preparation is designed to enable students to deliver counseling services to schools and their extended communities. Students are trained to apply principles of learning, human development, counseling, research, and measurement within the schools. The program is approved by the Missouri Department of Elementary and Secondary Education. Students wishing to receive Missouri certification in K-12 Counseling must complete all required courses. Students not possessing a teaching certificate must complete specific electives to complete their certification requirements.

Degree Requirements

Admission

In addition to meeting the general admission requirements of the Graduate School, applicants to the M.Ed. must complete the program supplemental application, have two completed references on file, have an undergraduate GPA of 3.0, and upon admission will take CNS ED 6010, Theories of Counseling, in their first semester. Admissions will be conducted twice a year. The deadlines for application are March 1 for the fall semester and October 1 for the spring semester.

| | |
|-------------|---|
| CNS ED 6010 | Theories of Counseling |
| CNS ED 6020 | Ethical and Professional Issues in Counseling |
| CNS ED 6060 | Helping-Relationship Skills |
| CNS ED 6270 | School Counseling Practicum |
| CNS ED 6280 | School Counseling Internship |
| CNS ED 6370 | Clinical Mental Health Counseling Practicum I |

CNS ED 6380 Clinical Mental Health Counseling Internship

Students admitted to the M.Ed. degree programs in counseling as “restricted graduate students” (see the “graduate study” rules in this Bulletin) must attain a 3.0 GPA in the 12 hours of course work at UMSL. Restricted students must include the following courses in the first 12 hours of coursework: CNS ED 6010: Theories of Counseling and CNS ED 6020: Ethical and Professional Issues in Counseling. A student on restricted status earning any grade less than a B- in either of these courses but still maintaining a 3.0 GPA, will be allowed to repeat the course one time and must earn a grade of B- or better to be fully admitted.

Requirements for the School Counseling Emphasis

The courses listed below meet the course work requirements for the M.Ed. degree, state certification, and licensing as a professional counselor:

Counselor Education

| | | |
|----------------|--|---|
| CNS ED 6010 | Theories of Counseling | 3 |
| CNS ED 6020 | Ethical and Professional Issues in Counseling | 3 |
| CNS ED 6030 | Foundations for Multicultural Counseling | 3 |
| CNS ED 6040 | Group Procedures in Counseling | 3 |
| CNS ED 6050 | Individual Inventory | 3 |
| CNS ED 6060 | Helping-Relationship Skills | 3 |
| CNS ED 6200 | Foundations of School Counseling | 3 |
| CNS ED 6270 | School Counseling Practicum | 3 |
| CNS ED 6280 | School Counseling Field Experience | 6 |
| CNS ED 6400 | Career Information and Development | 3 |
| CNS ED 6600 | Theories and Techniques of Counseling Children and Adolescents | 3 |
| or CNS ED 6610 | Introduction to Play Therapy | |
| CNS ED 6630 | Career Development in K-12 Schools | 3 |
| CNS ED 6730 | Counseling for Loss, Crisis, and Trauma | 3 |

Psychological Foundations and Human Development

| | | |
|----------------|--|---|
| ED PSY 6226 | Mental Health and Development of Children and Youth | 3 |
| or ED PSY 6222 | Advanced Studies in Child and Adolescent Development | |
| or ED PSY 6210 | Life-Span: Individual and Family Development | |
| ED PSY 6532 | Psychoeducational Differences | 3 |

Educational Research and Evaluation Methods

| | | |
|-------------|---|---|
| ED REM 6710 | Educational Research Methods and Design | 3 |
|-------------|---|---|

Electives

Nine credit hours from CNS ED or related courses such as: 9

| | | |
|-------------|--|--|
| CNS ED 6220 | Counseling Individuals with Disabilities | |
| CNS ED 6410 | Advanced Career and Leadership Development | |

| | |
|-------------|--|
| CNS ED 6620 | Advanced Play Therapy |
| CNS ED 6680 | School Counseling in the Classroom |
| CNS ED 6700 | Introduction to Addictive Behaviors and Addiction Counseling |
| CNS ED 6830 | Counseling African American Clients |
| CNS ED 6840 | Sexual Orientation and Gender Diversity in Counseling |
| CNS ED 6850 | Social Class and Poverty Issues in Counseling |
| CNS ED 6870 | Counseling and Cultural Competence in a Global Society |

Comprehensive Examination (Capstone Experience) ¹

Total Hours **60**

¹ Please consult with the Department office for requirements and dates of this examination.

Learning Outcomes

The Master of Education in Counseling programs prepare professionals to work in educational settings - elementary, middle, or high schools - as school counselors or in clinical settings - clinics, community mental health centers, or private practice - as clinical mental health counselors. Counselors have professional preparation in the theory and practice of counseling, treatment planning, and career development.

The candidate learning outcomes of the school and clinical mental health counseling programs are to:

- Demonstrate awareness and behavior consistent with an understanding and appreciation of diversity issues.
- Apply helping relationship skills to establish therapeutic alliances and to achieve counseling goals with clients in diverse counseling settings.
- Utilize counseling ethical standards to guide professional practice and ethical decision-making.
- Assess client status and goals within relevant treatment contexts (e.g., school, clinic, community) and identify interventions based on research and best practice.
- Identify and apply appropriate theories to conceptualize client cases and inform counseling practice to achieve therapeutic goals.
- Articulate the ways in which mental health and career needs intersect for clients across the lifespan.
- Use developmentally appropriate trauma-informed approaches to address the needs of clients and systems.

Couple, Marriage and Family Counseling Graduate Certificate

The Graduate Certificate in Couple, Marriage and Family Counseling (CMFC) may be pursued as a stand-alone credential or in conjunction with the Master's Degree in Education in counseling, the Master's in Social Work degree, the Ed.D., or the Ph.D. in Education. With advance planning, all 12 credits may be applied to the Master's of Education in Clinical Mental Health Counseling. Completion of the CMFC certificate, however, does not guarantee acceptance into any other degree program (which requires a separate application for admission).

Admission Requirements

Requirements for admission to the CMFC certificate program are current “good standing” (non-probation) in an UMSL graduate mental health practitioner training program (such as counseling, social work, or psychology), **OR** all of the following criteria must be met:

1. Undergraduate degree with a GPA of 3.0 or better;
2. Enrollment in a graduate mental health practitioner training program, or completion of a mental health practitioner master's degree;
3. Two letters of recommendation with at least one from a current or former college-level instructor (or someone with a graduate degree who can attest to the applicant's capacity to complete graduate-level work);
4. Two-page personal statement explaining the applicant's personal and professional goals.

Certificate Requirements

| | | |
|--------------------|--|-----------|
| CNS ED 6500 | Introduction to Systems Theory for Couples and Family Counseling | 3 |
| CNS ED 6510 | Marriage Counseling and Enrichment | 3 |
| CNS ED 6520 | Family Counseling | 3 |
| CNS ED 6380 | Clinical Mental Health Counseling Field Experience ¹ | 3 |
| or CNS ED 7000 | Advanced Theories and Practice of Counseling | |
| or CNS ED 7780 | Doctoral Internship | |
| Total Hours | | 12 |

¹ For CNS ED 6380/CNS ED 7000/CNS ED 7780, the counseling must be completed at a site requiring the student to work with couples/families.

Creative Writing MFA

The application process is identical to that for the master of arts degree (p. 569), with these exceptions: there is one annual deadline for all applications, Feb. 15; a writing sample is required (15-20 poems or 20-40 pages of fiction); the GRE test is required only if the applicant seeks financial aid or a teaching assistantship. In addition to the Graduate School requirements, students must complete at least 39 hours, 30 of which must be in 5000-level courses. Nine hours may be taken in 4000-level courses approved by the department and Graduate School. Students will specialize in one genre, poetry or fiction. They must complete the following course work: 15 hours of workshops, three hours of literary journal editing (ENGL 5190), 3 hours of either ENGL 5170 or ENGL 5180 depending on specialization (fiction writers take ENGL 5170 and poets take ENGL 5180), 3 hours thesis (ENGL 6000). Total designated hours, 24. Any of the following can make up the remaining 15 hours, but we especially recommend the first three:

1. ENGL 5180 for fiction writers and ENGL 5170 for poets, the opposite of the students' specialization.
2. A contemporary literature class offered by the MFA program or the MA program
3. A composition theory course, recommended mainly for those who want to teach later

4. another workshop
5. ENGL 5190, literary journal editing, a second time
6. Any other graduate level class in literature, linguistics, or composition offered by the Department of English
7. 5200-MFA readings course, or an independent study-IF you can find someone to work with you.
8. Up to 3 (9 hours) of 4000 level undergrad lit or linguistics classes offered by the Department of English, recommended especially for those without an English background.
9. One three hour class outside the Department of English, at least a 4000 level, and with all needed permissions from both departments that will enhance the student's writing.

Complete information may be found in The Master of Fine Arts in Creative Writing, available from the English department.

Creative Writing Undergraduate Certificate

Requirements

Students earn the Certificate in Creative Writing by completing 18 hours in selected writing courses with a grade point average of 3.0 or better. The creative writing emphasis focuses the students' effort toward producing original fiction, poetry, and creative nonfiction and can include other endeavors, such as publishing, feature writing, and copywriting. The specific requirements for the Creative Writing Emphasis are listed below.

Courses for the certificate should be chosen with the guidance of the program coordinator. If the student elects to complete English 4890 as one of the courses for the certificate, he or she should meet with the coordinator to make arrangements for the internship.

To receive this certificate, the student must take 18 hours chosen from the courses listed below, three of which should be creative writing courses. Creative writing courses have a CW designation after the course title in the list below.

2000-Level Courses

| | | |
|---|---------------------------------------|---|
| Students may take no more than two 2000-level courses | | |
| ENGL 2020 | Introduction to Creative Writing (CW) | 3 |
| ENGL 2030 | Poetry Writing Jumpstart (CW) | 3 |
| ENGL 2040 | Fiction Writing Jumpstart (CW) | 3 |

Creative Writing and Literature Courses

| | | |
|-----------|--|---|
| ENGL 3030 | Improving on the Blank Page: Writing Poetry (CW) | 3 |
| ENGL 3040 | Lying to Tell a Truth: Writing Fiction (CW) | 3 |
| ENGL 3090 | Turning the Kaleidoscope: How We Look at Texts | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| ENGL 4130 | A Machine Made of Words: Writing Your Best Poems (CW) | 3 |
| ENGL 4140 | Polishing Your Stories: Producing a Publishable Short Story (CW) | 3 |
| ENGL 4150 | Creative Non-Fiction (CW) | 3 |

| | | |
|-----------|--|---|
| ENGL 4160 | Special Topics in Writing (with permission from the Writing Certificate Coordinator) | 3 |
| ENGL 4180 | Novel Beginnings (CW) | 3 |
| ENGL 4890 | Writing Internship | 3 |
| ENGL 4892 | Independent Writing Project (limited availability) | 3 |
| ENGL 4895 | Editing "Litmag" | 3 |

Professional Writing Courses

Students are encouraged to take at least one professional writing course, but no more than two

| | | |
|--------------------|------------------------------------|---|
| ENGL/MEDIA ST 2080 | Advertising Copywriting | 3 |
| ENGL/MEDIA ST 3150 | Feature Writing | 3 |
| ENGL 4162 | Writers at Work | 3 |
| ENGL 4860 | Editing and the Production Process | 3 |

Capstone Course

Students may use ENGL 4895, ENGL 4890, ENGL 4140, or ENGL 4130 as their capstone course. If ENGL 4890 is used, it will be an internship in literary publishing, feature writing, or advertising copywriting. To use ENGL 4130 or ENGL 4140, the student must obtain the teacher's permission and do extra work in the course. The Editing Litmag course, ENGL 4895, may also be used as the final course for this certificate.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Identify and execute particular techniques of the genre, such as characterization, plot, dialogue, metaphor, meter, and rhyme
- Improve, sharpen, and extend these techniques in their own writing through revision
- Demonstrate practice in multiple creative writing genres
- Reflect on their own work in the context of literary traditions and aesthetic points of view
- Possess the ability to critically read and analyze the work of others
- Incorporate constructive criticism into the revising process
- Provide critical feedback to other writers during their creative process
- Experiment with literary traditions to break tradition
- Explain how different genres inform and intersect with one another
- Pursue ideas, techniques, and forms that are outside their comfort zone
- Demonstrate how professional publishing and editing functions, including how and where to send their work for publication
- Market their skills set as creative writers for employment

Criminology and Criminal Justice BS

The interdisciplinary curricula unify a body of knowledge from criminology, social science, law, public administration, and corrections, and provide the student with an understanding of the assumptions, values, and processes of the system of justice. Many pre-law students choose criminology and

criminal justice as an undergraduate major because of the excellent preparation offered for law school.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). Foreign language proficiency is not required, although students are encouraged to take foreign language courses. Majors may not take the following courses on a satisfactory/unsatisfactory basis: criminology and criminal justice courses; SOC 3220, Quantitative Techniques in Sociology; or SOC 3230, Research Methods. Additionally, substitutions approved by departmental advisers for these courses may not be taken on a satisfactory/unsatisfactory basis.

Declaring the Criminology and Criminal Justice Major

Students must complete the following courses before declaring the major:

| | | |
|-------------|---|---|
| CRIMIN 1100 | Introduction to Criminology and Criminal Justice | 3 |
| CRIMIN 1110 | Theories of Crime | 3 |
| CRIMIN 2210 | Research Methods in Criminology and Criminal Justice | 3 |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice ¹ | 4 |

¹ Students must successfully complete CRIMIN 2220 with a grade of C- or better within three attempts.

Degree Requirements

Courses used to fulfill the social science or state requirements may not be taken from courses in the major. Students may register for 3000-5000 level courses only after completing ENGL 3100 (Advanced Expository Writing).

Students may register for 3000-5000 level courses only after prerequisites have been satisfied or after obtaining a signature from the adviser in criminology and criminal justice or consent of the instructor.

Criminology majors may not take course numbers 1100, 2260, or 3345 offered through UM-Independent Studies to fulfill degree requirements in the major.

Core Curriculum

Bachelor of Science in Criminology and Criminal Justice candidates must complete the core curriculum listed below:

Core Curriculum

| | | |
|---|--|----|
| The following courses in criminology and criminal justice are required: | | 22 |
| CRIMIN 1100 | Introduction to Criminology and Criminal Justice | |
| CRIMIN 1110 | Theories of Crime | |
| CRIMIN 1120 | Criminal Law | |
| CRIMIN 2130 | Criminal Justice Policy | |
| CRIMIN 2210 | Research Methods in Criminology and Criminal Justice | |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice | |

| | | |
|--|---|----|
| CRIMIN 4390 | Seminar in Criminology and Criminal Justice | |
| Select one of the following: | | 3 |
| CRIMIN 2240 | Policing | |
| CRIMIN 2250 | Courts | |
| CRIMIN 2260 | Corrections | |
| Select one of the following courses in Criminology and Criminal Justice: | | 3 |
| CRIMIN 3305 | Crime and Justice in a Globalized World | |
| CRIMIN 4325 | Gender, Crime, and Justice | |
| CRIMIN 4330 | Violence Against Women | |
| CRIMIN 4340 | Race, Crime, and Justice | |
| Select three additional CRIMIN courses at the 3000, 4000, or 5000 level: | | 9 |
| Total Hours | | 37 |

Candidates must earn a minimum grade of (C-) in the following courses: CRIMIN 2220 Statistical Analysis in Criminology and Criminal Justice, and CRIMIN 4390 Seminar in Criminology and Criminal Justice.

Candidates must also have a cumulative grade point average of 2.0 or better in the major.

Credit for Police Officer Certified Police Academy Training

Credit may be allowed for individuals certified as law enforcement officers in the states of Missouri and Illinois, as well as certified Federal law enforcement officers/agents for police academy training. Consideration may be given to individuals certified as law enforcement officers/agents from other states on a case-by-case evaluation. Individuals who qualify as certified law enforcement officers/agents may receive up to 15 hours of credit for Criminology and Criminal Justice (CCJ) coursework awarded at the discretion of the CCJ department faculty. To count toward a degree, the credit granted must be appropriate to the student's curriculum.

Expected Learning Outcomes

- Students will demonstrate critical thinking to reflect a depth, breadth and integration of knowledge in the key areas of criminology and criminal justice, law, theory, research methods, statistics, and criminal justice policy.
- Students will demonstrate an understanding of the three areas of the criminal justice system: policing, courts, and corrections.
- Students will analyze the role that class, race, gender and culture play in crime and criminal justice.
- Students will be able to evaluate and report research findings and data in a professional and ethical manner.
- Graduates will be able to formulate and assess research questions, recognize the need for information and the knowledge to procure that information from relevant scholarly literature and databases, design research projects grounded in theory and scholarship, and evaluate data critically.

Sample Four Year Plan

| | | | |
|--------------------------|-------|---------------|-------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 CRIMIN 1110 | 3 |
| CRIMIN 1100 | | 3 CRIMIN 1120 | 3 |

| | | |
|------------------------------------|--|----|
| ENGL 1100 | 3 EXPLORE - Mathematics and Natural Sciences | 3 |
| CORE - Mathematics Proficiency | 3 EXPLORE - Humanities and Fine Arts | 3 |
| CORE - Communication Proficiency | 3 Elective or minor | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | |
| | | 16 |
| | | 15 |

| | | | |
|--|-------|--|-------|
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| CRIMIN 2130 | | 3 CRIMIN 2240, 2250, or 2260 | 3 |
| CRIMIN 2210 | | 3 CRIMIN 2220 | 4 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 CORE - US History and Government | 3 |
| Elective or minor | | 3 Elective or minor | 1 |
| | | 15 | 14 |

| | | | |
|--------------------------------|-------|----------------------------|-------|
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| CRIMIN 3000+ level course | | 3 CRIMIN 3000+level course | 3 |
| ENGL 3100 | | 3 Elective or minor | 3 |
| Cultural Diversity Requirement | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | 15 | 15 |

| | | | |
|---------------------------|-------|-----------------------------|-------|
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| CRIMIN 3000+ level course | | 3 CRIMIN 4390 | 3 |
| Elective or minor | | 3 CRIMIN 3000+ level course | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | 15 | 15 |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Criminology and Criminal Justice MA

The department offers a Master of Arts degree in Criminology and Criminal Justice, which provides students with advanced theoretical and methodological training for research and management careers in criminal justice.

Admission Requirements

The minimum GPA for regular admission to graduate study is 3.0 on a 4-point scale and students are expected to begin their course of study in the Fall semester. Admission is competitive.

Degree Requirements

The M.A. in Criminology and Criminal Justice requires the completion of 30 credit hours, at least 21 of which are required to be in courses housed

in the Department of Criminology and Criminal Justice. Nine (9) of these hours represent the core of the curriculum. Students may choose between a thesis and a nonthesis course of study. Students whose cumulative GPAs fall below 3.0 after 9 or more hours of work will be placed on probation and given one semester to raise their cumulative GPAs to at least the 3.0 threshold.

Plan of Study

- Required Coursework (9 hours)

| | | |
|-------------|---|---|
| CRIMIN 5415 | Foundations of Criminological Theory (core) | 3 |
| CRIMIN 6405 | Methods (core) | 3 |
| CRIMIN 6410 | Statistical Applications in Criminology and Criminal Justice (core) | 3 |

- Four additional Criminology and Criminal Justice seminars at the 6000 level (12; non-core)
- Electives (9 hours)
Nine elective hours of coursework are required; some or all of these credits may be earned in Criminology and Criminal Justice 6000 level seminars not counted toward the 21-hour requirement. Students may take a maximum of two 4000-level courses in partial fulfillment of this requirement, but they must have the prior approval of the Graduate Committee. All electives taken outside the College of Arts and Sciences also must receive prior approval of the Graduate Committee.

Transfer Courses

Transfer courses are evaluated for acceptance on a case-by-case basis subject to the rules and regulations of the Graduate School. A maximum of 10 credit hours earned at other institutions can be credited toward the UMSL M.A. degree in Criminology and Criminal Justice.

Learning Outcomes

Without Thesis

- Upon completion of the program, graduates will be able to:
- Demonstrate a thorough understanding of theory, methods, and substantive literature of criminology and criminal justice, and the interconnections between social theory, research, and policy
 - Demonstrate a thorough understanding of the research methods of criminology and criminal justice
 - Demonstrate a thorough understanding of the structure and functioning of the fundamental institutions (e.g., legislatures, police, punishment, supervisory) that are part of criminal justice system
 - Analyze the role that social structure (e.g. race, class, gender) plays in crime and criminal justice
 - Assess research questions, recognize the need for information and the knowledge to procure that information from relevant scholarly literature and databases, design research projects grounded in theory and scholarship, and evaluate data critically
 - Be knowledgeable users of scientific research related to a wide range of criminology and criminal justice issues

With Thesis

Upon completion of the program, graduates will be able to:

- Demonstrate a thorough understanding of theory, methods, and substantive literature of criminology and criminal justice, and the interconnections between social theory, research, and policy
- Analyze the role that social structure (e.g. race, class, gender) plays in crime and criminal justice
- Formulate and assess research questions, recognize the need for information and the knowledge to procure that information from relevant scholarly literature and databases, design research projects grounded in theory and scholarship, and evaluate data critically
- Use scientific research related to a wide range of criminology and criminal justice issues
- Apply scientific research methods to produce original, theoretically relevant, and socially important criminological research
- Conduct research in accordance with the highest ethical standards and scientific integrity
- Effectively translate and communicate scientific findings in both oral and written forms

Criminology and Criminal Justice MA Accelerated Master's Degree

The Department of Criminology and Criminal Justice offers an Accelerated MA degree program that allows students to simultaneously earn their BS and their MA in Criminology and Criminal Justice in as few as 10 semesters. Students in the Accelerated MA program will complete the MA through coursework; the MA thesis option is not available for Accelerated MA degree program students.

The combined program requires a minimum of 138 credit hours. Students accepted to the Accelerated MA degree program will be permitted to count up to 12 credit hours at the 4000-level or higher toward both the BS and MA degrees; the 4000-level courses will require additional work assigned by the instructor. The remaining 18 credit hours must be at the 5000/6000 level.

Any 4000-level course taken before admission to the Accelerated MA program will apply only to the undergraduate requirements unless given prior permission from the Graduate School. Students are encouraged to work closely with the Undergraduate and MA Program Directors to ensure that required courses are timed appropriately. It is strongly recommended that students meet with the MA Director as soon as possible and ideally before their Junior year.

Eligibility

Students will need to have fulfilled the core undergraduate curriculum requirements prior to applying for the Accelerated MA program, with the exception of CRIMIN 4390 (Seminar in CCJ).

Admission Requirements

Provisional Admission

Applicants are considered for provisional admission if they meet the following four criteria.

- Earned 60 hours as an undergraduate
- Completed the core curriculum requirements for the CCJ major, with the exception of CRIMIN 4390

- Have a minimum GPA of 3.0 with a B or better in CRIMIN 2220 (Statistics) and CRIMIN 2210 (Research Methods)
- Have met with both the Undergraduate and MA Directors in CCJ

Seniors who have earned more than 105 credit hours will not be considered for the Accelerated MA degree program. The MA Program Director, in consultation with the Undergraduate Director, will determine whether the student can apply for provisional status. Graduate courses completed by undergraduate students who have been provisionally admitted to Accelerated Master's program will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. These courses must be approved before the semester starts. Therefore, it is recommended to apply for provisional status as a junior, preferably in the first semester of junior year.

Graduate Admission

Students are considered for formal admission to the graduate school each semester after being granted provisional status. Thus, students should meet with the MA Program Director each semester. Applicants are considered for formal admission if they meet the following four criteria:

- Earned at least 90 hours as an undergraduate
- Have a minimum GPA of 3.0 since being granted provisional status
- Submitted at least one letter of recommendation from an UMSL CCJ professor
- Submitted to the MA Director a 1–2 page statement of purpose briefly explaining why an advanced degree in criminology and criminal justice is of interest and why the applicant merits serious consideration
- Have met with the MA Program Director in CCJ

The MA Program Director, in consultation with the Undergraduate Director, will determine whether the student can apply for formal admission. Final decisions concerning formal admission are made by the Graduate Dean in consultation with the Program Director. Students admitted at this stage are conferred graduate status and must continue taking courses with graduate status until the completion of the MA degree.

Awarding of Degrees

The student must apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In that semester, the student must also apply and be admitted to the graduate program, to begin in the semester following the awarding of the undergraduate degree. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Program Requirements

Junior/Senior Year Courses

| | | |
|--|---|---|
| CRIMIN 4390 | Seminar in Criminology and Criminal Justice | 3 |
| Any three 4000-level CRIMIN courses ¹ | | 9 |

Final Year Courses

Fall

| | | |
|--|--|---|
| CRIMIN 6410 | Statistical Applications in Criminology and Criminal Justice | 3 |
| CRIMIN 5415 | Foundations of Criminological Theory | 3 |
| Spring | | |
| CRIMIN 6405 | Methods | 3 |
| Any three 6000-level CRIMIN Electives ¹ | | 6 |

¹ A student must obtain permission from the MA Program Director to take a 4000-level course and 6000-level course as two separate courses when they have the same topic (e.g., CRIMIN 4350 Victimology and CRIMIN 6448 Victimization).

Criminology and Criminal Justice Minor

Requirements for the Minor

The minor has been designed to ground students in the basics of criminology and criminal justice.

| | | |
|---|--|-----------|
| All minor candidates must take: | | 3 |
| CRIMIN 1100 | Introduction to Criminology and Criminal Justice | |
| The candidate must then select two of the following: | | 6 |
| CRIMIN 1110 | Theories of Crime | |
| CRIMIN 1120 | Criminal Law | |
| CRIMIN 2130 | Criminal Justice Policy | |
| Candidates must then complete 6 hours of criminology and criminal justice course work at the 2000 level or above. | | 6 |
| Total Hours | | 15 |

If used for the minor, candidates must earn a minimum grade of (C-) in the following courses: CRIMIN 2220 Statistical Analysis in Criminology and Criminal Justice, and CRIMIN 4390 Seminar in Criminology and Criminal Justice

Candidates must also have a cumulative grade point average of 2.0 or better in the minor. None of the courses may be taken on a satisfactory/unsatisfactory (s/u) basis.

Expected Learning Outcomes

A Minor in Criminology and Criminal Justice (CCJ) will expose students to some of the same learning outcomes as the BA, thereby providing a foundation for pursuit of the BA if desired. The Minor in CCJ will also offer students the opportunity to advance their current criminology or criminal justice careers or pursue a new or more advanced career path.

- Students will be able to describe the structure and functioning of the fundamental institutions (e.g., police, courts, corrections) that comprise the criminal justice system in the United States.
- Students will be able to define basic laws, legal concepts, constitutional requirements, and legal procedures relevant to criminal justice professionals in the United States.
- Students will critically assess and evaluate contemporary issues and research in criminology and criminal justice.

- Students will be able to define and explain the major criminological and criminal justice theories, thereby helping them to better understand causes of crime and criminal behavior.
- Students will actively apply their theoretical knowledge and academic skills by formulating basic research hypotheses, conducting basic criminological research, and completing academic writing assignments and exams.

Criminology and Criminal Justice PhD

Eligibility

Undergraduate applicants must have a baccalaureate degree or expect one by the end of the academic year in which they apply. Applicants must have a grade point average of 3.0 or greater (on a scale of A = 4.0) for the last 60 hours of undergraduate work. Admission is competitive.

Graduate applicants who have or will have a master's degree must have a grade point average of 3.0 or greater (on a scale of A = 4.0) for their graduate course work.

Application

To consider an applicant for admission, the Department of Criminology and Criminal Justice must have transcripts, three letters of recommendation, GRE scores, statement of purpose, and a writing sample. Applicants with master's degrees should include a chapter of their thesis. International students whose native language is not English are required to submit scores from the TOEFL examination.

Amount of Course Work

Sixty post-baccalaureate hours of graduate work are required for the Ph.D. More than half of these hours must be completed in residence. A minimum of six credit hours of dissertation research (CRIMIN 7499) are required. Students may enroll for dissertation credits (CRIMIN 7499) only when all other degree requirements have been completed.

Required Courses

| | | |
|-------------|--|---|
| CRIMIN 5415 | Foundations of Criminological Theory | 3 |
| CRIMIN 6405 | Methods | 3 |
| CRIMIN 6410 | Statistical Applications in Criminology and Criminal Justice | 3 |
| CRIMIN 6420 | Contemporary Criminological Theories | 3 |
| CRIMIN 6450 | Criminal Justice Theory and Policy | 3 |
| CRIMIN 6465 | Qualitative Research Design | 3 |
| CRIMIN 6470 | Quantitative Research Design | 3 |
| CRIMIN 6480 | Multivariate Statistics in Criminology | 3 |

Area Courses 12

At least twelve hours beyond those required must be taken at the 5000-level or higher within the CCJ Department.

Electives 12

Four additional courses beyond the above requirements are taken as elective courses.

Qualifying Papers

Graduate students in the doctoral program are not officially classified as PhD candidates until they have passed the Qualifying Papers prerequisite defined below. The goal of this requirement is to establish a student's familiarity with the substantive literature, theory, and methods of criminology and criminal justice, and to demonstrate an ability to imaginatively and creatively use this knowledge to address criminological questions. Passing the Qualifying Papers prerequisite fulfills the comprehensive exam requirement of the Graduate School.

Further information about qualifying papers is available from the department.

The Dissertation

The dissertation is required of all Ph.D. candidates and demonstrates the student's scholarly expertise. The dissertation process formally begins when all other requirements of the Ph.D. program have been met. The dissertation committee assists in selecting and developing the research problem and evaluates the student's work on that problem.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate a mastery of theory, methods, and substantive literature of criminology and criminal justice, and the interconnections between social theory, research, and policy
- Analyze the role that social structure (e.g. race, class, gender, etc.) plays in crime and criminal justice
- Critically synthesize and analyze the nature, scope, and determinants of major criminological problems and identify gaps for further inquiry
- Independently apply scientific research methods and empirical analyses to produce high-quality original, theoretically relevant, and socially important criminological research
- Conduct independent high-quality research in accordance with the highest ethical standards and scientific integrity
- Effectively translate and communicate scientific findings effectively, in both oral and written forms
- Demonstrate knowledge of the profession needed for a successful research and/or teaching career in criminology and criminal justice

Cybersecurity BS, Computer Science Emphasis

The joint Interdisciplinary B.S. in Cybersecurity is designed for students who wish to pursue high-demand work roles such as cybersecurity specialist, cyber defense analyst, cyber defense incident responder, information security analyst, vulnerability assessment analyst, security architect, among a variety of other entry to mid-level cybersecurity and computing related fields. The Computer Science emphasis focuses on more technical aspects of the field. The entire program can be completed in the evening or online.

Students must choose one of the following emphasis areas at the time of application for admission.

- Computer Science (CS) Emphasis
- Information Systems and Technology (IST) Emphasis

Degree requirements vary depending on the chosen emphasis area (see common and emphasis area required courses and credit hours below).

General Education Requirements

Students must satisfy the university general education requirements. (p. 30) Many of the courses for the degree may be used to fulfill general education requirements. There is no foreign language requirement for this degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Required Courses

The degree requires 24 credit hours of core coursework applicable to both emphasis areas. Emphasis specific required courses are listed below. Please see 4-year degree plans for recommend course sequences within each emphasis.

Required Core Courses

| | | |
|--------------------|--|-----------|
| ENGL 3120 | Business Writing | 3 |
| or ENGL 3130 | Technical Writing | |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 2250 | Programming and Data Structures | 3 |
| CMP SCI 2700 | Computer Organization and Architecture | 3 |
| CMP SCI 2751 | File Systems, Operations, and Tools | 3 |
| INFSYS 3848 | Introduction to Information Security | 3 |
| or CMP SCI 3702 | Introduction to Cyber Threats and Defense | |
| INFSYS 3868 | Secure Software Development | 3 |
| INFSYS 3878 | Information Security Risk Management and Business Continuity | 3 |
| Total Hours | | 24 |

Emphasis Area Requirements

In addition to the 24 credit hours of core required coursework, the B.S. Cybersecurity degree with Computer Science emphasis requires 51-53 credit hours of emphasis-specific course work. Thus, candidates for the B.S. in Cybersecurity degree with Computer Science emphasis must complete a major program of 75-77 (24 core + 51-53 emphasis-specific) credit hours of required courses.

For the Computer Science emphasis all general degree requirements from the College of Arts and Science (p. 59) apply.

| | | |
|--------------|--|-----|
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| MATH 1100 | Basic Calculus | 3-5 |
| or MATH 1800 | Analytic Geometry and Calculus I | |
| MATH 3000 | Discrete Structures | 3 |
| CMP SCI 2261 | Object-Oriented Programming | 3 |
| CMP SCI 3010 | Web Full Stack Development | 3 |
| CMP SCI 3130 | Design and Analysis of Algorithms | 3 |
| CMP SCI 3260 | C/C++ for Advanced Programming | 3 |
| CMP SCI 3780 | Software Security | 3 |
| CMP SCI 4700 | Computer Forensics | 3 |

| | | |
|---|--|--------------|
| CMP SCI 4730 | Computer Networks and Communications | 3 |
| CMP SCI 4732 | Introduction to Cryptography for Computer Security | 3 |
| CMP SCI 4760 | Operating Systems | 3 |
| CMP SCI 4782 | Information Security | 3 |
| CMP SCI 4794 | Introduction to Internet of Things | 3 |
| Electives | | 9 |
| Choose three of the following: | | |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | |
| PHIL 2254 | Business Ethics | |
| CRIMIN 1100 | Introduction to Criminology and Criminal Justice | |
| CRIMIN 3310 | Computers in Criminal Justice | |
| CMP SCI 3990 | Undergraduate Internship | |
| CMP SCI 4020 | Introduction to Android Apps: Android Fundamentals | |
| CMP SCI 4220 | Introduction to iOS Programming and Apps | |
| CMP SCI 4222 | iOS Apps | |
| CMP SCI 4300 | Introduction to Artificial Intelligence | |
| CMP SCI 4500 | Introduction to the Software Profession | |
| CMP SCI 4610 | Database Management Systems | |
| CMP SCI 4750 | Introduction to Cloud Computing | |
| CMP SCI 4792 | Introduction to Mobile Computing, Networking, and Security | |
| INFSYS 3858 | Advanced Security and Information Systems | |
| INFSYS 3898 | Seminar in Information Systems | |
| Other electives upon approval of Computer Science chair | | |
| Total Hours | | 51-53 |

Learning Outcomes

1. Understand and Describe the Confidentiality, Integrity, and Availability security objectives and key security principles that enable the development of security mechanisms
2. Demonstrate an understanding of physical, data link, network, transport, and application layers of data networking and identify potential information security pitfalls at each layer
3. Describe important secure software development principles and common web application security vulnerabilities
4. Describe common applications of cryptographic, network, application, and systems security defense mechanisms to improve information security
5. Understand the role of systematic information security risk management in fostering information security within organizations and the role of management and control frameworks such as NIST Special Publications and ISO 27000 series standards in doing so.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|--------------------------|-------|----------------|-------|
| INTDSC 1003 ¹ | | 1 CMP SCI 1250 | 3 |
| ENGL 1100 | | 3 MATH 1800 | 5 |

| | | | | | |
|--|--------------|--|--------------|---------------|--------------|
| MATH 1030 | 3 | CORE - US History and Government | 3 | | |
| MATH 1035 | 2 | EXPLORE - Humanities and Fine Arts | 3 | | |
| EXPLORE - Humanities and Fine Arts | 3 | EXPLORE - Social Sciences | 3 | | |
| EXPLORE - Social Sciences | 3 | | | | |
| | 15 | | 17 | | |
| Second Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| CMP SCI 2250 | 3 | CMP SCI 2261 | 3 | | |
| CMP SCI 2700 | 3 | CMP SCI 2750 | 3 | | |
| MATH 1320 | 3 | CMP SCI 3010 | 3 | | |
| MATH 3000 | 3 | INFSYS 3848 | 3 | | |
| EXPLORE - Humanities and Fine Arts | 3 | CORE - Communication Proficiency | 3 | | |
| | 15 | | 15 | | |
| Third Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| CMP SCI 3130 | 3 | CMP SCI 3702 | 3 | CMP SCI 4732 | 3 |
| CMP SCI 3780 | 3 | CMP SCI XXXX Computer Science Elective | 3 | | |
| CMP SCI 4730 | 3 | CMP SCI XXXX Computer Science Elective | 3 | | |
| INFSYS 3878 | 3 | INFSYS 3868 | 3 | | |
| ENGL 3130 | 3 | EXPLORE - Social Sciences | 3 | | |
| | 15 | | 15 | | 3 |
| Fourth Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| CMP SCI 4700 | 3 | CMP SCI 4782 | 3 | | |
| CMP SCI 4750 | 3 | CMP SCI 4760 | 3 | | |
| CMP SCI 4794 | 3 | Cultural Diversity Requirement | 3 | | |
| CMP SCI 3XXX Computer Science Elective | 3 | Elective or minor | 3 | | |
| | | Elective or minor | 1 | | |
| | 12 | | 13 | | |
| Total Hours: 120 | | | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Cybersecurity BS, Information Systems Emphasis

Students must choose one of the following emphasis areas at the time of application for admission.

- Computer Science (CS) Emphasis
- Information Systems and Technology (IST) Emphasis

Degree requirements vary depending on the chosen emphasis area (see common and emphasis area required courses and credit hours below).

General Education Requirements

Students must satisfy the university general education requirements. (p. 30) Many of the courses for the degree may be used to fulfill general education requirements. There is no foreign language requirement for this degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Required Courses

The degree requires 24 credit hours of core coursework applicable to both emphasis areas. Emphasis specific required courses are listed below. Please see 4-year degree plans for recommend course sequences within each emphasis.

Required Core Courses

| | | |
|--------------------|--|-----------|
| ENGL 3120 | Business Writing | 3 |
| or ENGL 3130 | Technical Writing | |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 2250 | Programming and Data Structures | 3 |
| CMP SCI 2700 | Computer Organization and Architecture | 3 |
| CMP SCI 2751 | File Systems, Operations, and Tools | 3 |
| INFSYS 3848 | Introduction to Information Security | 3 |
| or CMP SCI 3702 | Introduction to Cyber Threats and Defense | |
| INFSYS 3868 | Secure Software Development | 3 |
| INFSYS 3878 | Information Security Risk Management and Business Continuity | 3 |
| Total Hours | | 24 |

Emphasis Area Requirements

In addition to the 24 credit hours of core required coursework, the B.S. Cybersecurity degree with Information Systems and Technology emphasis requires 81 credit hours of emphasis specific coursework (45 general business + 36 program specific). Thus, candidates for the B.S. in Cybersecurity degree with Information Systems and Technology emphasis must complete a program of 105 (24 core + 81 emphasis specific) credit hours of required courses.

For the Information Systems and Technology emphasis all general degree requirements from the College of Business Administration apply.

| | | |
|-------------|--|---|
| INFSYS 3806 | Managerial Applications of Object-Oriented Programming I | 3 |
| INFSYS 3820 | Introduction to Systems Administration | 3 |
| INFSYS 3830 | Data Programming | 3 |
| INFSYS 3842 | Data Networks and Security | 3 |
| INFSYS 3845 | Database Management Systems | 3 |

| | | |
|-------------|---|---|
| INFSYS 3858 | Advanced Security and Information Systems | 3 |
| INFSYS 3862 | Artificial Intelligence Applications for Business | 3 |
| INFSYS 3864 | Applied Cryptography for Business | 3 |
| INFSYS 3866 | Cloud Security for Business | 3 |

Electives 9

Choose three of the following:

| | | |
|--------------------------|--|--|
| INFSYS 3807 | Legacy Systems | |
| INFSYS 3815 | Object-Oriented Applications in Business | |
| INFSYS 3816 | Managerial Application of Object-Oriented Programming II | |
| INFSYS 3817 | Advanced Legacy Systems | |
| INFSYS 3818 | Management of Software Testing | |
| INFSYS 3818 | Management of Software Testing | |
| INFSYS 3841 | Enterprise Information Systems | |
| INFSYS 3844 | Developing Business Applications in .NET | |
| INFSYS 3847 | Web Design | |
| INFSYS 3860 | Data Integration | |
| INFSYS 3890 | Internship in Information Systems | |
| INFSYS 3898 | Seminar in Information Systems ¹ | |
| INFSYS 3899 | Independent Study in Information Systems | |
| INFSYS 4847 or SCMA 4347 | IT Project Management Introduction to Project Management | |
| CMP SCI 2261 | Object-Oriented Programming | |
| CMP SCI 4700 | Computer Forensics | |
| CMP SCI 4732 | Introduction to Cryptography for Computer Security | |
| CMP SCI 4750 | Introduction to Cloud Computing | |
| CMP SCI 4782 | Information Security | |
| MATH 3000 | Discrete Structures | |
| SCMA 3345 | Predictive Analytics and Data Mining | |
| SCMA 4350 | Prescriptive Analytics and Optimization | |
| SCMA 3376 | Transportation Security and Risk | |

Other electives upon approval of Information Systems and Technology department chair

Total Hours 36

- Recognize professional responsibilities and make informed judgments in cybersecurity practice based on legal and ethical principles.
- Function effectively as a member of a team engaged in activities appropriate to the cybersecurity discipline.
- Apply security principles and practices to maintain business operations in the presence of risks and threats.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|---|-----------|---|-----------|
| INTDSC 1003 ¹ | | 1 MATH 1100 | 3 |
| MATH 1030 | 3 | ECON 1001 | 3 |
| ENGL 1100 | 3 | PHIL 1160 or EXPLORE - HUMANITIES AND FINE ARTS | 3 |
| CRIMIN 1100 or CORE - US HISTORY AND GOVERNMENT | 3 | EXPLORE - Humanities and Fine Arts (non-philosophy Cultural Diversity course) | 3 |
| INFSYS 2800 | 3 | CMP SCI 1250 | 3 |
| PHIL 2254 or EXPLORE - HUMANITIES AND FINE ARTS | 3 | | |
| | 16 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|--------------|-----------|---------------|-----------|
| ACCTNG 2400 | | 3 ACCTNG 2410 | 3 |
| ECON 1002 | 3 | BUS AD 2900 | 3 |
| CMP SCI 2250 | 3 | CMP SCI 2700 | 3 |
| INFSYS 3820 | 3 | COMM 2240 | 3 |
| MATH 1105 | 3 | INFSYS 3806 | 3 |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|--------------|-----------|----------------|-----------|
| SCMA 3301 | | 3 FINANCE 3500 | 3 |
| MGMT 3600 | 3 | MKTG 3700 | 3 |
| CMP SCI 2750 | 3 | INFSYS 3845 | 3 |
| INFSYS 3842 | 3 | ENGL 3120 | 3 |
| SCMA 3300 | 3 | INFSYS 3848 | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|------------------------|-----------|-------------------------|-----------|
| INFSYS 3858 | | 3 MGMT 4219 & MGMT 4220 | 3 |
| INFSYS 3868 | 3 | INFSYS 3864 | 3 |
| INFSYS 3830 | 3 | INFSYS 3878 | 3 |
| INFSYS 3866 | 3 | SCMA 4347 | 3 |
| Cybersecurity elective | 3 | Cybersecurity Elective | 3 |
| | 15 | | 15 |

Total Hours: 121

¹ If course is offered and topic is approved by the Information Systems and Technology department chair

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Analyze a complex cybersecurity problem and apply principles of cybersecurity and business decision making to identify potential solutions.
- Design, implement, and evaluate a cybersecurity-based solution to meet a given set of cybersecurity and business requirements.
- Communicate cybersecurity issues effectively in a variety of professional contexts.

Please Note: This is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Cybersecurity Graduate Certificate

Information security is currently one of the most critical issues facing individuals, organizations, governments, and society. Media reports are replete with breaches of information security and the adverse consequences for all stakeholders involved. Thus, demand for professionals who understand the managerial and technical aspects of information security is growing. However, security is a rather broad field and includes a plethora of interconnected sub-specialties. Students or professionals seeking an entry into this field are often overwhelmed by its vastness. Further, since security is both a management issue and a technological issue, it is critical that students think about it from both perspectives and develop skills at their intersection.

This multidisciplinary certificate program is designed for students from diverse backgrounds who wish to get a foundation in information security. Given its flexible structure, it allows students to pursue either more technical courses throughout their program or have a mixture of technical and non-technical courses to match their interests and skill-sets.

The University of Missouri-St. Louis holds the prestigious **National Center of Academic Excellence in Cyber Defense Education (CAE-CDE)** designation granted by the National Security Agency and the U.S. Department of Homeland Security. We are currently one of only two institutions that hold such a designation in the state of Missouri and the only CAE-CDE in the Saint Louis region. UMSL also holds an additional CAE-CDE designation in the **Security Policy Development and Compliance** focus area.

For more information, please visit <http://cybersecurity.umsi.edu> or contact the program directors at cybersecurity@umsi.edu.

Admissions Requirements

Applicants must meet the following program admission requirements in addition to the general requirements of the Graduate School.

By the time of enrollment, prospective students must have obtained a baccalaureate degree or the equivalent from an accredited college or university. A minimum GPA of 3.0 on a 4.0 scale is required to be considered for regular admission. This GPA is higher than the minimum for the Graduate School. An undergraduate GPA below 3.0 will be considered on an individual basis for restricted admission. Applicants must demonstrate proficiency in college algebra or the equivalent. Graduate coursework also will be taken into consideration.

Applicants must obtain three letters of recommendation. The letters should be from those who are familiar with your professional and/or academic skills. At least one of the letters must be from a current or former college-level instructor. Written letters of recommendation must accompany the downloadable recommendation forms from the Graduate School. These materials should be sent by the letter writer directly to the Cybersecurity program director of either Computer Science or Information Systems.

Applicants must submit official transcripts to the graduate admissions office documenting the baccalaureate degree and all other prior college and graduate-level coursework completed.

For more information on the program and contact information please visit cybersecurity.umsi.edu.

Certificate Requirements

The Graduate Certificate in Cybersecurity is a four-course (12 credit hours) multidisciplinary program designed to help students from all backgrounds achieve a foundation in information security. It provides students the flexibility to focus on technical and/or managerial aspects of computer, software, network, and information security. With primary courses offered by the Computer Science and Information Systems and Technology departments, the program also allows students to choose from a range of electives based on student interests. This certificate serves a broad group of managers, technical specialists, and professionals with a bachelor's degree. A prior background in information security is not required to enter this program.

Requirements

All students must take three required courses and one elective.

Required Courses

| | | |
|------------------------------------|--|---|
| INFSYS 6828 or CMP SCI 5702 | Principles of Information Security Cyber Threats and Defense | 3 |
| CMP SCI 4730 or INFSYS 6836 | Computer Networks and Communications Management of Data Networks and Security | 3 |
| CMP SCI 5782 or INFSYS 6858 | Advanced Information Security Advanced Cybersecurity Concepts | 3 |

Electives

| | | |
|------------------------------|---|---|
| Choose one of the following: | | 3 |
| CMP SCI 4700 | Computer Forensics | |
| CMP SCI 5020 | Android Apps: Android Fundamentals | |
| CMP SCI 5222 | Advanced iOS Apps | |
| CMP SCI 5732 | Cryptography for Computer Security | |
| CMP SCI 5750 | Cloud Computing | |
| CMP SCI 5792 | Mobile Computing, Networking, and Security | |
| CMP SCI 5794 | Security of IoT Systems | |
| INFSYS 6830 | Data Programming for Business Intelligence | |
| INFSYS 6862 | Artificial Intelligence Applications for Business and Cybersecurity | |
| INFSYS 6864 | Applied Cryptography for Business Applications | |
| INFSYS 6866 | Cloud Security Management | |
| INFSYS 6868 | Software Assurance | |
| INFSYS 6878 | Management of Information Security | |

Total Hours

12

A maximum of two (2) 4000-level courses can be taken as part of the graduate certificate. A minimum of three courses must be taken from UMSL. Students may not receive both the Undergraduate and the Graduate Certificate in Cybersecurity.

For more information, students can contact the program directors at cybersecurityUMSL@umsi.edu.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- apply fundamental security principles and formal security models to solve problems in cybersecurity
- develop, maintain, and update an organization's information security policies to meet security and compliance requirements
- select and execute appropriate security mechanisms to implement security policies of an organization
- communicate cybersecurity issues effectively to a range of audiences and work effectively in a team environment

Cybersecurity Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

The Undergraduate Minor in Cybersecurity is a five-course (15 credit hours) program. It is designed to help students from all backgrounds achieve a foundation in Cybersecurity. It provides students the flexibility to focus on technical and/or managerial aspects of Cybersecurity. The program also allows students to choose from a range of electives based on student interests. This minor serves a broad group of managers, technical specialists, and professionals enrolled in any baccalaureate degree at UMSL. A prior background in information security is not required to enter this program. This minor may be added for up to two years following completion of the baccalaureate degree.

Requirements: All students must take four required courses and one elective.

Required

| | | |
|-------------|--|---|
| INFSYS 3842 | Data Networks and Security | 3 |
| INFSYS 3848 | Introduction to Information Security | 3 |
| INFSYS 3858 | Advanced Security and Information Systems | 3 |
| INFSYS 3878 | Information Security Risk Management and Business Continuity | 3 |

Elective 3

Choose one of the following:

| | |
|--------------|-------------------------------|
| INFSYS 3868 | Secure Software Development |
| CMP SCI 4700 | Computer Forensics |
| CMP SCI 4780 | Computer and Network Security |

Total Hours 15

Students may substitute the above courses with other courses upon approval by the Chair of the Information Systems department. In all cases, 15 hours are needed to complete the Undergraduate Minor in Cybersecurity. A minimum of four courses must be taken in residence at UMSL.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Analyze a complex cybersecurity problem and apply principles of cybersecurity and business decision making to identify potential solutions.
- Design, implement, and evaluate a cybersecurity-based solution to meet a given set of cybersecurity and business requirements.
- Describe professional responsibilities and make informed judgments in cybersecurity practice based on legal and ethical principles.
- Communicate with a wide range of audiences about critical challenges and solutions related to cybersecurity.
- Function effectively as a member of a team engaged in activities appropriate to the cybersecurity discipline.

Cybersecurity MS, Computer Science Emphasis

The joint interdisciplinary M.S. in Cybersecurity is designed for graduates to pursue high-demand work roles such as cybersecurity specialist, cyber defense analyst, cyber defense incident responder, information security analyst, vulnerability assessment analyst, or security architect, among a variety of other entry to mid-level cybersecurity and computing-related fields. The Computer Science emphasis focuses on more technical aspects of the field. The program can be taken part-time or full-time and can be completed in the evening or online.

Admission Requirements

Applicants must have at least a bachelor's degree, preferably in cybersecurity, computer science, information systems, or a related area. Applicants with bachelor's degrees outside of specified areas must demonstrate significant proficiency by showing competence (proving related academic or professional experience or taking a test) in the following areas. Courses in parenthesis are UMSL courses that can be used to fulfill the requirement.

1. Programming skills in C/C++ and Java with at least three college semesters or comparable experience (CMP SCI 2261, or INFSYS 3806 and INFSYS 3816)
2. Proficiency with computer organization, architecture, or assembly level programming (CMP SCI 2700)

Students must also have satisfactorily completed mathematics courses equivalent to the following UMSL courses:

1. Survey Calculus or Calculus I (MATH 1100 or MATH 1800)
2. An elementary course in probability or statistics (MATH 1320)
3. A course in discrete mathematics (MATH 3000)

A student missing some of the above requirements may be admitted on restricted status if there is strong supportive evidence in other areas. The student will have to take the missing courses, or otherwise demonstrate proficiency. Special regulations of the Graduate School that apply to students on restricted status are described in the UMSL Bulletin.

Entrance examinations

- The Graduate Record Examination (GRE) General Test is required only to apply for an assistantship (see <http://www.gre.org/ttindex.html>).
- International students are required to document English proficiency by providing scores from an internationally accepted standardized examination before a decision is made on admission.

Coursework

Candidates for the M.S. in Cybersecurity with Computer Science emphasis must complete 30 credit-hours of graduate coursework, subject to the Graduate School regulations. Of these, at least 18 hours must be numbered 5000 or above. All courses numbered below 5000 must be completed with grades of at least B-. Outside computer science and information systems, up to 6 hours of related course work is allowed upon permission of the Graduate Director.

| | | |
|---------------------------------|---------------------------------------|---|
| CMP SCI 4730 | Computer Networks and Communications | 3 |
| CMP SCI 4760 or CMP SCI 5710 | Operating Systems Modern Computing | 3 |

| | | |
|--|--|-----------|
| CMP SCI 5702 | Cyber Threats and Defense | 3 |
| CMP SCI 5732 | Cryptography for Computer Security | 3 |
| CMP SCI 5782 | Advanced Information Security | 3 |
| CMP SCI 5888 | Cybersecurity Capstone ¹ | 3 |
| Electives (Choose four courses. At least two must be from Computer Science) | | 12 |
| CMP SCI 4700 | Computer Forensics | |
| CMP SCI 5750 | Cloud Computing | |
| CMP SCI 5792 | Mobile Computing, Networking, and Security | |
| CMP SCI 5794 | Internet of Things | |
| INFSYS 6858 | Advanced Cybersecurity Concepts | |
| INFSYS 6868 | Software Assurance | |
| INFSYS 6878 | Management of Information Security | |
| Other electives upon approval of Computer Science department chair | | |
| Total Hours | | 30 |

¹ A student is allowed to work on three credit-hours of Master's Thesis (CMP SCI 6900) in place of Cybersecurity Capstone (CMP SCI 5888)

Cybersecurity MS, Computer Science Emphasis Accelerated Master's Degree

The Department of Computer Science offers the Accelerated MS degree in Cybersecurity available to departmental undergraduate majors. Student may join the program and work toward MS in Cybersecurity regardless of the departmental BS program (BS in Computer Science; BS in Computing Technology; BS in Cybersecurity, Computer Science Emphasis; BS in Data Science and Analysis, Computer Science Emphasis).

A student accepted to the Accelerated MS in Cybersecurity degree program can double count up to 12 credit hours toward both their BS degree and the MS in Cybersecurity degree, reducing the total credits required to earn both degrees by up to 12 credits. The student must still complete their BS requirements, as well as entry and graduation requirements for the MS in Cybersecurity program. In the program, the student will complete the BS first and can continue the MS in Cybersecurity program part-time after transitioning to a job. To gain the dual benefits, the student should begin working with a designated advisor before BS graduation, at least a year before graduation.

Admission

Provisional Admission

An applicant is considered for provisional admission if they meet the following criteria.

- Working toward one of the departmental BS programs with at least 60 credits completed
- Completed at least the following Computer Science courses:
 - CMP SCI 1250
 - CMP SCI 2250
 - CMP SCI 2261
 - CMP SCI 2700
- Have a minimum GPA of 3.0
- Have met with the program advisor as listed

After provisional admission, but while in provisional standing, the student continues working toward their BS program but can take courses, including graduate-level courses, to count toward both degrees, while still paying undergraduate tuition rates. These courses must be approved in advance to count toward both degrees.

Graduate Admission

A student in their final semester as a provisional undergraduate student must apply and be admitted to the graduate program to work toward the MS in Cybersecurity. An applicant must meet the following criteria for graduate admission.

- Are in their final semester in undergraduate status
- Maintained a GPA of a minimum of 3.0 in the provisional status
- Submitted to the Graduate Director for MS in Cybersecurity a 1 – 2 page statement of purpose briefly explaining what and why they intend to study
- Meet the entry requirements for admission to the MS degree in Cybersecurity other than having received the BS degree

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Cybersecurity MS, Information Systems Emphasis

Students must meet all general University of Missouri-St. Louis Graduate School admission and degree requirements.

Students must choose one of the following emphasis areas at the time of application for admission:

- 1. Information Systems Emphasis or
- 2. Computer Science Emphasis

Degree requirements vary depending on the chosen emphasis area.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Cybersecurity only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Additional emphasis specific requirements are listed below.

Admission Requirements

In addition to Graduate School admission requirements, the following requirements apply.

Applicants must have an undergraduate degree with a minimum cumulative GPA of 3.0. Students whose GPAs are between 2.75 and 2.9 may be admitted under a restricted status within the terms specified by the Graduate School.

Prior to entry, students must demonstrate competence in the following areas (through prior course work or professional experience) or take coursework at UMSL to fulfill the entry requirements.

- Business Statistics (similar to undergraduate course SCMA 3300). Students without a background in statistics could take SCMA 5300 as a graduate student to fulfill this requirement.
- At least one semester of computer programming coursework or application development work experience (similar to undergraduate courses INFSYS 3806 or INFSYS 3844). Students without programming background can take either INFSYS 6805 or INFSYS 6806 as a graduate student to fulfill this requirement.

Entrance examinations

- The Graduate Management Admission Test (GMAT) is not required for admission. However, it may be used by students when their overall GPA is below 3.0 to strengthen their application.
- International students are required to document English proficiency by providing scores from an internationally accepted standardized examination before a decision is made on admission

Coursework

Candidates for the M.S. in Cybersecurity with Information Systems Emphasis must complete 30 credit hours of graduate coursework subject to Graduate School requirements.

| Required Courses | | |
|---|---|----|
| INFSYS 6820 | Systems and IT Infrastructure | 3 |
| INFSYS 6828 | Principles of Information Security | 3 |
| INFSYS 6836 | Management of Data Networks and Security | 3 |
| INFSYS 6858 | Advanced Cybersecurity Concepts | 3 |
| INFSYS 6864 | Applied Cryptography for Business Applications | 3 |
| INFSYS 6868 | Software Assurance | 3 |
| INFSYS 6878 | Management of Information Security | 3 |
| INFSYS 6888 | Capstone in Information Security | 3 |
| Electives (select two from following) | | 6 |
| CMP SCI 5732 | Cryptography for Computer Security | |
| CMP SCI 5750 | Cloud Computing | |
| INFSYS 5890 | Graduate Internship in Information Systems | |
| INFSYS 5899 | Individual Research in Information Systems ¹ | |
| INFSYS 6818 | Management of Software Testing | |
| INFSYS 6847 | Project Management | |
| INFSYS 6860 | Advanced Data Integration | |
| INFSYS 6862 | Artificial Intelligence Applications for Business and Cybersecurity | |
| INFSYS 6891 | Seminar in Information Systems ¹ | |
| MGMT 5600 | Managing and Leading in Organizations | |
| Other electives upon approval of Information Systems department chair | | |
| Total Hours | | 30 |

¹ Topic must be approved by Information Systems department chair

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply fundamental security principles and formal security models to solve many complex problems in cybersecurity.
- Develop, maintain, and update an organization's information security policies to meet security and compliance requirements.
- Select and execute appropriate security mechanisms to implement security policies of an organization.
- Evaluate and maintain information systems for secure and reliable operations by employing appropriate risk management strategies.
- Communicate cybersecurity issues effectively to a range of audiences.

- Function effectively as a leader or member of a team engaged in activities appropriate to the cybersecurity discipline.

Cybersecurity Undergraduate Certificate

Certificate Requirements

The Undergraduate Certificate in Cybersecurity is a five-course (15 credit hours) interdisciplinary studies program. It is designed to help students from all backgrounds achieve a foundation in information security. It provides students the flexibility to focus on technical and/or managerial aspects of computer, software, network, and information security. With primary courses offered by Computer Science and Information Systems and Technology departments, the program also allows students to choose from a range of electives based on student interests. This certificate serves a broad group of managers, technical specialists, and professionals with or without a bachelor's degree. A prior background in information security is not required to enter this program. A minimum GPA of 2.5 is required for admission.

Requirements

All students must take three required courses and two electives.

Required Courses

| | | |
|--------------------------------|---|---|
| INFSYS 3848 or CMP SCI 3702 | Introduction to Information Security Introduction to Cyber Threats and Defense | 3 |
| CMP SCI 4730 or INFSYS 3842 | Computer Networks and Communications Data Networks and Security | 3 |
| CMP SCI 4782 or INFSYS 3858 | Information Security Advanced Security and Information Systems | 3 |

Electives

| | | |
|------------------------------|--|---|
| Choose two of the following: | | 6 |
| CMP SCI 3780 | Software Security | |
| CMP SCI 4020 | Introduction to Android Apps: Android Fundamentals | |
| CMP SCI 4200 | Python for Scientific Computing and Data Science | |
| CMP SCI 4222 | iOS Apps | |
| CMP SCI 4700 | Computer Forensics | |
| CMP SCI 4732 | Introduction to Cryptography for Computer Security | |
| CMP SCI 4750 | Introduction to Cloud Computing | |
| CMP SCI 4792 | Introduction to Mobile Computing, Networking, and Security | |
| CMP SCI 4794 | Introduction to Security of IoT Systems | |
| INFSYS 3830 | Data Programming | |
| INFSYS 3862 | Artificial Intelligence Applications for Business | |
| INFSYS 3864 | Applied Cryptography for Business | |
| INFSYS 3866 | Cloud Security for Business | |
| INFSYS 3868 | Secure Software Development | |

INFSYS 3878

Information Security Risk
Management and Business
Continuity

Total Hours

15

Students may substitute the above courses with other courses upon approval by the program adviser in either the Computer Science or Information Systems department. In all cases, 15 hours are needed to complete the Undergraduate Certificate in Cybersecurity. A minimum of three courses must be taken from UMSL. Students may not receive both the Undergraduate and the Graduate Certificate in Cybersecurity.

For more information, students can contact the program directors at cybersecurityUMSL@umsl.edu.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Analyze a cybersecurity problem and apply principles of cybersecurity and business decision making to identify potential solutions
- Design, implement, and evaluate a cybersecurity-based solution to meet a given set of cybersecurity and business requirements
- Describe professional responsibilities and make informed judgments in cybersecurity practice based on legal and ethical principles
- Function effectively as a member of a team engaged in activities appropriate to the cybersecurity discipline

Cybersecurity, Information Systems and Technology Emphasis Accelerated Master's Degree

The Accelerated MS in Cybersecurity with Information Systems and Technology (IST) Emphasis program provides an opportunity for students to earn their BS in Cybersecurity with an IST Emphasis or their BS in Information Systems and Technology, and an MS degree in Cybersecurity with IST Emphasis in as few as 10 semesters.

The accelerated program reduces time to completion by requiring a minimum of 138 credit hours instead of the typical 150 credit hours if the degrees were pursued separately (120 for BS and 30 for MS). The program allows undergraduate students, in their Junior and Senior years, to take up to 12 credit hours of graduate courses and count those graduate courses to also fulfill some of their undergraduate degree requirements. Students then proceed to take the remaining 18 graduate credit hours to fulfill their graduate degree requirements.

Students are required to work closely with both BS and MS Program Advisors to ensure that the correct levels of required courses are completed in a timely manner and in the appropriate sequence.

Eligibility

Undergraduate students can apply to the Chair of the Information Systems and Technology Department for admission to the Accelerated MS Cybersecurity – IST Emphasis degree program during the semester they will complete 60 undergraduate credit hours. A cumulative grade point average of 3.0 or higher is required.

Admission Requirements

Admission to the Accelerated MS Cybersecurity with IST Emphasis program and Graduate School proceeds in two phases: 1) Provisional Admission and 2) Graduate Admission.

Provisional Admission

Undergraduate BS in Cybersecurity with IST Emphasis or BS in Information Systems and Technology students are considered for provisional admission to Graduate School if they meet the following criteria.

- Have earned 60 credit hours as an undergraduate
- Have a minimum GPA of 3.0
- Have met with both the BS and MS Academic Advisors in Information Systems and Technology

The IST Department Chair, in consultation with the Undergraduate Advisor and Graduate Program Director, will determine whether the student can apply for provisional status. Provisionally admitted students are still classified as undergraduates but may begin obtaining the 12 graduate credits that will apply toward both their MS and BS degrees. Graduate courses completed by undergraduate students, who have been provisionally admitted to the Accelerated MS Cybersecurity with IST Emphasis program, will be charged at the undergraduate tuition rate. However, these courses will count toward the MS Cybersecurity with IST Emphasis degree while also fulfilling the requirements of their BS degree. These courses must be approved in advance to count toward both degrees. Therefore, it is recommended to apply for provisional status as a junior, preferably in the first semester of the junior year.

Graduate Admission

Applicants are considered for admission to the Graduate School if they meet the following criteria:

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Have met with the MS Academic Advisor in IST Emphasis

The MS Academic Advisor, in consultation with the BS Academic Advisor, will determine whether the student can apply for graduate admission. Final decisions concerning graduate admission are made by the Graduate School in consultation with the IST Department Chair and Graduate Program Director. Students admitted at this stage are conferred graduate status and must continue taking courses with graduate status until the completion of the MS Cybersecurity – IST Emphasis degree.

Program Requirements

Eligible undergraduate BS students pursuing the Accelerated MS Cybersecurity – IST Emphasis degree option will be required to take the following four graduate courses (12 credits), which will count toward both their undergraduate and graduate degree requirements.

| | | |
|-------------|--|----|
| INFSYS 6820 | Systems and IT Infrastructure | 3 |
| INFSYS 6828 | Principles of Information Security | 3 |
| INFSYS 6836 | Management of Data Networks and Security | 3 |
| INFSYS 6858 | Advanced Cybersecurity Concepts | 3 |
| Total Hours | | 12 |

Additionally, students must complete all the remaining requirements of the MS Cybersecurity with IST Emphasis and meet all Graduate School requirements.

Awarding of Degrees

The student may apply for and receive the bachelor’s degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master’s degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor’s degree, the student can still earn the master’s degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Data Science and Analysis BS, Biology Emphasis

General Education Requirements

Students must satisfy the university general education requirements. Many of the courses for the degree may be used to fulfill math proficiency, information literacy, social science, and math and life/natural sciences requirements. The program recommends students take ENGL 3130 Technical Writing or ENGL 3120 Business Writing to satisfy the Junior-Level Writing requirement. Emphasis areas may require one of these courses. There is no foreign language requirement for the degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

The BS in Data Science and Analysis consists of a set of core courses along with an emphasis area. Students must earn a minimum grade of C- in all core courses and emphasis area courses.

Core Courses

| | | |
|---|---|-----|
| Calculus Course | | |
| MATH 1800 or MATH 1100 | Analytic Geometry and Calculus I ¹ Basic Calculus | 3-5 |
| Statistics Course | | 3 |
| The Introduction to Statistics course should align with the student's Discipline Emphasis Area. | | |
| Choose one of the following: | | |
| SOC 3220 | Quantitative Data Analysis in Social Science Research | |
| BIOL 4122 | Biostatistics | |
| ECON 3100 | Economic Data and Statistics | |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice | |
| MATH 1320 | Introduction to Probability and Statistics | |
| PSYCH 2201 | Psychological Statistics | |
| POL SCI 3000 | Political Analysis | |
| SCMA 3300 | Business Analytics and Statistics | |

Additional Required Courses

| | | |
|------------------------------|--|--------------|
| MATH 4005 | Exploratory Data Analysis with R | 3 |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 4200 | Python for Scientific Computing and Data Science | 3 |
| CMP SCI 4342 or MATH 4250 | Introduction to Data Mining ² Introduction to Statistical Methods in Learning and Modeling | 3 |
| Total Hours | | 18-20 |

¹ Students interested in the Computer Science emphasis area, the Mathematics Emphasis Area, or in taking additional mathematics courses should take MATH 1800.

² MATH 4250 is available for Mathematics Emphasis Area students.

Emphasis Area Requirements

| | | |
|--------------------------------|--|-----------|
| BIOL 1821 | Introductory Biology: Organisms and the Environment (MOTR BIOL 150L) | 5 |
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 2012 | Genetics | 3 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| BIOL 4436 | Applied Bioinformatics | 3 |
| Choose three of the following: | | 9 |
| BIOL 2102 | Ecology | |
| BIOL 3302 | Evolution | |
| BIOL 3622 | Cell Biology | |
| BIOL 4182 | Population Biology | |
| BIOL 4602 | Molecular Biology | |
| BIOL 4732 | Principles of Biochemistry | |
| Total Hours | | 30 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply knowledge of statistical data collection, analysis and quantitative modeling techniques
- Demonstrate proficiency in industry-standard programming languages that support data acquisition, retrieval and analysis
- Select, apply and build data-based models and visualizations to devise solutions to data science problems
- Effectively communicate technical results and recommendations in various formats to appropriate audiences
- Demonstrate an understanding of the fundamental principles of biology including the structure and functions of cells and their components, heredity and variation in populations, and evolution
- Apply statistical concepts and data science methods to analyze real-world problems in biology

Data Science and Analysis BS, Computer Science Emphasis**General Education Requirements**

Students must satisfy the university general education requirements. Many of the courses for the degree may be used to fulfill math proficiency, information literacy, social science, and math and life/natural sciences requirements. The program recommends students take ENGL 3130 Technical Writing or ENGL 3120 Business Writing to satisfy the Junior-Level Writing requirement. Emphasis areas may require one of these courses. There is no foreign language requirement for the degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

The BS in Data Science and Analysis consists of a set of core courses along with an emphasis area. Students must earn a minimum grade of C- in all core courses and emphasis area courses.

Core Courses**Calculus Course**

| | | |
|---------------------------|---|-----|
| MATH 1800 or MATH 1100 | Analytic Geometry and Calculus I ¹ Basic Calculus | 3-5 |
|---------------------------|---|-----|

Statistics Course**3**

The Introduction to Statistics course should align with the student's Discipline Emphasis Area.

Choose one of the following:

| | | |
|--------------|--|--|
| SOC 3220 | Quantitative Data Analysis in Social Science Research | |
| BIOL 4122 | Biostatistics | |
| ECON 3100 | Economic Data and Statistics | |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice | |
| MATH 1320 | Introduction to Probability and Statistics | |
| PSYCH 2201 | Psychological Statistics | |
| POL SCI 3000 | Political Analysis | |
| SCMA 3300 | Business Analytics and Statistics | |

Additional Required Courses

| | | |
|------------------------------|--|---|
| MATH 4005 | Exploratory Data Analysis with R | 3 |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 4200 | Python for Scientific Computing and Data Science | 3 |
| CMP SCI 4342 or MATH 4250 | Introduction to Data Mining ² Introduction to Statistical Methods in Learning and Modeling | 3 |

Total Hours**18-20**

¹ Students interested in the Computer Science emphasis area, the Mathematics Emphasis Area, or in taking additional mathematics courses should take MATH 1800.

² MATH 4250 is available for Mathematics Emphasis Area students.

Emphasis Area Requirements

| | | |
|------------------------------|--|-----------|
| CMP SCI 2250 | Programming and Data Structures | 3 |
| CMP SCI 3130 | Design and Analysis of Algorithms | 3 |
| CMP SCI 3411 | Introduction to Data Visualization | 3 |
| CMP SCI 4151 | Introduction to Statistical Methods for Data Science | 3 |
| CMP SCI 4340 | Introduction to Machine Learning | 3 |
| ENGL 3130 | Technical Writing | 3 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 3000 | Discrete Structures | 3 |
| Choose six of the following: | | 18 |
| CMP SCI 2261 | Object-Oriented Programming | |
| CMP SCI 2751 | File Systems, Operations, and Tools | |
| CMP SCI 3260 | C/C++ for Advanced Programming | |
| CMP SCI 3010 | Web Full Stack Development | |
| CMP SCI 3702 | Introduction to Cyber Threats and Defense | |
| CMP SCI 4030 | Introduction to Intelligent Web | |
| CMP SCI 4300 | Introduction to Artificial Intelligence | |
| CMP SCI 4320 | Introduction to Evolutionary Computation | |
| CMP SCI 4370 | Introduction to Biological Data Science | |
| CMP SCI 4390 | Introduction to Deep Learning | |
| CMP SCI 4610 | Database Management Systems | |
| CMP SCI 4750 | Introduction to Cloud Computing | |
| MATH 2450 | Elementary Linear Algebra | |
| Total Hours | | 44 |

Other Data Science courses may be included as electives with prior approval of the program coordinator.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply knowledge of statistical data collection, analysis and quantitative modeling techniques
- Demonstrate proficiency in industry-standard programming languages that support data acquisition, retrieval and analysis
- Select, apply and build data-based models and visualizations to devise solutions to data science problems
- Effectively communicate technical results and recommendations in various formats to appropriate audiences
- Identify and interpret the basic computational issues in problem solving
- Apply appropriate tools and techniques necessary for programming practice
- Apply statistical concepts and data science methods to analyze real-world problems using appropriate computer science processes and techniques

Data Science and Analysis BS, Economics Emphasis

General Education Requirements

Students must satisfy the university general education requirements. Many of the courses for the degree may be used to fulfill math proficiency, information literacy, social science, and math and life/natural sciences requirements. The program recommends students take ENGL 3130 Technical Writing or ENGL 3120 Business Writing to satisfy the Junior-Level Writing requirement. Emphasis areas may require one of these courses. There is no foreign language requirement for the degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

The BS in Data Science and Analysis consists of a set of core courses along with an emphasis area. Students must earn a minimum grade of C- in all core courses and emphasis area courses.

Core Courses

Calculus Course

| | | |
|--------------|---|-----|
| MATH 1800 | Analytic Geometry and Calculus I ¹ | 3-5 |
| or MATH 1100 | Basic Calculus | |

Statistics Course

3

The Introduction to Statistics course should align with the student's Discipline Emphasis Area.

Choose one of the following:

| | | |
|--------------|--|--|
| SOC 3220 | Quantitative Data Analysis in Social Science Research | |
| BIOL 4122 | Biostatistics | |
| ECON 3100 | Economic Data and Statistics | |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice | |
| MATH 1320 | Introduction to Probability and Statistics | |
| PSYCH 2201 | Psychological Statistics | |
| POL SCI 3000 | Political Analysis | |
| SCMA 3300 | Business Analytics and Statistics | |

Additional Required Courses

| | | |
|--------------|--|---|
| MATH 4005 | Exploratory Data Analysis with R | 3 |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 4200 | Python for Scientific Computing and Data Science | 3 |
| CMP SCI 4342 | Introduction to Data Mining ² | 3 |
| or MATH 4250 | Introduction to Statistical Methods in Learning and Modeling | |

Total Hours

18-20

¹ Students interested in the Computer Science emphasis area, the Mathematics Emphasis Area, or in taking additional mathematics courses should take MATH 1800.

² MATH 4250 is available for Mathematics Emphasis Area students.

Emphasis Area Requirements

| | | |
|------------------------------|--|--------------|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| ECON 4100 | Introduction to Econometrics | 4 |
| ECON 4110 | Applied Econometrics | 4 |
| ECON 4120 | Time Series Econometrics for Economics and Finance | 4 |
| or ECON 4130 | Business and Economic Forecasting | |
| Choose one of the following: | | 3-4 |
| ECON 4040 | Booms and Busts in the Economy: Data and Theory | |
| ECON 4120 | Time Series Econometrics for Economics and Finance (if not used above) | |
| ECON 4130 | Business and Economic Forecasting (if not used above) | |
| ECON 4160 | Geospatial Analysis in the Social Sciences | |
| Total Hours | | 21-22 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply knowledge of statistical data collection, analysis and quantitative modeling techniques
- Demonstrate proficiency in industry-standard programming languages that support data acquisition, retrieval and analysis
- Select, apply and build data-based models and visualizations to devise solutions to data science problems
- Effectively communicate technical results and recommendations in various formats to appropriate audiences
- Use economic reasoning to construct models to analyze economic phenomena and evaluate public policy at the micro and macro levels
- Use mathematical models to construct and analyze economic behavior
- Apply statistical concepts and data science methods to analyze real-world problems in economics

| | | | |
|--|--------------|---|--------------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 | | 1 CMP SCI 1250 | 3 |
| ENGL 1100 | | 3 ECON 1001 | 3 |
| MATH 1030 | | 3 MATH 1800 | 5 |
| GEN ED CORE: Communication Proficiency | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| GEN ED CORE: US History and Government | | 3 | |
| | | 13 | 14 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ECON 1002 | | 3 MATH 1320 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Social Sciences | | 3 Cultural Diversity Requirement - Global | 3 |
| Cultural Diversity Requirement - US | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | 15 | 15 |

Third Year

| | | | |
|-------------------|--------------|---------------------|--------------|
| Fall | Hours | Spring | Hours |
| CMP SCI 4200 | | 3 CMP SCI 4342 | 3 |
| ECON 4100 | | 4 ECON 4110 | 4 |
| ENGL 3100 | | 3 Elective or minor | 3 |
| MATH 4005 | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | 16 | 16 |

Fourth Year

| | | | |
|-------------------|--------------|---------------------|--------------|
| Fall | Hours | Spring | Hours |
| ECON 4120 or 4130 | | 4 ECON 4160 | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | 16 | 15 |

Total Hours: 120

Data Science and Analysis BS, Mathematics Emphasis

General Education Requirements

Students must satisfy the university general education requirements. Many of the courses for the degree may be used to fulfill math proficiency, information literacy, social science, and math and life/natural sciences requirements. The program recommends students take ENGL 3130 Technical Writing or ENGL 3120 Business Writing to satisfy the Junior-Level Writing requirement. Emphasis areas may require one of these courses. There is no foreign language requirement for the degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

The BS in Data Science and Analysis consists of a set of core courses along with an emphasis area. Students must earn a minimum grade of C- in all core courses and emphasis area courses.

Core Courses

Calculus Course

| | | |
|--------------|---|-----|
| MATH 1800 | Analytic Geometry and Calculus I ¹ | 3-5 |
| or MATH 1100 | Basic Calculus | |

Statistics Course **3**

The Introduction to Statistics course should align with the student's Discipline Emphasis Area.

Choose one of the following:

| | |
|--------------|--|
| SOC 3220 | Quantitative Data Analysis in Social Science Research |
| BIOL 4122 | Biostatistics |
| ECON 3100 | Economic Data and Statistics |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice |
| MATH 1320 | Introduction to Probability and Statistics |
| PSYCH 2201 | Psychological Statistics |
| POL SCI 3000 | Political Analysis |

| | | |
|------------------------------------|--|--------------|
| SCMA 3300 | Business Analytics and Statistics | |
| Additional Required Courses | | |
| MATH 4005 | Exploratory Data Analysis with R | 3 |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 4200 | Python for Scientific Computing and Data Science | 3 |
| CMP SCI 4342 or MATH 4250 | Introduction to Data Mining ² Introduction to Statistical Methods in Learning and Modeling | 3 |
| Total Hours | | 18-20 |

¹ Students interested in the Computer Science emphasis area, the Mathematics Emphasis Area, or in taking additional mathematics courses should take MATH 1800.

² MATH 4250 is available for Mathematics Emphasis Area students.

Emphasis Area Requirements

| | | |
|------------------------------|--|-----------|
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 2450 | Elementary Linear Algebra | 3 |
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |
| Choose two of the following: | | 6 |
| MATH 4090 | Introduction to High-dimensional Data Analysis | |
| MATH 4220 | Bayesian Statistical Methods | |
| MATH 4225 | Introduction to Statistical Computing | |
| MATH 4250 | Introduction to Statistical Methods in Learning and Modeling | |
| MATH 4260 | Introduction to Stochastic Processes | |
| MATH 4470 | Introduction to Statistical Data Analysis for GIS | |
| MATH 4480 | Introduction to Remote Sensing Digital Image Analysis | |
| MATH 4750 | Introduction to Mathematics of Artificial Neural Networks | |
| Total Hours | | 25 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply knowledge of statistical data collection, analysis and quantitative modeling techniques
- Demonstrate proficiency in industry-standard programming languages that support data acquisition, retrieval and analysis
- Select, apply and build data-based models and visualizations to devise solutions to data science problems
- Effectively communicate technical results and recommendations in various formats to appropriate audiences
- Reformulate problems or question in relevant mathematical terms
- Solve multivariable problems which involve algebra or calculus
- Apply statistical concepts and data science methods to analyze real-world problems using appropriate mathematical processes and techniques

Data Science and Analysis BS, Social Science Emphasis

General Education Requirements

Students must satisfy the university general education requirements. Many of the courses for the degree may be used to fulfill math proficiency, information literacy, social science, and math and life/natural sciences requirements. The program recommends students take ENGL 3130 Technical Writing or ENGL 3120 Business Writing to satisfy the Junior-Level Writing requirement. Emphasis areas may require one of these courses. There is no foreign language requirement for the degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

The BS in Data Science and Analysis consists of a set of core courses along with an emphasis area. Students must earn a minimum grade of C- in all core courses and emphasis area courses.

Core Courses

Calculus Course

| | | |
|---------------------------|---|-----|
| MATH 1800 or MATH 1100 | Analytic Geometry and Calculus I ¹ Basic Calculus | 3-5 |
|---------------------------|---|-----|

Statistics Course

3

The Introduction to Statistics course should align with the student's Discipline Emphasis Area.

Choose one of the following:

| | | |
|--------------|--|--|
| SOC 3220 | Quantitative Data Analysis in Social Science Research | |
| BIOL 4122 | Biostatistics | |
| ECON 3100 | Economic Data and Statistics | |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice | |
| MATH 1320 | Introduction to Probability and Statistics | |
| PSYCH 2201 | Psychological Statistics | |
| POL SCI 3000 | Political Analysis | |
| SCMA 3300 | Business Analytics and Statistics | |

Additional Required Courses

| | | |
|------------------------------|--|---|
| MATH 4005 | Exploratory Data Analysis with R | 3 |
| CMP SCI 1250 | Introduction to Computing | 3 |
| CMP SCI 4200 | Python for Scientific Computing and Data Science | 3 |
| CMP SCI 4342 or MATH 4250 | Introduction to Data Mining ² Introduction to Statistical Methods in Learning and Modeling | 3 |

Total Hours **18-20**

¹ Students interested in the Computer Science emphasis area, the Mathematics Emphasis Area, or in taking additional mathematics courses should take MATH 1800.

² MATH 4250 is available for Mathematics Emphasis Area students.

Emphasis Area Requirements

Choose two of the following. Courses must be from at least two subject areas:

| | |
|--------------|--|
| ANTHRO 1005 | Introduction to Human Evolution |
| ANTHRO 1011 | Introduction to Cultural Anthropology (MOTR ANTH 201) |
| ANTHRO 1019 | Introduction to Archaeology |
| CRIMIN 1100 | Introduction to Criminology and Criminal Justice |
| CRIMIN 1110 | Theories of Crime |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) |
| POL SCI 1800 | Introduction to International Politics (MOTR POSC 201) |
| PSYCH 1003 | General Psychology (MOTR PSYC 100) |
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) |
| SOC 2280 | Technology and Society |

Choose one of the following:

| | |
|--------------|--|
| CRIMIN 2210 | Research Methods in Criminology and Criminal Justice |
| POL SCI 3000 | Political Analysis |
| PSYCH 2219 | Research Methods in Psychological Science |
| SOC 3230 | Social Research Methods |

Choose three of the following. Courses must be from two subject areas:

| | |
|--------------|--|
| ANTHRO 4310 | Laboratory Methods in Archaeology |
| COMM 3150 | Crisis, Disaster, and Risk Communication |
| COMM 4100 | Communication Campaigns |
| POL SCI 3330 | Public Opinion and Political Participation |
| POL SCI 4040 | Survey Research Practicum in Political Science |
| PSYCH 3318 | Industrial and Organizational Psychology |
| PSYCH 4365 | Psychological Testing and Assessment |
| SOC 3344 | Problems of Urban Community |
| SOC 3501 | Social Mapping for Change |
| SOC 4040 | Survey Research Practicum for Sociology |

Total Hours

18

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply knowledge of statistical data collection, analysis and quantitative modeling techniques
- Demonstrate proficiency in industry-standard programming languages that support data acquisition, retrieval and analysis

- Select, apply and build data-based models and visualizations to devise solutions to data science problems
- Effectively communicate technical results and recommendations in various formats to appropriate audiences
- Identify and apply appropriate social theories to understand social phenomena
- Critically evaluate explanations of human behavior and social phenomena
- Apply statistical concepts and data science methods to analyze real-world problems in communications, political science, sociology, or psychology

Data Science and Analysis BS, Supply Chain Analytics Emphasis

General Education Requirements

Students must satisfy the university general education requirements. Many of the courses for the degree may be used to fulfill math proficiency, information literacy, social science, and math and life/natural sciences requirements. The program recommends students take ENGL 3130 Technical Writing or ENGL 3120 Business Writing to satisfy the Junior-Level Writing requirement. Emphasis areas may require one of these courses. There is no foreign language requirement for the degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Degree Requirements

The BS in Data Science and Analysis consists of a set of core courses along with an emphasis area. Students must earn a minimum grade of C- in all core courses and emphasis area courses.

Core Courses

Calculus Course

| | | |
|--------------|---|-----|
| MATH 1800 | Analytic Geometry and Calculus I ¹ | 3-5 |
| or MATH 1100 | Basic Calculus | |

Statistics Course

3

The Introduction to Statistics course should align with the student's Discipline Emphasis Area.

Choose one of the following:

| | |
|--------------|--|
| SOC 3220 | Quantitative Data Analysis in Social Science Research |
| BIOL 4122 | Biostatistics |
| ECON 3100 | Economic Data and Statistics |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice |
| MATH 1320 | Introduction to Probability and Statistics |
| PSYCH 2201 | Psychological Statistics |
| POL SCI 3000 | Political Analysis |
| SCMA 3300 | Business Analytics and Statistics |

Additional Required Courses

| | | |
|--------------|----------------------------------|---|
| MATH 4005 | Exploratory Data Analysis with R | 3 |
| CMP SCI 1250 | Introduction to Computing | 3 |

| | | |
|------------------------------|--|--------------|
| CMP SCI 4200 | Python for Scientific Computing and Data Science | 3 |
| CMP SCI 4342 or MATH 4250 | Introduction to Data Mining ² Introduction to Statistical Methods in Learning and Modeling | 3 |
| Total Hours | | 18-20 |

¹ Students interested in the Computer Science emphasis area, the Mathematics Emphasis Area, or in taking additional mathematics courses should take MATH 1800.

² MATH 4250 is available for Mathematics Emphasis Area students.

Emphasis Area Requirements

| | | |
|------------------------------|---|-----------|
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| SCMA 3320 | Advanced Supply Chain and Operations Management | 3 |
| SCMA 4330 | Business Logistics | 3 |
| SCMA 4331 | Applied Supply Chain Modeling | 3 |
| SCMA 4350 | Prescriptive Analytics and Optimization | 3 |
| Choose one of the following: | | 3 |
| SCMA 3345 | Predictive Analytics and Data Mining | |
| SCMA 3390 | Internship in Supply Chain and Analytics | |
| SCMA 3398 | Seminar in Supply Chain Management and Analytics ¹ | |
| SCMA 4389 | Supply Chain Management Practicum | |
| SCMA 4398 | Advanced Topics in Supply Chain and Analytics ¹ | |
| Total Hours | | 18 |

¹ Students must complete 3 credit hours in order to count the course as an elective.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply knowledge of statistical data collection, analysis and quantitative modeling techniques
- Demonstrate proficiency in industry-standard programming languages that support data acquisition, retrieval and analysis
- Select, apply and build data-based models and visualizations to devise solutions to data science problems
- Effectively communicate technical results and recommendations in various formats to appropriate audiences
- Reformulate problems or question in relevant mathematical terms
- Solve multivariable problems which involve algebra or calculus
- Apply statistical concepts and data science methods to analyze real-world problems using appropriate mathematical processes and techniques

Data Science Graduate Certificate

The graduate certificate in Data Science is a four-course (12 credit hour) program. It provides skills, both statistical and computational, and technologies for the growing and popular fields involving data science and analysis. All students must take two required courses and two electives.

A minimum of three courses must be taken from UMSL. A maximum of two courses can be used from the 4000-level. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the department chair or email info@arch.umsi.edu.

Required Courses

| | | |
|--------------|--|---|
| CMP SCI 4200 | Python for Scientific Computing and Data Science | 3 |
| CMP SCI 5340 | Machine Learning | 3 |
| CMP SCI 5342 | Data Mining | 3 |

Elective Courses

Choose one of the following:

| | | |
|--------------|--------------------------------------|--|
| CMP SCI 4610 | Database Management Systems | |
| CMP SCI 5151 | Statistical Methods for Data Science | |
| CMP SCI 5370 | Biological Data Science | |
| CMP SCI 5390 | Deep Learning | |
| CMP SCI 5411 | Data Visualization | |
| MATH 4005 | Exploratory Data Analysis with R | |
| MATH 4220 | Bayesian Statistical Methods | |

Total Hours **12**

Data Science Undergraduate Certificate

Certificate Requirements

The undergraduate certificate in Data Science is a five-course (15 credit hour) program. It provides skills, both statistical and computational, and technologies for the growing and popular fields involving data science and analysis. A student pursuing this certificate can choose from one of the two tracks, the computational track or the statistical track. Each track consists of three required courses (9 credit hours) and two additional elective courses (6 credit hours).

Computational Track

Required Courses

| | | |
|--------------|--|---|
| CMP SCI 4200 | Python for Scientific Computing and Data Science | 3 |
| CMP SCI 4340 | Introduction to Machine Learning | 3 |
| CMP SCI 4342 | Introduction to Data Mining | 3 |

Electives

Choose two of the following courses:

| | | |
|--------------|--|--|
| CMP SCI 3411 | Introduction to Data Visualization | |
| CMP SCI 4030 | Introduction to Intelligent Web | |
| CMP SCI 4151 | Introduction to Statistical Methods for Data Science | |
| CMP SCI 4300 | Introduction to Artificial Intelligence | |
| CMP SCI 4370 | Introduction to Biological Data Science | |

| | | |
|--------------------|--|-----------|
| CMP SCI 4390 | Introduction to Deep Learning | |
| CMP SCI 4610 | Database Management Systems | |
| MATH 4005 | Exploratory Data Analysis with R | |
| MATH 4090 | Introduction to High-dimensional Data Analysis | |
| MATH 4220 | Bayesian Statistical Methods | |
| MATH 4225 | Introduction to Statistical Computing | |
| MATH 4260 | Introduction to Stochastic Processes | |
| Total Hours | | 15 |

Statistical Track

Required Courses

| | | |
|-----------------|--|---|
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |
| MATH 4250 | Introduction to Statistical Methods in Learning and Modeling | 3 |
| or CMP SCI 4340 | Introduction to Machine Learning | |

Electives

| | | |
|--------------------------------------|---|-----------|
| Choose two of the following courses: | | 6 |
| CMP SCI 4030 | Introduction to Intelligent Web | |
| CMP SCI 4200 | Python for Scientific Computing and Data Science | |
| CMP SCI 4300 | Introduction to Artificial Intelligence | |
| CMP SCI 4320 | Introduction to Evolutionary Computation | |
| CMP SCI 4340 | Introduction to Machine Learning (if course not used above) | |
| CMP SCI 4342 | Introduction to Data Mining | |
| CMP SCI 4370 | Introduction to Biological Data Science | |
| CMP SCI 4390 | Introduction to Deep Learning | |
| MATH 4005 | Exploratory Data Analysis with R | |
| MATH 4090 | Introduction to High-dimensional Data Analysis | |
| MATH 4220 | Bayesian Statistical Methods | |
| MATH 4225 | Introduction to Statistical Computing | |
| MATH 4250 | Introduction to Statistical Methods in Learning and Modeling (if course not used above) | |
| MATH 4260 | Introduction to Stochastic Processes | |
| Total Hours | | 15 |

A minimum of three courses must be taken from UMSL. Courses may be substituted with the permission of the certificate coordinator. For more information, contact the department chair or email info@arch.umsf.edu.

Learning Outcomes

Upon completion the program, certificate earners will be able to:

- Identify, interpret, and manage the computational issues involved in the handling of large volumes of data
- Apply algorithmic principles and statistical theories to analyze data-sets
- Build and evaluate data-based models
- Apply machine learning techniques to data-mining problems

Digital and Social Media Marketing Graduate Certificate

The Graduate Certificate in Digital and Social Media Marketing is designed to provide a focused, intensive study of the applications of digital and social media marketing management within organizations. Topics include web analytics, search engine optimization, paid search techniques, user experience, social media applications and best practices, content management and creation, video production and podcasting. Based on course selection, they can further their knowledge in CRM techniques including Salesforce and Hubspot as well as LinkedIn B2B marketing strategies or advanced Facebook advertising. This certificate is suitable for those seeking their MBA or those with an undergraduate degree who are working professionals seeking to gain experience in this exciting and complex field.

All 12 credit hours taken as part of this certificate transfer to the MBA degree program.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs.

Required Courses

| | | |
|-----------|--|---|
| MKTG 5721 | Digital Marketing Strategies and Measurement | 3 |
| MKTG 5722 | Social Media Marketing Strategy | 3 |
| MKTG 5731 | Special Seminars in Digital and Social Media Marketing | 3 |

Electives

| | | |
|--------------------------------------|---|---|
| Choose one of the following courses: | | 3 |
| MKTG 5700 | Integrated Marketing Strategies | |
| MKTG 5710 | Consumer Motivation and Behavior | |
| MKTG 5733 | Customer Relationship Management Strategies | |

| | |
|--------------------|-----------|
| Total Hours | 12 |
|--------------------|-----------|

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Assess the role and practice of marketing within an organization, including theoretical and applied aspects of the marketing discipline (MKTG 5700)
- demonstrate fluency in digital marketing technologies such as web analytics, search engine optimization and paid search techniques (MKTG 5721)
- design and measure the effectiveness of social marketing campaigns leveraging social networks to develop social media content to meet specific marketing objectives (MKTG 5722)
- examine advanced customer relationship marketing techniques to reach new audiences and refine marketing campaigns (MKTG 5733).

Digital Marketing Communications Minor

This minor in Digital Marketing Communications is a **15-hour** program designed to provide a focused, intensive study of the applications of digital and social media marketing communications, advertising and branding within organizations. This program serves marketing managers who want to understand a true integrated marketing and communication approach to sales, brand management, promotion, and consumer behavior.

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

To obtain this minor, students must successfully complete the following four "core" marketing courses.

Required Courses:

| | | |
|-----------|--|---|
| MKTG 3700 | Principles of Marketing | 3 |
| MKTG 3720 | Advertising and Promotion | 3 |
| MKTG 3721 | Introduction to Digital Marketing Strategies | 3 |
| MKTG 3722 | Introduction to Social Media Marketing | 3 |

Electives: 3

Choose one of the following courses:

| | |
|-----------|-------------------------|
| MKTG 3731 | |
| MKTG 3740 | Marketing Analysis |
| MKTG 3790 | Internship in Marketing |

Total Hours 15

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Develop knowledge of the general digital industry landscape.
- Elaborate new online consumer behaviors made possible by digital technologies and identify firms' strategies to cope with the new behaviors.
- Perform analysis of digital marketing strategies.
- Develop problem-solving skills using digital measurement and analytics.

Doctor of Business Administration (DBA)

Admission Requirements

Candidates must be committed to a rigorous program of study requiring periodic residence at the University of Missouri-St. Louis College of Business Administration as well as substantial reading and academic inquiry throughout the program. Applicants are expected to hold an MBA or other relevant advanced degree from an acceptable academic institution and to have ten years of significant professional and/or senior level management experience with high levels of responsibility. In exceptional cases, individuals without an advanced degree but other forms of advanced education and substantial managerial experience may be considered; other experience or qualifications may also compensate for less than 10 years of professional or managerial experience. Applicants must submit

- Most recent transcript(s). Scanned transcripts will be sufficient for the preliminary application. Official Transcripts in sealed envelopes will be required for final acceptance.
- Résumé or Curriculum Vitae (C.V.)
- Names and contact information of two people who can provide insights into the applicant's academic potential and ability to think critically.
- Two essays (Statement of Commitment & Statement of Research Interest)

For more information and application deadlines, please go to <http://dba.umsi.edu>.

Degree Requirements

The DBA in the College of Business Administration requires completion of 60 credit hours. To ensure sufficient background for doctoral-level courses, students must demonstrate appropriate competence in quantitative reasoning, which is evidenced through completion of BUS AD 7301 and BUS AD 7109 or their equivalent to be determined by the DBA Director.

| First Year | | | | | |
|--|-------|----------------------------|-------|----------------------------------|-------|
| Fall | Hours | Spring | Hours | Summer | Hours |
| BUS AD 7301 | | 2 BUS AD 7100 | | 3 BUS AD 7101 | 3 |
| BUS AD 7109 | | 4 BUS AD 7102 | | 3 BUS AD 7600 | 3 |
| | 6 | | 6 | | 6 |
| Second Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| BUS AD 7103 | | 3 BUS AD 7104 | | 3 Selected Topic I ¹ | 3 |
| BUS AD 7400 | | 3 BUS AD 7106 | | 3 Selected Topic II ¹ | 3 |
| | 6 | | 6 | | 6 |
| Third Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| BUS AD 7107 | | 6 BUS AD 7108 ² | | 6 BUS AD 7108 ² | 6 |
| Development and Defense of Proposal for Dissertation | | | | | |
| | 6 | | 6 | | 6 |
| Fourth Year | | | | | |
| Fall | Hours | | | | |
| BUS AD 7108 ² | 6 | | | | |

Final Dissertation
Defense

6

Total Hours: 60

- ¹ Selected Topics courses are BUS AD 7700, BUS AD 7500, BUS AD 7300, BUS AD 7800, and BUS AD 7105. Two of these courses will fulfill the Selected Topics option.
- ² Students who need additional time to complete the dissertation are required to enroll in an additional credit hour per semester they are working on the project. A minimum of 18 hours is required.

Students will be evaluated annually for satisfactory progress. Students deemed not to be making adequate progress are subject to the policies of the Graduate School and the College of Business Administration regarding probation and dismissal from the program.

Learning Outcomes

Upon completion of the program, graduates should be able to:

- Design research studies based on sound methodological considerations
- Exhibit expertise in a stream of academic research
- Apply theory to address business problems
- Apply advanced quantitative methods to conduct original research
- Apply advanced qualitative methods to conduct original research
- Communicate research findings in both oral and written formats in a public forum
- Develop pedagogical skills for disseminating information in educational settings

Doctor of Education (Ed.D.)

The Ed.D. in Educational Practice degree is designed for educational practitioners interested in: (1) leading critical analyses of existing problems of practice and (2) proposing solutions to those problems of practice that can be assessed for effectiveness. Students are admitted to a learning community of practice, under the mentorship of a faculty team that focuses on an area of educational practice (theme).

Students seeking the Ed.D. degree are expected to meet the Graduate School's (p. 312) relevant practitioner doctoral degree requirements and procedures.

Degree requirements

1. Learning Community of Practice Seminars 15-20

| | |
|-----------|------------------------------------|
| EDUC 7600 | Learning Community of Practice I |
| EDUC 7610 | Learning Community of Practice II |
| EDUC 7620 | Learning Community of Practice III |
| EDUC 7630 | Learning Community of Practice IV |
| EDUC 7640 | Learning Community of Practice V |
| EDUC 7650 | Learning Community of Practice VI |

2. Laboratory of Practice

| | | |
|-----------|------------------------|---|
| EDUC 7889 | Laboratory of Practice | 3 |
|-----------|------------------------|---|

3. Required Common Courses

| | | |
|-----------|---|---|
| EDUC 7215 | Data Analysis for Educational Practitioners | 3 |
|-----------|---|---|

| | | |
|-----------|--|---|
| EDUC 7395 | Research and Technical Writing for Educational Practitioners | 2 |
|-----------|--|---|

EDUC 7615

| | | |
|-----------|--|---|
| EDUC 7625 | Building Socially Just and Ethical Educational Communities | 3 |
|-----------|--|---|

| | | |
|-----------|---|---|
| EDUC 7710 | Research Methods and Design for Educational Practitioners | 3 |
|-----------|---|---|

| | | |
|-------------|---|---|
| ED REM 7781 | Qualitative Methods in Educational Research I | 3 |
|-------------|---|---|

4. Tools Courses

| | | |
|-----------|--|---|
| EDUC 7310 | Integrating Technology in Learning for Educational | 1 |
|-----------|--|---|

| | | |
|-----------|---|---|
| EDUC 7325 | Grant Writing for Educational Practitioners | 1 |
|-----------|---|---|

5. Specialization 30-60

Courses in an area of specialization (can include Master's or Education Specialist work)

6. Dissertation in Practice

| | | |
|-----------|-----------------------------------|---|
| EDUC 7998 | Dissertation in Practice Research | 8 |
|-----------|-----------------------------------|---|

Total: minimum 80 hours, post-baccalaureate

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Design solutions to complex problems of practice related to educational practices that are equitable, ethical, and socially just.
- Construct and apply educational practice knowledge to make a positive difference in the lives of individuals, families, organizations, or communities.
- Demonstrate effective collaboration and communication skills when working with diverse communities and building partnerships.
- Integrate practical and research knowledge with systemic and systematic inquiry in educational practice.
- Create solutions to problems of practice by generating, transforming, and using professional knowledge and practices related to educational practice.
- Take part in and develop communities of practice highlighting their value and function.
- Implement change in their professional practice and within educational practice organizations using critical reflective practice.

Early Childhood Education BSEd

Undergraduate educator preparation is both engaging and innovative. Our high quality undergraduate educator preparation programs are designed around research-based scholarship and practical community-based contexts. To prepare our undergraduate students as the highest quality educators for our region, we contribute to and harness the resources of our deep community partnerships. The community-based experiences broaden candidates' understanding of their own identity as educators as well as enhancing their ability to build relationships, extend their skills, and understand family/community dynamics and interactions.

The Bachelor of Science in Education (B.S.Ed.) in Early Childhood Education prepares those who desire to teach birth through grade 3. Students electing this program will work directly with young children as a part of the professional courses offered. The curriculum provides learning background, applied knowledge, and best practice interventions

for children of diverse populations who demonstrate varied abilities and levels of developmental growth.

Early Childhood Education with an emphasis in Early Childhood Special Education can be achieved with courses satisfactorily completed in this program of study. The core courses are combined with the emphasis area in Early Childhood Special Education. Please see the degree requirements listed below.

The Bachelor's of Science in Early Childhood Education degree prepares candidates to teach in early childhood and preschool settings. Candidates who complete this program are eligible for Missouri teacher certification in Early Childhood (Birth-Grade 3).

University General Education and Graduation Requirements

Education majors must complete all General Education (p. 30) requirements (p. 30) and Graduation Requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

First Year Writing

| | | |
|-----------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
|-----------|------------------------------------|---|

Communication Proficiency

| | | |
|--------------|--|---|
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |

Mathematics Proficiency

| | | |
|--------------|--|---|
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |

Information Literacy

| | | |
|--------------|----------------------|---|
| ED TECH 2230 | Information Literacy | 3 |
|--------------|----------------------|---|

US History and Government

| | | |
|--------------|---|---|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |

Humanities and Fine Arts

| | | |
|--|--|---|
| Choose any 9 hours from approved fields. | | 9 |
|--|--|---|

Social Sciences

| | | |
|---|--|---|
| Choose any 9 hours. At least one course must meet the cultural diversity requirement. | | 9 |
|---|--|---|

Math and Life/Natural Sciences

| | | |
|---------------------|--|---|
| Choose any 9 hours. | | 9 |
|---------------------|--|---|

Junior Level Writing

| | | |
|-----------|----------------------|---|
| ENGL 3100 | Junior-Level Writing | 3 |
|-----------|----------------------|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 45 |
|--------------------|--|-----------|

Program Requirements

All candidates in the B.S.Ed. Early Childhood Education program are required to successfully complete the following Teacher Education courses

as well as the required Missouri Department of Elementary and Secondary Education (DESE) performance assessment.

Professional Education courses must be completed with a grade of C or better (a grade of C- or below must be retaken).

To be recommended for certification, candidates must satisfy all DESE requirements for grade point average and for certification-specific assessments.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|-----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| TCH ED 3310 | Instructional Design and Technology Integration | 3 |
| Total Hours | | 12 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 3212 | Sociolinguistics and Communication in the Classroom | 3 |
| TCH ED 3312 | Psychology of Learning, Instruction, and Assessment | 3 |
| ELE ED 3339 | Teaching Elementary Literacy in Inclusive Settings: Literacy Instruction and Learning | 4 |
| ELE ED 4246 | Teaching Elementary Mathematics in Inclusive Settings I | 3 |
| ELE ED 4342 | Teaching Elementary Mathematics in Inclusive Settings II | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| SPEC ED 4323 | Classroom Management and Positive Behavioral Supports in Inclusive Educational Settings | 3 |
| TCH ED 3565 | Fine Arts Integration for the Elementary Classroom | 2 |
| TCH ED 3566 | Teaching Health and Physical Education Skills and Concepts in the Elementary Classroom | 2 |
| Total Hours | | 27 |

Emphasis Area Requirements

In addition to the above courses, students must complete all required coursework for the emphasis area in Early Childhood Special Education:

| | | |
|--------------------|---|-----------|
| ECH ED 3302 | Introduction to Inclusive Early Childhood Education | 3 |
| ECH ED 3303 | Curriculum and Practice Laboratory: Infant/Toddler | 1 |
| ECH ED 3304 | Curriculum and Practice Laboratory: Preschool | 1 |
| ECH ED 3313 | Curriculum and Practice: Infant/Toddler | 2 |
| ECH ED 3314 | Curriculum and Practice: Preschool Education | 2 |
| ECH ED 3332 | Literacy, Learning, and Instruction For The Young Child | 3 |
| ECH ED 3350 | Family and Professional Partnerships within School/Community | 3 |
| SPEC ED 4315 | Language and Communication of Children with Disabilities | 3 |
| ECH ED 4317 | Implementation, Evaluation, and Assessment in Early Childhood Education | 3 |
| ECH ED 4348 | The Acquisition of Mathematical and Scientific Concepts | 3 |
| Total Hours | | 24 |

The program will culminate in the completion of two sequential site-based practicum experience courses.

| | | |
|--------------------|---|-----------|
| ECH ED 4989 | Practicum I: Early Childhood Education/Early Childhood Special Education Site Based Experience | 3 |
| ECH ED 4990 | Practicum II: Early Childhood Education/Early Childhood Special Education Site Based Experience | 12 |
| Total Hours | | 15 |

Total Credit Hours: 124

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Continually reflect on professional growth to improve student learning outcomes/enhance student learning.
- Integrate technology to create meaningful student learning within the context of a global digital society.
- Apply content and pedagogical knowledge to create authentic and deep learning experiences.
- Use learning science principles to design, implement, and evaluate curriculum based on learning standards.
- Foster effective working relationships with students, school colleagues, families, and community members to enhance student learning and well-being.
- Design and establish a safe, inclusive, and respectful learning environment that nurtures the intellectual, social, and personal development of all students.
- Use equitable frameworks and inclusive practices to create a variety of instructional and assessment opportunities adapted to diverse learners to encourage all students' critical thinking, problem solving, and performance skills

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|--------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| ENGL 1100 | | 3 CORE - US History and Government | 3 |
| COMM 1040 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| MATH 1020 | | 3 EXPLORE - Social Sciences | 3 |
| ED TECH 2230 | | 3 EXPLORE - Social Sciences | 3 |
| TCH ED 1000 | | 1 EXPLORE - Math and Sciences | 3 |
| | | 13 | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| EXPLORE - Humanities and Fine Arts | | 3 TCH ED 2001 & TCH ED 2209 | 3 |
| EXPLORE - Social Sciences | | 3 ENGL 3100 | 3 |
| EXPLORE - Math and Sciences | | 3 MATH 1025 | 3 |
| TCH ED 1001 & TCH ED 2000 | | 2 ART ED 2179 | 3 |
| ED PSY 2212 | | 3 MUS ED 2770 | 3 |
| | | HLTH PE 3432 | 3 |
| | | 14 | 18 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| TCH ED 3001 | | 1 SPEC ED 3318 | 3 |
| ECH ED 3304 & ECH ED 3314 | | 3 ECH ED 3332 | 3 |
| TCH ED 3312 | | 3 ELE ED 4246 | 3 |
| SPEC ED 4323 | | 3 ECH ED 3303 & ECH ED 3313 | 3 |
| ECH ED 3302 | | 3 ELE ED 3339 | 4 |
| ECH ED 3350 | | 3 | |
| | | 16 | 16 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| TCH ED 3212 | | 3 ECH ED 4990 | 12 |
| ECH ED 4317 | | 3 ECH ED 4348 | 3 |
| ELE ED 4342 | | 3 | |
| SPEC ED 4315 | | 3 | |
| ECH ED 4989 | | 3 | |
| | | 15 | 15 |
| Total Hours: 122 | | | |

Early Childhood Education BSEd, Special Education Emphasis

Undergraduate educator preparation is both engaging and innovative. Our high quality undergraduate educator preparation programs are designed around research-based scholarship and practical community-based contexts. To prepare our undergraduate students as the highest quality educators for our region, we contribute to and harness the resources of our deep community partnerships. The community-based experiences broaden candidates' understanding of their own identity as educators as well as enhancing their ability to build relationships, extend their skills, and understand family/community dynamics and interactions.

The Bachelor of Science in Education (B.S.Ed.) in Early Childhood Education prepares those who desire to teach birth through grade 3. Students electing this program will work directly with young children as a part of the professional courses offered. The curriculum provides learning background, applied knowledge, and best practice interventions

for children of diverse populations who demonstrate varied abilities and levels of developmental growth.

Early Childhood Education with an add-on Early Childhood Special Education can be achieved with courses satisfactorily completed in this program of study. The core courses are combined with the emphasis area in Early Childhood Special Education. Please see the degree requirements listed below.

The Bachelor's of Science in Early Childhood Education degree prepares candidates to teach in early childhood and preschool settings. Candidates who complete this program are eligible for Missouri teacher certification in Early Childhood (Birth-Grade 3).

University General Education and Graduation Requirements

Education majors must complete all General Education (p. 30) requirements (p. 30) and Graduation Requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

First Year Writing

| | | |
|-----------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
|-----------|------------------------------------|---|

Communication Proficiency

| | | |
|--------------|--|---|
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |

Mathematics Proficiency

| | | |
|--------------|--|---|
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |

Information Literacy

| | | |
|--------------|----------------------|---|
| ED TECH 2230 | Information Literacy | 3 |
|--------------|----------------------|---|

US History and Government

| | | |
|--------------|---|---|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |

Humanities and Fine Arts

| | | |
|--|--|---|
| Choose any 9 hours from approved fields. | | 9 |
|--|--|---|

Social Sciences

| | | |
|---|--|---|
| Choose any 9 hours. At least one course must meet the cultural diversity requirement. | | 9 |
|---|--|---|

Math and Life/Natural Sciences

| | | |
|---------------------|--|---|
| Choose any 9 hours. | | 9 |
|---------------------|--|---|

Junior Level Writing

| | | |
|-----------|----------------------|---|
| ENGL 3100 | Junior-Level Writing | 3 |
|-----------|----------------------|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 45 |
|--------------------|--|-----------|

Program Requirements

All candidates in the B.S.Ed. Early Childhood Education program are required to successfully complete the following Teacher Education courses

as well as the required Missouri Department of Elementary and Secondary Education (DESE) performance assessment.

Professional Education courses must be completed with a grade of C or better (a grade of C- or below must be retaken).

To be recommended for certification, candidates must satisfy all DESE requirements for grade point average and for certification-specific assessments.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|-----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| TCH ED 3310 | Instructional Design and Technology Integration | 3 |
| Total Hours | | 12 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 3212 | Sociolinguistics and Communication in the Classroom | 3 |
| TCH ED 3312 | Psychology of Learning, Instruction, and Assessment | 3 |
| ELE ED 3339 | Teaching Elementary Literacy in Inclusive Settings: Literacy Instruction and Learning | 4 |
| ELE ED 4246 | Teaching Elementary Mathematics in Inclusive Settings I | 3 |
| ELE ED 4342 | Teaching Elementary Mathematics in Inclusive Settings II | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| SPEC ED 4323 | Classroom Management and Positive Behavioral Supports in Inclusive Educational Settings | 3 |
| TCH ED 3565 | Fine Arts Integration for the Elementary Classroom | 2 |
| TCH ED 3566 | Teaching Health and Physical Education Skills and Concepts in the Elementary Classroom | 2 |
| Total Hours | | 27 |

Emphasis Area Requirements

In addition to the above courses, students must complete all required coursework for the emphasis area in Early Childhood Special Education:

| | | |
|--------------------|---|-----------|
| ECH ED 3302 | Introduction to Inclusive Early Childhood Education | 3 |
| ECH ED 3303 | Curriculum and Practice Laboratory: Infant/Toddler | 1 |
| ECH ED 3304 | Curriculum and Practice Laboratory: Preschool | 1 |
| ECH ED 3313 | Curriculum and Practice: Infant/Toddler | 2 |
| ECH ED 3314 | Curriculum and Practice: Preschool Education | 2 |
| ECH ED 3332 | Literacy, Learning, and Instruction For The Young Child | 3 |
| ECH ED 3350 | Family and Professional Partnerships within School/Community | 3 |
| SPEC ED 4315 | Language and Communication of Children with Disabilities | 3 |
| ECH ED 4317 | Implementation, Evaluation, and Assessment in Early Childhood Education | 3 |
| ECH ED 4348 | The Acquisition of Mathematical and Scientific Concepts | 3 |
| Total Hours | | 24 |

The program will culminate in the completion of two sequential site-based practicum experience courses.

| | | |
|--------------------|---|-----------|
| ECH ED 4989 | Practicum I: Early Childhood Education/Early Childhood Special Education Site Based Experience | 3 |
| ECH ED 4990 | Practicum II: Early Childhood Education/Early Childhood Special Education Site Based Experience | 12 |
| Total Hours | | 15 |

Total Credit Hours: 124

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Continually reflect on professional growth to improve student learning outcomes/enhance student learning.
- Integrate technology to create meaningful student learning within the context of a global digital society.
- Apply content and pedagogical knowledge to create authentic and deep learning experiences.
- Use learning science principles to design, implement, and evaluate curriculum based on learning standards.
- Foster effective working relationships with students, school colleagues, families, and community members to enhance student learning and well-being.
- Design and establish a safe, inclusive, and respectful learning environment that nurtures the intellectual, social, and personal development of all students.
- Use equitable frameworks and inclusive practices to create a variety of instructional and assessment opportunities adapted to diverse learners to encourage all students' critical thinking, problem solving, and performance skills

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|--------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| ENGL 1100 | | 3 COMM 1040 | 3 |
| HIST 1001 or 1002 | | 3 ED TECH 2230 | 3 |
| MATH 1020 or 1030 | | 3 TCH ED 1001 | 1 |
| TCH ED 1000 | | 1 TCH ED 2000 | 1 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| | | EXPLORE - Math and Sciences | 3 |
| | | EXPLORE - Social Sciences | 3 |
| | | 13 | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| TCH ED 2001 | | 1 ED PSY 2212 | 3 |
| TCH ED 2209 | | 2 ENGL 3100 | 3 |
| TCH ED 3310 | | 3 MATH 1025 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 TCH ED 3565 | 2 |
| EXPLORE - Math and Sciences | | 3 TCH ED 3566 | 2 |
| EXPLORE - Social Sciences | | 3 | |
| | | 15 | 13 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ECH ED 3302 | | 3 ECH ED 3303 | 1 |
| ECH ED 3304 | | 1 ECH ED 3313 | 2 |
| ECH ED 3314 | | 2 ECH ED 3332 | 3 |
| ECH ED 3350 | | 3 ECH ED 4348 | 3 |
| ELE ED 4246 | | 3 SPEC ED 3318 | 3 |
| TCH ED 3312 | | 3 TCH ED 3001 | 1 |
| | | TCH ED 3212 | 3 |
| | | 15 | 16 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ECH ED 4317 | | 3 ECH ED 4990 | 12 |
| ECH ED 4989 | | 3 | |
| ELE ED 3339 | | 4 | |
| ELE ED 4342 | | 3 | |
| SPEC ED 4315 | | 3 | |
| SPEC ED 4323 | | 3 | |
| | | 19 | 12 |
| Total Hours: 120 | | | |

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

East Asian Studies Undergraduate Certificate

| HIST 1043 | Topics in East Asian History and Culture | 3 |
|--|---|---|
| FGN LANG 2100 | Languages and World View | 3 |
| Select one course in three of the following areas: | | 9 |
| Art and Art History | | |
| ART HS 1160 | Introduction to the Art and Visual Cultures of Asia | |
| Business Administration | | |

| | |
|-------------------------|--|
| INTL BUS 3281 | Business in China |
| INTL BUS 3283 | International Business and Society (when offered as a Japanese Study Tour) |
| History | |
| HIST 2420 | Maiko, Maids, and Masako: Women in Japanese Cultural History |
| HIST 2425 | Food and Drink in Japan: A Cultural History |
| HIST 2430 | Ghosts, Goblins, and Godzillas |
| HIST 3032 | China's Rise: From the Opium Wars to Global Superpower |
| HIST 3218 | Visual and Material Culture of Japan |
| HIST 2143 | Korea: History, Culture, and Cinema |
| Philosophy | |
| PHIL 1120 | Asian Philosophy |
| Japanese Courses | |
| JAPAN 1005 | Practicum in East Asian Calligraphy |
| JAPAN 1011 | Anime Nation: Popular Culture in Japan |
| JAPAN 2170 | Kanji: A Radical Approach |
| JAPAN 2190 | Special Readings |
| JAPAN 2191 | Special Topics in Japanese Culture |
| JAPAN 3211 | Topics in Japanese Culture |
| JAPAN 3280 | Readings in Japanese |
| JAPAN 3290 | Special Readings |
| Total Hours | 15 |

Economics BA

Nearly every decision which a person, business, or government makes involves trade-offs, and so, falls under the purview of economic analysis. In coursework for the Economics BA, students learn to think analytically and apply their knowledge to a broad range of topics such as property rights, environmental regulation, labor markets, and government regulation. Students also study the economy as a whole and explore the sources of growth, recessions, and inflation, as well as government policies designed to influence the economy. The study of economics is an excellent way to learn how to apply analytical skills to a range of interesting questions and problems.

General Education Requirements

All undergraduate economics majors must meet the university and college general education requirements (p. 30). Candidates for the B.A. degree may take any foreign language to meet this requirement. Candidates for the B.S. degree take mathematics and quantitative courses instead of the foreign language requirement. Courses in economics may be used to meet the university social sciences requirement.

Satisfactory/Unsatisfactory Option

Courses outside the major field and ECON 1001, Principles of Microeconomics, and ECON 1002, Principles of Macroeconomics, may be taken on a satisfactory/unsatisfactory basis.

Prerequisites

All prerequisites for economics courses must be completed with a C- or better.

Degree Requirements

Candidates for the B.A. degree must take at least 33, but no more than 45, hours in economics. At least 27 hours must be above the 2000 level. All core courses for the major must be completed with a grade of C- or better.

The following core courses are required:

| | | |
|--------------|--|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| ECON 2800 | History of American Economic Development | 3 |
| or ECON 2200 | Monetary Policy in Historical Perspective | |
| ECON 3001 | Intermediate Microeconomics | 3 |
| ECON 3002 | Intermediate Macroeconomics | 3 |
| ECON 3100 | Economic Data and Statistics | 3 |

Departmental Honors

A student may earn departmental honors with a GPA of 3.6 in economics and the recommendation of the department.

Complementary Areas of Study

The department encourages all majors to develop breadth in related disciplines. Course work and minors are available in a number of areas such as business administration, computer science, statistics, and political science. In addition, courses offered by the department are required for the B.S. in Actuarial Science (p. 392) and help satisfy the prerequisites for courses required for the Certificate in Actuarial Studies (p. 393) (p. 393) and have been approved by the Society of Actuaries (SOA) to satisfy the VEE requirements in Economics. Students should check with their advisers for recommendations concerning courses in these areas. The department suggests the following supplemental course work for students interested in pursuing doctoral-level graduate work in economics or careers in general business. It also encourages all students to obtain work experience by enrolling in the Internship in Applied Economics (ECON 4990).

General Business Preparation

It is recommended that students interested in pursuing careers in business also take:

| | | |
|--------------|--------------------------------------|---|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| FINANCE 3500 | Financial Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |

Learning Outcomes

- Use economic reasoning to interpret and evaluate social, political and economic arguments, and policies.
- Use mathematical methods to construct and analyze economic models and to analyze and interpret economic phenomena.

- Understand key market institutions such as property rights and contracts and economic organizations such as the Federal Reserve System and the International Monetary Fund and apply this knowledge to analyze economic behavior and evaluate public policy.
- Identify the causes and consequences of poverty and prosperity across and within societies.
- Predict changes in key macroeconomic variables in response to changes in social, political, and economic policy as well as non-economic events such as terrorist attacks, natural disasters, and changes in consumer confidence.
- Use basic statistical methods and statistical software to interpret and analyze economic data and relationships.
- Acquire a historical perspective through knowledge of the development of the U.S. economy and its key institutions.

Sample Four Year Plan

| First Year | | | |
|---|-------|---|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 ECON 1001 | 3 |
| MATH 1030 | | 3 MATH 1100 | 3 |
| ENGL 1100 | | 3 Foreign Language 1002 | 5 |
| Foreign Language 1001 | | 5 EXPLORE – Humanities & Fine Arts | 3 |
| CORE – Communication Proficiency | | 3 CORE – Information Literacy | 3 |
| | 15 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ECON 1002 | | 3 ECON 3001 | 3 |
| Foreign Language 2101 | | 3 ECON 2000+ level elective | 3 |
| EXPLORE – Humanities and Fine Arts | | 3 EXPLORE – Humanities and Fine Arts | 3 |
| EXPLORE – Mathematics and Life/ Natural Sciences | | 3 EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE - Social Sciences | | 3 Cultural Diversity Requirement | 3 |
| | 15 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ECON 2800 | | 3 ECON 3002 | 3 |
| ECON 3100 | | 3 ECON 2000+-level Course | 3 |
| ENGL 3100 | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ECON 2000+ level elective | | 3 ECON 2000+ level courses | 3 |
| ECON 2000+ level elective | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 1 |
| | 15 | | 13 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are

encouraged to meet with their advisor each semester. All requirements are subject to change.

Economics BS

Nearly every decision a person, business, or government makes involves trade-offs and can fall under the purview of economic analysis. In coursework for the Economics BS, students develop analytical and quantitative skills and apply their knowledge to a range of topics such as economic modeling, financial markets, and market analysis. Students also study the economy as a whole and analyze the sources of growth, recessions, and inflation, as well as government policies. The study of economics is an excellent way to learn how to apply analytical and quantitative skills to a range of interesting economic problems.

General Education Requirements

All undergraduate economics majors must meet the university and college general education requirements (p. 30). Candidates for the B.A. degree may take any foreign language to meet this requirement. Candidates for the B.S. degree take mathematics and quantitative courses instead of the foreign language requirement. Courses in economics may be used to meet the university social sciences requirement.

Satisfactory/Unsatisfactory Option

Courses outside the major field and ECON 1001, Principles of Microeconomics, and ECON 1002, Principles of Macroeconomics, may be taken on a satisfactory/unsatisfactory basis.

Prerequisites

All prerequisites for economics courses must be completed with a C- or better.

Degree Requirements

Candidates for the B.S. degree must complete at least 36, but no more than 50, hours in economics. At least 30 hours must be at or above the 2000 level. All core courses for the major must be completed with a grade of C- or better.

The following core courses are required:

| | | |
|--------------|--|-----|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| ECON 3001 | Intermediate Microeconomics | 3 |
| ECON 3002 | Intermediate Macroeconomics | 3 |
| ECON 3100 | Economic Data and Statistics | 3 |
| ECON 4100 | Introduction to Econometrics | 4 |
| MATH 1800 | Analytic Geometry and Calculus I (strongly recommended) ¹ | 3-5 |
| or MATH 1100 | Basic Calculus | |

Select two of the following quantitative courses: 6-8

| | |
|-----------|--|
| ECON 4030 | Managerial Economics |
| ECON 4040 | Booms and Busts in the Economy: Data and Theory |
| ECON 4110 | Applied Econometrics |
| ECON 4120 | Time Series Econometrics for Economics and Finance |
| ECON 4130 | Business and Economic Forecasting |

| | |
|---|--|
| ECON 4150 | Mathematical Economics |
| ECON 4160 | Geospatial Analysis in the Social Sciences |
| ECON 4170 | Fundamentals of Cost-Benefit Analysis |
| Mathematics courses numbered 1900 or above with consent of advisor ¹ | |

¹ Note: mathematics courses used for this requirement do **not** count towards the 36 hours in economics requirement

Departmental Honors

A student may earn departmental honors with a GPA of 3.6 in economics and the recommendation of the department.

Complementary Areas of Study

The department encourages all majors to develop breadth in related disciplines. Course work and minors are available in a number of areas such as business administration, computer science, statistics, and political science. In addition, courses offered by the department are required for the B.S. in Actuarial Science (p. 392) and help satisfy the prerequisites for courses required for the Certificate in Actuarial Studies (p. 393) and have been approved by the Society of Actuaries (SOA) to satisfy the VEE requirements in Economics. Students should check with their advisers for recommendations concerning courses in these areas. The department suggests the following supplemental course work for students interested in pursuing doctoral-level graduate work in economics or careers in general business. It also encourages all students to obtain work experience by enrolling in the Internship in Applied Economics (ECON 4990) .

Graduate School Preparation

It is recommended that students considering doctoral-level graduate work in economics also take:

| | | |
|-----------|--|---|
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 2020 | Introduction to Differential Equations | 3 |
| MATH 2450 | Elementary Linear Algebra | 3 |
| MATH 4100 | Real Analysis I | 3 |
| MATH 4200 | Mathematical Statistics I | 3 |

Learning Outcomes

- Use economic reasoning to interpret and evaluate social, political and economic arguments, and policies.
- Use mathematical methods to construct and analyze economic models and to analyze and interpret economic phenomena.
- Understand key market institutions such as property rights and contracts and economic organizations such as the Federal Reserve System and the International Monetary Fund and apply this knowledge to analyze economic behavior and evaluate public policy.
- Identify the causes and consequences of poverty and prosperity across and within societies.
- Predict changes in key macroeconomic variables in response to changes in social, political, and economic policy as well as non-economic events such as terrorist attacks, natural disasters, and changes in consumer confidence.

- Estimate, analyze, and interpret economic relationships using appropriate regression analysis techniques applied to economic data for use in business and policy applications.
- Write a research paper that employs sound economic reasoning and economic data that demonstrates the ability to model and interpret regression analysis of an economic relationship.

Sample Four Year Plan

| First Year | | | |
|-------------------------------------|-------|---|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 | | 1 ECON 1001 | 3 |
| ENGL 1100 | | 3 MATH 1800 | 5 |
| MATH 1045 | | 5 EXPLORE – Humanities and Fine Arts | 3 |
| CORE – Communication Proficiency | | 3 CORE – Information Literacy | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 | |
| | 15 | | 14 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ECON 1002 | | 3 ECON 3002 | 3 |
| CORE – US History & Government | | 3 ECON 2000+ course | 3 |
| EXPLORE – Math & Natural Sciences | | 3 Cultural Diversity Requirement - Global | 3 |
| EXPLORE – Humanities & Fine Arts | | 3 Elective or minor | 3 |
| Cultural Diversity Requirement - US | | 3 Elective or minor | 3 |
| | 15 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ECON 3001 | | 3 ECON 4100 | 4 |
| ECON 3100 | | 3 ECON 2000+ course | 3 |
| ENGL 3100 | | 3 EXPLORE - Math and Sciences | |
| CORE - US History and Government | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 13 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ECON 4XXX quantitative course | | 3 ECON 4XXX quantitative course | 3 |
| ECON XXXX Economics Elective | | 3 ECON XXXX Economics Elective | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |
| Total Hours: 117 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 26 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Economics BS/MA Dual Degree Program

The B.S./M.A. (also known as the “2+3”) program is an accelerated program that allows students to complete a B.S. and a M.A. in economics in five years. The program allows students to apply 12 of the M.A. credit hours towards the B.S., reducing the overall required hours for the two

degrees from the standard 150 (120 for the B.S. plus 30 for the M.A.) to 138 hours.

The M.A. in Economics requires 30 credit hours; at least 21 hours must be completed in residence.

The following 3 courses (9 credit hours) are required:

| | | |
|-----------|--------------------------------|---|
| ECON 5001 | Microeconomic Analysis | 3 |
| ECON 5002 | Macroeconomic Analysis | 3 |
| ECON 5100 | Econometric Theory and Methods | 3 |

In addition, 21 credit hours of electives must be completed. At most, six of these credit hours may be economics courses at the 4000 level (excluding ECON 4100 and ECON 4150 which cannot be utilized as part of the M.A. degree); all other electives must be at the 5000 level or higher.

Of the 30 hours taken in the M.A. program, 12 of these hours (per the approval of the Graduate Director) will also count toward the undergraduate B.S. requirements. All other requirements for the B.S. degree remain in effect.

Admission Requirements

Applicants must have completed between 60 and 108 credit hours. Applicants must have a minimum G.P.A. of 3.0 (both overall and in economics courses) and must be nominated by a full-time regular economics faculty member. Applicants must have completed all of the general education requirements as well as college algebra (or a higher level mathematics course), introductory microeconomics and introductory macroeconomics. Those accepted with fewer than 90 semester credit hours are accepted only on a provisional basis. Once the student has completed 90 semester hours of coursework (typically including ECON 3001, ECON 3002, ECON 3100, ECON 3200, MATH 1800, and preferably ECON 4100) with a satisfactory G.P.A. (minimum G.P.A. of 3.0 overall and in economics courses) the provisional status is dropped.

It is recommended that applicants apply when they have completed 90 credit hours; further, it is recommended that applicants should complete intermediate microeconomics (ECON 3001) and/or introductory econometrics (ECON 4100) before applying.

Awarding of Degree

Both degrees (the B.S. and M.A.) will be awarded when all requirements for the entire program have been completed. In other words, the B.S. and M.A. degrees will be simultaneously awarded at the completion of study.

Students who officially withdraw from the B.S./M.A. Dual Degree Program in Economics and who have successfully completed all of the requirements for the B.S. degree will be awarded the B.S. degree.

Economics MA

Admission Requirements

An undergraduate major in economics is not required for acceptance into the program. Application for admission may be submitted at any time, although class work formally begins in late August, mid-January, and mid-June. Candidates must meet the general admission requirements of the Graduate School, submit GRE scores (Advanced Economics optional), and submit two letters of recommendation from persons qualified to judge the candidate's potential for success in the program.

The admissions decision is based on the applicant's academic transcript, GRE scores, letters of recommendation, and a personal narrative on the application form.

Degree Requirements

The M.A. in Economics requires 30 credit hours; at least 21 hours must be completed in residence.

Candidates need not have an undergraduate degree in economics. However, students are expected to have taken intermediate micro- and macro-economics, mathematical economics, and introductory econometrics prior to the beginning of the core curriculum. Students that do not have these courses will take these courses first; credits earned in these courses do not count towards the 30 hours required for the MA.

Required Core Courses

The following courses or their equivalents are required for the M.A. in Economics. Students with previous education in economics or business may waive some of these courses.

| | | |
|-----------|--------------------------------|---|
| ECON 5001 | Microeconomic Analysis | 3 |
| ECON 5002 | Macroeconomic Analysis | 3 |
| ECON 5100 | Econometric Theory and Methods | 3 |

Electives

Candidates must complete at least 21 hours of electives. A maximum of 6 hours of economics electives may be taken at the 4000 level. With the approval of the graduate coordinator, students may take up to 9 hours of graduate courses outside the Department of Economics. In particular, students interested in business economics may take up to three approved graduate business courses for their electives.

Departmental Honors

A student may earn departmental honors with a GPA of 3.75 in all required courses for the M.A. degree and the recommendation of the department.

Complementary Areas of Study

Students with a public policy focus can complete the M.A. in Economics and the Public Policy Administration (PPA) Graduate Certificate in Policy and Program Evaluation (PPE) (p. 695). It is possible to earn the Certificate without any additional coursework beyond what is required for the M.A. alone.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Interpret and analyze economic models and assess their validity.
- Use theoretical and empirical tools to design effective business and government policies.
- Use econometric methods to interpret and analyze economic data, to assess the empirical validity of economic propositions, to evaluate policies, and to help inform business decisions.
- Develop at least one topic area of expertise through familiarity with the relevant scholarly and professional literatures, policy issues, institutions, and current data trends.
- Develop at least one methodological area of expertise through the acquisition of the theoretical and empirical tools needed to understand scholarly and professional contributions to the

literature to facilitate lifelong professional development and refinement of expertise.

- Write a professional quality research paper.
- Develop sufficient proficiency in the use of theoretical and empirical tools and in understanding of economic institutions to excel in a Ph.D. program.

Economics MA Accelerated Master's Degree

The Department of Economics offers an Accelerated MA degree program that allows students to simultaneously earn their BS and their MA in Economics in as few as 10 semesters. Students in the Accelerated MA program will complete the MA through coursework.

The combined program requires a minimum of 138 credit hours. Students accepted to the Accelerated MA degree program will be permitted to count up to 12 credit hours at the 4000-level or higher toward both the BS and MA degrees. The remaining 18 credit hours must be earned while in graduate status (after formal acceptance).

Any courses taken before provisional admission to the Accelerated MA program will apply to the undergraduate requirements only. Students are encouraged to work closely with the Undergraduate and MA Program Directors to ensure that required courses are timed appropriately.

Eligibility

Students will need to have fulfilled the core curriculum requirements prior to applying for the Accelerated MA program. The Department recommends applying during the student's Junior year (at about 90 credit hours toward the BS).

Admission Requirements

Provisional Admission

Applicants are considered for provisional admission if they meet the following criteria:

- Earned 75 hours as an undergraduate
- Completed MATH 1100 or MATH 1800 (preferred)
- Completed the at least twelve hours at the 3000-level including:
 - ECON 3001
 - ECON 3002
 - ECON 3100
- Have a minimum overall GPA of 3.0; likewise, a minimum GPA of 3.0 in Economics courses is required.

The Department also recommends that the student complete or be enrolled in ECON 4100, Introduction to Econometrics before applying.

The MA Program Director, in consultation with the Undergraduate Director, will determine whether the student can apply for provisional status. Graduate courses completed by undergraduate students who have been provisionally admitted to Accelerated Master's program will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. These courses must be approved before the semester starts. Therefore, it is recommended to apply for provisional status as a junior, preferably in the first semester of junior year.

Graduate Admission

Students are considered for admission to the graduate school in their final semester as an undergraduate. Students should meet with the MA Program Director each semester. Applicants are considered for graduate admission if they meet the following criteria:

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Have submitted at least one letter of recommendation from an UMSL Economics professor

The MA Program Director will determine whether the student can apply for graduate admission. Final decisions concerning graduate admission are made by the Graduate School in consultation with the Program Director. Students admitted at this stage are conferred graduate status and must continue taking courses with graduate status until the completion of the MA degree.

Program Requirements

The MA in Economics requires 30 credit hours (10 courses); at least 21 credit hours must be completed in residence.

The following 3 courses (9 credit hours) are required:

| | | |
|-----------|--------------------------------|---|
| ECON 5001 | Microeconomic Analysis | 3 |
| ECON 5002 | Macroeconomic Analysis | 3 |
| ECON 5100 | Econometric Theory and Methods | 3 |

In addition, 21 credit hours of electives must be completed; up to nine credit hours may be outside of Economics with the approval of the Graduate Program Director. At most, six of these credit hours may be economics courses at the 4000 level (excluding ECON 4100, ECON 4150 and ECON 4550 which cannot be utilized as part of the MA degree); all other electives must be at the 5000 level or higher.

Typically, the student will complete ECON 5001 and three electives while still in provisional status. The final year (in grad status) will be comprised of ECON 5002, ECON 5100 and four electives.

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Economics MA, Business Economics Emphasis

Admission Requirements

An undergraduate major in economics is not required for acceptance into the program. Application for admission may be submitted at any time,

although class work formally begins in late August, mid-January, and mid-June. Candidates must meet the general admission requirements of the Graduate School, submit GRE scores (Advanced Economics optional), and submit two letters of recommendation from persons qualified to judge the candidate's potential for success in the program.

The admissions decision is based on the applicant's academic transcript, GRE scores, letters of recommendation, and a personal narrative on the application form.

Degree Requirements

Like the General Option of the Economics MA, the Business Economics option requires 30 credit hours. Subject to approval from the Director of Graduate Studies, as many as nine credit hours may be waived based on previously completed graduate education. Independent of any waived courses, the 30 credit-hour program must be completed within a six-year period. A minimum of 21 credit hours must be completed while enrolled in the MA program at UMSL.

Required Courses

| | | |
|-----------|--------------------------------|---|
| ECON 5001 | Microeconomic Analysis | 3 |
| ECON 5002 | Macroeconomic Analysis | 3 |
| ECON 5100 | Econometric Theory and Methods | 3 |

Electives

Financial Economics Electives (Choose 3 courses)

| | |
|-----------|---|
| ECON 5120 | Advanced Topics In Time Series Econometrics |
| ECON 5200 | Advanced Monetary Theory and Policy |
| ECON 5210 | |
| ECON 5300 | |
| ECON 5301 | |

Finance Electives (Choose 2 or 3 courses)

| | |
|--------------|---|
| FINANCE 6500 | Financial Management |
| FINANCE 6520 | Security Analysis |
| FINANCE 6521 | Financial Forensics: The Science of Derivatives |
| FINANCE 6580 | International Financial Management |

Other Electives (choose 1 or 2 courses)

| |
|--|
| Any Economics 5000-level course not used above and approved by the Department Director of Graduate Studies |
| Any Economics 4000-level elective approved by Department Director of Graduate Studies |

Total Hours **30**

Departmental Honors

A student may earn departmental honors with a GPA of 3.75 in all required courses for the M.A. degree and the recommendation of the department.

Complementary Areas of Study

Students with a public policy focus can complete the M.A. in Economics and the Public Policy Administration (PPA) Graduate Certificate in Policy and Program Evaluation (PPE) (p. 695). It is possible to earn the Certificate without any additional coursework beyond what is required for the M.A. alone.

Economics Minor

Candidates for a minor in economics must take a minimum of 15 hours in economics.

The following courses are required:

| | | |
|-----------|--|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |

For the remaining 9 hours, 3 hours must be at or above the 2000 level and 6 hours must be at or above the 3000 level. It is recommended that students take ECON 3001, Intermediate Economic Theory: Microeconomics and/or ECON 3002, Intermediate Economic Theory: Macroeconomics. ECON 3100, Economic Statistics, cannot be counted towards the economics minor if the student has also taken SCMA 3300 or the equivalent.

A GPA of 2.0 or better is required for courses presented for the minor. The satisfactory/ unsatisfactory (s/u) option may be applied to ECON 1001 and only.

Learning Outcomes

- Apply the concepts of choice and opportunity cost to basic situations involving scarcity, and be able to clearly identify feasible choices.
- Understand supply, demand, and how markets operate and be able to identify welfare outcomes for consumers and producers.
- Understand the determination of the growth and short-run fluctuations of an economy.
- Appraise how government policies, monetary policies and fiscal policies in particular, affect output, unemployment, inflation and growth.

Education Administration EdS

The Ed.S. is designed for individuals who want to take their career, and their ability, to the next level. Students in the Ed.S. program may choose a plan of study that will prepare them for one of three Missouri Department of Elementary and Secondary Education (DESE) certification areas: Superintendent, Special Education Program Director, and Initial Principal Certification. Please note, the superintendent certification track is an online cohort program in collaboration with colleagues at the University of Missouri - Columbia and the University of Missouri - Kansas City.

The Ed.S. in Education Administration requires at least sixty (60) graduate credit hours of a planned program and may include no more than thirty (30) credit hours of an approved master's degree. One-half of all hours must be completed at UMSL.

Admission Standards

To be admitted to the Ed.S. in Education Administration program students must meet the following criteria:

1. Be admitted without qualification to the UMSL Graduate School;
2. Have a grade point average of at least 3.0 on a scale of 4.00 in graduate studies in education (Master's degree) from an accredited institution;

3. Have on file at least three (3) recommendations including the following: one (1) from an educator presently occupying a position equal or similar to that which the applicant aspires upon completing the Ed.S. and one (1) from someone other than a member of the applicant's family who can comment on the applicant's character;

4. Applicants must have a minimum of two years teaching experience. For candidates seeking superintendent certification, a current principal certification and experience as a building-level leader is preferred.

Degree Requirements

There are three distinct plans of study for individuals seeking an Ed.S. Degree. Each candidate must complete the following core courses or an equivalent. Courses may have been taken as part of a master's degree program.

| | | |
|--------------------|--|-----------|
| ED ADM 6205 | Legal Contexts of Education | 3 |
| ED ADM 6701 | Leadership for Equity | 3 |
| ED ADM 6702 | Supervision in Education Organizations | 3 |
| ED ADM 6714 | K-12 School Administration | 3 |
| TCH ED 6411 | Curriculum Leadership in Education | 3 |
| Total Hours | | 15 |

Education Administration EdS, Executive Superintendency Emphasis

The Ed.S. is designed for individuals who want to take their career, and their ability, to the next level. Students in the Ed.S. program may choose a plan of study that will prepare them for one of three Missouri Department of Elementary and Secondary Education (DESE) certification areas: Superintendent, Special Education Program Director, and Initial Principal Certification. Please note, the superintendent certification track is an online cohort program in collaboration with colleagues at the University of Missouri - Columbia and the University of Missouri - Kansas City.

The Ed.S. in Education Administration requires at least sixty (60) graduate credit hours of a planned program and may include no more than thirty (30) credit hours of an approved master's degree. One-half of all hours must be completed at UMSL.

Admission Standards

To be admitted to the Ed.S. in Education Administration program students must meet the following criteria:

1. Be admitted without qualification to the UMSL Graduate School;
2. Have a grade point average of at least 3.0 on a scale of 4.00 in graduate studies in education (Master's degree) from an accredited institution;
3. Have on file at least three (3) recommendations including the following: one (1) from an educator presently occupying a position equal or similar to that which the applicant aspires upon completing the Ed.S. and one (1) from someone other than a member of the applicant's family who can comment on the applicant's character;

4. Applicants must have a minimum of two years teaching experience. For candidates seeking superintendent certification, a current principal certification and experience as a building-level leader is preferred.

Degree Requirements

There are three distinct plans of study for individuals seeking an Ed.S. Degree. Each candidate must complete the following core courses or an equivalent. Courses may have been taken as part of a master's degree program.

| | | |
|--------------------|--|-----------|
| ED ADM 6205 | Legal Contexts of Education | 3 |
| ED ADM 6701 | Leadership for Equity | 3 |
| ED ADM 6702 | Supervision in Education Organizations | 3 |
| ED ADM 6714 | K-12 School Administration | 3 |
| TCH ED 6411 | Curriculum Leadership in Education | 3 |
| Total Hours | | 15 |

Emphasis Area Requirements

This plan of study prepares students with a current principal certification and building-level leadership experience to become inquiring, reflective school leaders at the district level. This unique online program is a collaboration with three campuses in the University of Missouri System: Columbia, Kansas City, and St. Louis. Students will work with students enrolled at the partner universities and receive instruction from professors at the different institutions based on expertise and experience. The program aligns with the Missouri Department of Elementary and Secondary Education (DESE) and the Missouri Leadership Standards for superintendent certification. We serve a diverse population of graduate students who are making a positive difference in students' lives.

For students who have obtained an approved master's degree in education administration (minimum 30 credit hours), the Ed.S. is an additional 30 credit hours (Minimum of 60 total credit hours). Candidates should consult with an advisor to ensure their courses align to specific certification requirements.

Internships and State Assessments

Students will complete a total of three semester hours of an internship during the fall and/or spring semester. An approved mentor, usually in the school district in which the student is employed, must be approved by the student's advisor. The mentor must be serving in an assistant superintendent or superintendent capacity, must have superintendent certification, and must have an Ed.S. or doctoral degree. The internship requires an action research project which will serve as a capstone examination for the program.

To be certified, students must take the appropriate content exam as required by the Missouri Department of Elementary and Secondary Education.

The plan of study for this certification area is below:

| | | |
|-------------|--|---|
| ED ADM 5626 | Theories of Educational Administration | 3 |
| ED ADM 5627 | Advanced Education Supervision | 3 |
| ED ADM 6301 | Education Policy Analysis | 3 |
| ED ADM 6305 | School District Administration | 3 |
| ED ADM 6402 | School Personnel Administration | 3 |

| | | |
|--------------------|--|-----------|
| ED ADM 6403 | Problems in School Public Relations | 3 |
| ED ADM 6501 | Principles of Public School Finance in Missouri | 3 |
| ED ADM 6424 | Educational Leadership: Superintendent as Instructional Leader | 3 |
| ED ADM 6435 | Superintendent: Legal Leadership and Management | 3 |
| ED ADM 6903 | Superintendent Clinical Experience | 3 |
| Total Hours | | 30 |

Education MEd Accelerated Master's, Interdisciplinary Studies Emphasis Area

Eligibility

The eligibility requirements are designed to allow Bachelor of Science in Education students to enter the Accelerated Master's Degree program during a short window of time during the senior year. Entry requirements take into account successful completion of multiple measures to be admitted to the Teacher Education Program (TEP).

Students will need to have fulfilled (or be concurrently enrolled in) all B.S. Ed. required coursework prior to applying for the Accelerated M.Ed. program, with the exception of Practicum II coursework (ECH ED 4990, ELE ED 4990, ELE ED 4993, ELE ED 4995, HLTH PE 4990, SEC ED 4990).

Admission Requirements

Provisional Admission

Applicants will be considered for provisional admission if they meet the following criteria.

- Met the approved requirements to be admitted to the Teacher Education Program (TEP).
- Applied for and been accepted to Practicum I.
- Have a minimum GPA of 3.0.

Twelve hours of practicum coursework completed by undergraduate students who have been provisionally admitted to Accelerated Master's program will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. It is recommended that students apply for provisional status no later than the first semester of their senior year.

Graduate Admission

Students are considered for formal admission to the Graduate School each semester after being granted provisional status. Applicants are considered for formal admission if they meet the following criteria.

- Received provisional admission to the Accelerated M.Ed.
- Enrolled in Practicum II.
- Eligible for the B.S.Ed. degree.
- Have met with their academic advisor and developed a plan of study for the M.Ed.

Final decisions concerning formal admission are made by the Graduate School in consultation with the COE Program Director. Students admitted

at this stage are conferred graduate status and continue taking courses in graduate status until the completion of the M.Ed. degree.

Awarding of Degrees

The student must apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In that semester, the student must also apply and be admitted to the graduate program, to begin in the semester following the awarding of the undergraduate degree. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Program Requirements

Candidates for the Accelerated Master's Degree in Education: Interdisciplinary Studies must complete the following for a total of 30 credit hours:

| Practicum II Course | | 12 |
|---|---|-----------|
| One of the following as determined by the candidate's B.S.Ed. degree requirements | | |
| ECH ED 4990 | Practicum II: Early Childhood Education/Early Childhood Special Education Site Based Experience | |
| ELE ED 4990 | Practicum II: Elementary/Special Education Site Based Experience | |
| ELE ED 4993 | Practicum II: Elementary/Special Education/TESOL Site-Based Experience | |
| ELE ED 4995 | Practicum II: Elementary/TESOL Site-Based Experience | |
| HLTH PE 4990 | Practicum II: 16-Week Site-Based Experience in Health and Physical Education | |
| SEC ED 4990 | Practicum II: Site-Based Experience | |
| Graduate Courses | | |
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment | 3 |
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |
| Graduate-level Electives | | 6 |
| Total Hours | | 30 |

Education MEd, Curriculum and Instruction Emphasis

The Master's Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

The M.Ed. with an emphasis in Curriculum and Instruction is designed for graduate candidates who wish to further their competencies as educators, curriculum specialists, or instructional leaders. Educators must develop evidence-based, socially just, and differentiated curriculum to prepare all learners for a digital, global society. This emphasis area explores common issues in curriculum design, implementation, and leadership in K-12 environments. Candidates will create cutting-edge curriculum and design innovative instruction for their educational settings.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements

Curricular Program

The M.Ed. in Education consists of 4 required courses (12 hours) plus candidate choice from emphasis areas and electives (18 hours) for a total of 30 hours. Program requirements are met by:

- (a) completing 2 required foundation courses (6 hours) toward the beginning of the M.Ed. program
- (b) completing the coursework for an emphasis area and/or electives (18 hours)
- (c) completing the 2 exit research capstone classes (6 hours)

Most emphasis areas indicate 3-6 required courses. In addition, electives allow candidates to construct an individualized set of target courses. Transfer graduate credit from another institution may also fit into elective hours.

Candidates seeking certifications with the master's program may require additional coursework and State of Missouri assessments (Reading, TESOL, initial teacher certification).

Required Core

Students are required to complete the following courses within the first 15 hours of study.

| | | |
|-------------|--|---|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment ¹ | 3 |

Required Research Courses

These two research courses should be taken in sequence (not concurrently) at the end of the program. Candidates will design and execute a piece of original practitioner research and present their findings in a public forum.

| | | |
|--------------------|----------------------------------|-----------|
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |
| Total Hours | | 12 |

¹ Students earning the TESOL emphasis area will be required to take TCH ED 6240 instead of TCH ED 6030 in order to meet state certification requirements.

Specific Requirements for the Emphasis Area

In addition to the required courses above (12 hours), candidates seeking an emphasis in Curriculum and Instruction are required to complete the following coursework (18 hours) for a program total of 30 hours.

| | | |
|--------------------|---|-----------|
| ELE ED 6411 | Curriculum Leadership Elementary Programs | 3 |
| TCH ED 6422 | Curriculum Design of K-12 Programs | 3 |
| TCH ED 6423 | Learning Through Inquiry | 3 |
| Graduate Electives | | 9 |
| Total Hours | | 18 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Education MEd, Early Childhood Education Emphasis

The Master's Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform

practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

The M.Ed with an emphasis in Early Childhood Education is designed to enable candidates to further their competencies as teachers or program administrators in public and private early childhood programs. Early childhood education also prepares candidates for positions in community agencies that support families and young children.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements

Curricular Program

The M.Ed. in Education consists of 4 required courses (12 hours) plus candidate choice from emphasis areas and electives (18 hours) for a total of 30 hours. Program requirements are met by:

- (a) completing 2 required foundation courses (6 hours) toward the beginning of the M.Ed. program
- (b) completing the coursework for an emphasis area and/or electives (18 hours)
- (c) completing the 2 exit research capstone classes (6 hours)

Most emphasis areas indicate 3-6 required courses. In addition, electives allow candidates to construct an individualized set of target courses. Transfer graduate credit from another institution may also fit into elective hours.

Candidates seeking certifications with the master’s program may require additional coursework and State of Missouri assessments (Reading, TESOL, initial teacher certification).

Required Core

Students are required to complete the following courses within the first 15 hours of study.

| | | |
|-------------|--|---|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment ¹ | 3 |

Required Research Courses

These two research courses should be taken in sequence (not concurrently) at the end of the program. Candidates will design and execute a piece of original practitioner research and present their findings in a public forum.

| | | |
|-------------|----------------------------------|---|
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |

| | | |
|-------------|--|----|
| Total Hours | | 12 |
|-------------|--|----|

¹ Students earning the TESOL emphasis area will be required to take TCH ED 6240 instead of TCH ED 6030 in order to meet state certification requirements.

Specific Requirements for the Emphasis Area

In addition to the Required M.Ed. Core (12 hours), candidates seeking an emphasis in Early Childhood are required to complete the following coursework (18 hours) for a program total of 30 hours.

Required:

| | | |
|----------------|--|----|
| ECH ED 6412 | Foundations of Early Childhood Education | 3 |
| ECH ED 6413 | Educational Role of Play | 3 |
| ECH ED 6415 | Organization and Development of Early Childhood Programs | 3 |
| ED PSY 6215 | Psychology of Early Childhood Development | 3 |
| Elective hours | | 6 |
| Total Hours | | 18 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Education MEd, Elementary and Special Education Teacher Certification Emphasis

The Master’s Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

This program of study is for individuals with a bachelor's degree who would like to pursue elementary teacher certification and the Master's Degree in Education. This option leads to Missouri Initial Teacher Certification in Elementary Teaching 1-6 with an add-on in Mild/Moderate Cross-Categorical Disabilities, K-12 Special Education.

It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements

Curricular Program

The M.Ed. in Education consists of 4 required courses (12 hours) plus candidate choice from emphasis areas and electives (18 hours) for a total of 30 hours. Program requirements are met by:

- (a) completing 2 required foundation courses (6 hours) toward the beginning of the M.Ed. program
- (b) completing the coursework for an emphasis area and/or electives (18 hours)
- (c) completing the 2 exit research capstone classes (6 hours)

Most emphasis areas indicate 3-6 required courses. In addition, electives allow candidates to construct an individualized set of target courses. Transfer graduate credit from another institution may also fit into elective hours.

Candidates seeking certifications with the master's program may require additional coursework and State of Missouri assessments (Reading, TESOL, initial teacher certification).

Required Core

Students are required to complete the following courses within the first 15 hours of study.

| | | |
|-------------|--|---|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment ¹ | 3 |

Required Research Courses

These two research courses should be taken in sequence (not concurrently) at the end of the program. Candidates will design and execute a piece of original practitioner research and present their findings in a public forum.

| | | |
|-------------|----------------------------------|---|
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |

Total Hours **12**

¹ Students earning the TESOL emphasis area will be required to take TCH ED 6240 instead of TCH ED 6030 in order to meet state certification requirements.

Specific Requirements for the Emphasis Area

In addition to the admission requirements above, candidates must meet the following admission requirements for the Option in Teacher Certification:

1. A passing score on the designated Missouri Content Examination or an approved program of study
2. A 2.75 or higher overall GPA
3. Approved results of the Family Care Safety Registry
4. A clear TB test or chest x-ray, if appropriate

In addition to the required courses above (12 hours), candidates seeking an Elementary and Special Education Teacher Emphasis are required to complete the following coursework:

Required Certification Courses

| | | |
|--------------|---|---|
| TCH ED 5001 | Advanced Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 5310 | Instructional Design and Technology Integration for Educators | 3 |
| TCH ED 6565 | Integrating the Fine Arts into Elementary Classrooms | 2 |
| TCH ED 6566 | Teaching Health and Physical Education Skills and Concepts for the Elementary Teacher | 2 |
| ED PSY 6222 | Advanced Studies in Child and Adolescent Development | 3 |
| ELE ED 6337 | Teaching and Learning Literacy in the Elementary Classrooms: Teaching Reading and Writing | 3 |
| ELE ED 6342 | Addressing the Mathematical Needs of Students | 3 |
| SPEC ED 6412 | Foundations of Inclusive Education | 3 |
| SPEC ED 6315 | Speech and Language Interventions for Children with Disabilities | 3 |
| SPEC ED 6325 | Positive Behavior Interventions for Individual, Classroom, and School-wide Systems | 3 |
| ELE ED 6338 | Literacy Assessment for Guided Instruction | 3 |
| ELE ED 6241 | Science Content, Inquiry-Based Instruction, and Assessment: STEM-Integrated Pedagogy | 2 |
| ELE ED 6246 | Math Content Pedagogy, Inquiry-Based Instruction, and Assessment | 3 |
| ELE ED 6253 | Teaching Social Studies through Reading, Writing, and English Language Learning | 3 |
| SPEC ED 6342 | Advanced Transition Issues and Planning | 3 |
| SPEC ED 6346 | Reading Instruction and Intervention in Special Education | 3 |
| SPEC ED 6415 | Disability Law and Policy | 3 |

| | | |
|--------------------|--|-----------|
| ELE ED 5989 | Practicum I: Elementary/Special Education Site-Based Experience | 2 |
| ELE ED 5990 | Practicum II: Elementary/Special Education Site-Based Experience | 8 |
| Total Hours | | 56 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Education MEd, Elementary Teacher Certification

The Master's Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

This program of study is for individuals with a bachelor's degree who would like to pursue elementary teacher certification and the Master's Degree in Education. This option leads to Missouri Initial Teacher Certification in Elementary Teaching 1-6. It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements

Curricular Program

The M.Ed. in Education consists of 4 required courses (12 hours) plus candidate choice from emphasis areas and electives (18 hours) for a total of 30 hours. Program requirements are met by:

- (a) completing 2 required foundation courses (6 hours) toward the beginning of the M.Ed. program
- (b) completing the coursework for an emphasis area and/or electives (18 hours)
- (c) completing the 2 exit research capstone classes (6 hours)

Most emphasis areas indicate 3-6 required courses. In addition, electives allow candidates to construct an individualized set of target courses. Transfer graduate credit from another institution may also fit into elective hours.

Candidates seeking certifications with the master's program may require additional coursework and State of Missouri assessments (Reading, TESOL, initial teacher certification).

Required Core

Students are required to complete the following courses within the first 15 hours of study.

| | | |
|-------------|--|---|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment ¹ | 3 |

Required Research Courses

These two research courses should be taken in sequence (not concurrently) at the end of the program. Candidates will design and execute a piece of original practitioner research and present their findings in a public forum.

| | | |
|-------------|----------------------------------|---|
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |

Total Hours **12**

¹ Students earning the TESOL emphasis area will be required to take TCH ED 6240 instead of TCH ED 6030 in order to meet state certification requirements.

Specific Requirements for the Emphasis Area

In addition to the admission requirements above, candidates must meet the following admission requirements for the Option in Teacher Certification:

1. A passing score on the designated Missouri Content Examination or an approved program of study
2. A 2.75 or higher overall GPA
3. Approved results of the Family Care Safety Registry
4. A clear TB test or chest x-ray, if appropriate

Applicants must meet all deadlines as set by the Graduate School.

In addition to the required courses above (12 hours), candidates seeking an Elementary Teacher Certification Emphasis are required to complete the following coursework:

Required Certification Core Courses

| | | |
|--------------------|---|-----------|
| TCH ED 5001 | Advanced Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 6565 | Integrating the Fine Arts into Elementary Classrooms | 2 |
| TCH ED 6566 | Teaching Health and Physical Education Skills and Concepts for the Elementary Teacher | 2 |
| TCH ED 6030 | Instruction, Learning, and Assessment | 3 |
| ED PSY 6222 | Advanced Studies in Child and Adolescent Development | 3 |
| TCH ED 5310 | Instructional Design and Technology Integration for Educators | 3 |
| ELE ED 6337 | Teaching and Learning Literacy in the Elementary Classrooms: Teaching Reading and Writing | 3 |
| SPEC ED 6412 | Foundations of Inclusive Education | 3 |
| SPEC ED 6325 | Positive Behavior Interventions for Individual, Classroom, and School-wide Systems | 3 |
| ELE ED 6338 | Literacy Assessment for Guided Instruction | 3 |
| ELE ED 6253 | Teaching Social Studies through Reading, Writing, and English Language Learning | 3 |
| ELE ED 6246 | Math Content Pedagogy, Inquiry-Based Instruction, and Assessment | 3 |
| ELE ED 6241 | Science Content, Inquiry-Based Instruction, and Assessment: STEM-Integrated Pedagogy | 2 |
| ELE ED 5989 | Practicum I: Elementary/Special Education Site-Based Experience | 2 |
| ELE ED 5990 | Practicum II: Elementary/Special Education Site-Based Experience | 8 |
| Total Hours | | 44 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Education MEd, Interdisciplinary Studies

The Master's Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

The M.Ed. with an emphasis in Interdisciplinary Studies is designed for graduate candidates who seek professional growth and advancement in the field of education. The Interdisciplinary Studies program allows candidates to design a master's program that meets their unique needs and professional goals.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements**Curricular Program**

The M.Ed. in Education consists of 4 required courses (12 hours) plus candidate choice from emphasis areas and electives (18 hours) for a total of 30 hours. Program requirements are met by:

- (a) completing 2 required foundation courses (6 hours) toward the beginning of the M.Ed. program
- (b) completing the coursework for an emphasis area and/or electives (18 hours)
- (c) completing the 2 exit research capstone classes (6 hours)

Most emphasis areas indicate 3-6 required courses. In addition, electives allow candidates to construct an individualized set of target courses. Transfer graduate credit from another institution may also fit into elective hours.

Candidates seeking certifications with the master's program may require additional coursework and State of Missouri assessments (Reading, TESOL, initial teacher certification).

Required Core

Students are required to complete the following courses within the first 15 hours of study.

| | | |
|---|--|-----------|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment ¹ | 3 |
| Required Research Courses | | |
| These two research courses should be taken in sequence (not concurrently) at the end of the program. Candidates will design and execute a piece of original practitioner research and present their findings in a public forum. | | |
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |
| Total Hours | | 12 |

¹ Students earning the TESOL emphasis area will be required to take TCH ED 6240 instead of TCH ED 6030 in order to meet state certification requirements.

Specific Requirements for the Emphasis Area

In addition to the Required Core (12 hours), Candidates seeking an emphasis in Interdisciplinary Studies are required to complete 18 hours of elective graduate coursework for a program total of 30 hours.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Education MEd, Interdisciplinary Studies for Teacher Residency

The Master's Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

The M.Ed. with an emphasis in Interdisciplinary Studies for Teach Residency is designed for graduate candidates who seek professional growth and advancement in the field of education and teacher certification in the UMSL Teach Residency program. The Interdisciplinary Studies program allows candidates to design a master's program that meets their unique needs and professional goals.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements

Curricular Program

The M.Ed. in Education consists of 4 required courses (12 hours) plus candidate choice from emphasis areas and electives (18 hours) for a total of 30 hours. Program requirements are met by:

- (a) completing 2 required foundation courses (6 hours) toward the beginning of the M.Ed. program
- (b) completing the coursework for an emphasis area and/or electives (18 hours)
- (c) completing the 2 exit research capstone classes (6 hours)

Most emphasis areas indicate 3-6 required courses. In addition, electives allow candidates to construct an individualized set of target courses. Transfer graduate credit from another institution may also fit into elective hours.

Candidates seeking certifications with the master's program may require additional coursework and State of Missouri assessments (Reading, TESOL, initial teacher certification).

Required Core

Students are required to complete the following courses within the first 15 hours of study.

| | | |
|---|--|-----------|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment ¹ | 3 |
| Required Research Courses | | |
| These two research courses should be taken in sequence (not concurrently) at the end of the program. Candidates will design and execute a piece of original practitioner research and present their findings in a public forum. | | |
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |
| Total Hours | | 12 |

¹ Students earning the TESOL emphasis area will be required to take TCH ED 6240 instead of TCH ED 6030 in order to meet state certification requirements.

Specific Requirements for the Emphasis Area

In addition to the admission requirements above, candidates must be accepted into UMSL Teach Residency to pursue this degree and will complete a graduate program that meets state requirements for certification in their selected content area.

Candidates will follow all Teach Residency guidelines. In addition to the Required Core (12 hours), Candidates seeking an emphasis in Interdisciplinary Studies for Teach Residency are required to complete a minimum of 18 hours of elective graduate coursework in their certification area for a program total of 30 hours.

Learning Outcomes

- Upon completion of the program, graduates will be able to:
- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
 - Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
 - Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
 - Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
 - Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Education MEd, Interdisciplinary Studies for Temporary Authorization Certification

The Master’s Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

The M.Ed. with an emphasis in Interdisciplinary Studies with Temporary Authorization Certificate is designed for graduate candidates who seek professional growth and advancement in the field of education and teacher certification through the Temporary Authorization Certificate program. The Interdisciplinary Studies program allows candidates to design a master’s program that meets their unique needs and professional goals. Candidates will complete a graduate program that also meets state requirements for certification in their selected content area.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements

Curricular Program

- The M.Ed. in Education consists of 4 required courses (12 hours) plus candidate choice from emphasis areas and electives (18 hours) for a total of 30 hours. Program requirements are met by:
- (a) completing 2 required foundation courses (6 hours) toward the beginning of the M.Ed. program
 - (b) completing the coursework for an emphasis area and/or electives (18 hours)
 - (c) completing the 2 exit research capstone classes (6 hours)

Most emphasis areas indicate 3-6 required courses. In addition, electives allow candidates to construct an individualized set of target courses. Transfer graduate credit from another institution may also fit into elective hours.

Candidates seeking certifications with the master’s program may require additional coursework and State of Missouri assessments (Reading, TESOL, initial teacher certification).

Required Core

| | | |
|---|--|---|
| Students are required to complete the following courses within the first 15 hours of study. | | |
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment ¹ | 3 |

Required Research Courses

| | | |
|---|----------------------------------|---|
| These two research courses should be taken in sequence (not concurrently) at the end of the program. Candidates will design and execute a piece of original practitioner research and present their findings in a public forum. | | |
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |

Total Hours 12

¹ Students earning the TESOL emphasis area will be required to take TCH ED 6240 instead of TCH ED 6030 in order to meet state certification requirements.

Specific Requirements for the Emphasis Area

In addition to the Required Core (12 hours), Candidates seeking an emphasis in Interdisciplinary Studies with Temporary Authorization Certificate are required to complete a minimum of 18 hours of elective graduate coursework in their certification area for a program total of 30 hours.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Education MEd, Reading Emphasis

The Master's Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

The M.Ed. program with an emphasis in Reading (K-12 literacy) is designed to enable candidates to further their competencies as teachers of reading, writing and other communication arts. The program also prepares them for positions as literacy coaches, reading specialists, curriculum specialists, consultants in areas of communication arts, and/or for further graduate study. This program may lead to the Department of Elementary and Secondary Education (DESE) requirements for Special Reading K-12 certification in Missouri.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are

considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements

To be recommended for Missouri Department of Elementary and Secondary Education Special Reading Certification K-12, teachers must have a valid Missouri teacher's certificate, two years of approved classroom teaching experience as determined by DESE, successful completion of any required DESE assessments, and the following:

- A course(s) in child and adolescent psychology (3-6 hours)
- A course in psychology/education of exceptional child (3 hours)
- A course in reading in the content area (3 hours)
- A course in language acquisition or development specifically targeting children with special needs (3 hours)
- A course in behavior intervention strategies (3 hours)
- A course in counseling techniques (3 hours)

These certification requirements may be in addition to the courses listed in the program of study above. Students should consult their graduate advisor for information about these courses.

Required Core

Candidates are required to complete the following courses within the first 15 hours of study:

| | | |
|-------------|--|---|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
|-------------|--|---|

ED PSY 6030

Required Evaluation of Abilities and Achievement Course

| | | |
|-------------|--------------------------------------|---|
| ED REM 6716 | Academic Assessment and Intervention | 3 |
|-------------|--------------------------------------|---|

Required Capstone Course

The capstone course is completed at the end of the program.

| | | |
|-------------|---|---|
| ELE ED 6482 | Problems and Research in Teaching Elementary School | 3 |
|-------------|---|---|

Total Hours **9**

Specific Requirements for the Emphasis Area

In addition to the required courses above (12 hours), candidates seeking an emphasis in Reading are required to complete the following coursework (18 hours) for a program total of 30 hours.

| | | |
|---------------------------|--|---|
| ELE ED 6387 | Literacy Acquisition and Learning for Diverse Students | 3 |
| ELE ED 6684 | Instructional Strategies for Teaching Reading | 3 |
| ELE ED 6686 | Analysis and Correction of Reading Disabilities | 3 |
| ELE ED 6493 | Reading Specialist Practicum I | 3 |
| ELE ED 6494 | Reading Specialist Practicum II | 3 |
| Literacy Related Elective | | 3 |

Total Hours **18**

Total: 30 hours
Learning Outcomes

- Upon completion of the program, graduates will be able to:
- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
 - Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
 - Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
 - Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
 - Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Education MEd, Secondary
Teacher Certification Emphasis

The Master's Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

This program of study is for individuals with a bachelor's degree who would like to pursue secondary teacher certification and the Master's Degree in Education.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements
Curricular Program

The M.Ed. in Education consists of 4 required courses (12 hours) plus candidate choice from emphasis areas and electives (18 hours) for a total of 30 hours. Program requirements are met by:

- (a) completing 2 required foundation courses (6 hours) toward the beginning of the M.Ed. program
- (b) completing the coursework for an emphasis area and/or electives (18 hours)
- (c) completing the 2 exit research capstone classes (6 hours)

Most emphasis areas indicate 3-6 required courses. In addition, electives allow candidates to construct an individualized set of target courses. Transfer graduate credit from another institution may also fit into elective hours.

Candidates seeking certifications with the master's program may require additional coursework and State of Missouri assessments (Reading, TESOL, initial teacher certification).

| Required Core | | |
|---|--|---|
| Students are required to complete the following courses within the first 15 hours of study. | | |
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment ¹ | 3 |

| Required Research Courses | | |
|---|----------------------------------|----|
| These two research courses should be taken in sequence (not concurrently) at the end of the program. Candidates will design and execute a piece of original practitioner research and present their findings in a public forum. | | |
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |
| Total Hours | | 12 |

¹ Students earning the TESOL emphasis area will be required to take TCH ED 6240 instead of TCH ED 6030 in order to meet state certification requirements.

Specific Requirements for the Emphasis Area

- In addition to the admission requirements above, candidates must meet the following admission requirements for the Option in Teacher Certification:
1. A passing score on the designated Missouri Content Assessment
 2. A 2.75 or higher overall GPA
 3. Approved results of the Missouri Family Care Safety Registry
 4. A clear TB test or chest x-ray, if appropriate

Applicants must meet all deadlines as set by the Graduate School.

In addition to the required courses above (12 hours), candidates seeking an Secondary Teacher Certification Emphasis are required to complete the following coursework:

| Required Certification Courses | | |
|--------------------------------|--|---|
| TCH ED 5000 | Advanced Early Clinical Experience | 1 |
| TCH ED 5001 | Advanced Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 5311 | Foundations of Education | 3 |
| TCH ED 5310 | Instructional Design | 3 |

| | | |
|--------------------|--|-----------|
| TCH ED 5312 | Teaching Reading in the Content Areas | 3 |
| TCH ED 5880 | Writing in the Content Areas | 3 |
| ED PSY 6222 | Advanced Studies in Child and Adolescent Development | 3 |
| SEC ED 4xxx | Curriculum and Methods of Teaching [Subject Area] | 3 |
| SPEC ED 6412 | Foundations of Inclusive Education | 3 |
| SEC ED 5989 | Practicum I: Site-Based Experience | 2 |
| SEC ED 5990 | Practicum II: Site-Based Experience | 8 |
| Total Hours | | 33 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Education MEd, Teaching English to Speakers of Other Languages Emphasis

The Master's Degree in Education is an accredited program appropriate for K-12 teachers, specialists, department chairpersons, and those who work in informal learning or international educational settings. Candidates choose electives that will support their personal growth and development as an educational leader to impact the communities with which they work.

Diverse candidates will engage in a learner-centered environment committed to the success of historically marginalized and diverse students, research, and community engagement. Within diverse education settings, candidates will: advance pedagogical knowledge, recognize inequalities in educational opportunity, design differentiated assessments to inform practice, critically examine professional practice, and demonstrate commitment to ethical professional practice.

It is important that both candidates and advisors plan ahead to ensure courses are taken when they are offered in the schedule. Programs must be planned with an academic advisor and meet the approval of the faculty advisor, adhering to the College of Education and UMSL Graduate School policies.

The M.Ed. program with an emphasis in TESOL is designed to meet the need for teachers who can apply knowledge about language learning to their culturally and linguistically diverse classrooms. This program meets the requirements for a Missouri Department of Elementary and Secondary

Education (DESE) endorsement in Teaching English to Speakers of Other Languages (TESOL).

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Education only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

Degree Requirements

Curricular Program

The M.Ed. in Education consists of 4 required courses (12 hours) plus candidate choice from emphasis areas and electives (18 hours) for a total of 30 hours. Program requirements are met by:

- (a) completing 2 required foundation courses (6 hours) toward the beginning of the M.Ed. program
- (b) completing the coursework for an emphasis area and/or electives (18 hours)
- (c) completing the 2 exit research capstone classes (6 hours)

Most emphasis areas indicate 3-6 required courses. In addition, electives allow candidates to construct an individualized set of target courses. Transfer graduate credit from another institution may also fit into elective hours.

Candidates seeking certifications with the master's program may require additional coursework and State of Missouri assessments (Reading, TESOL, initial teacher certification).

Required Core

Students are required to complete the following courses within the first 15 hours of study.

| | | |
|-------------|--|---|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment ¹ | 3 |

Required Research Courses

These two research courses should be taken in sequence (not concurrently) at the end of the program. Candidates will design and execute a piece of original practitioner research and present their findings in a public forum.

| | | |
|-------------|----------------------------------|---|
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |

Total Hours **12**

¹ Students earning the TESOL emphasis area will be required to take TCH ED 6240 instead of TCH ED 6030 in order to meet state certification requirements.

Specific Requirements for the Emphasis Area

In addition to the Required Core (12 hours), candidates seeking an emphasis in TESOL are required to complete the following coursework (18 hours) for a total of 30 hours.

| | | |
|--------------------|---|-----------|
| TCH ED 6210 | Foundations Of Teaching English To Speakers Of Other Languages | 3 |
| TCH ED 6220 | Principles of Second/Foreign Language Acquisition | 3 |
| TCH ED 6224 | Integrated Curriculum Development for Content Teaching of English Language Learners | 3 |
| TCH ED 6230 | Cross-Cultural Communication in the Classroom | 3 |
| TCH ED 6250 | Methods and Materials for Teaching English to Speakers of Other Languages | 3 |
| TCH ED 6260 | Practicum in Teaching English to Speakers of Other Languages | 3 |
| Total Hours | | 18 |

Education Minor

A minor in education consists of 18 hours of course work. A total of 15 hours must be taken at or above the 2000 level including at least 2 courses at or above the 3000 level from the following curricular designations: ART ED, CNS ED, ECH ED, ED PSY, ED REM, ED TECH, EDUC, ELE ED, HLTH PE, MUS ED, PHYS ED, SEC ED, SPEC ED, and TCH ED. In addition, a 3 hour capstone course must be selected from the following:

| | | |
|-------------|--|---|
| ECH ED 4989 | Practicum I: Early Childhood Education/Early Childhood Special Education Site Based Experience | 3 |
| EDUC 4989 | Internship I | 3 |
| ELE ED 4989 | Practicum I: Elementary/Special Education Site-Based Experience | 3 |
| ELE ED 4992 | Practicum I: Elementary/Special Education/TESOL Site-Based Experience | 3 |
| ELE ED 4994 | Practicum I: Elementary/TESOL Site-Based Experience | 3 |
| MID ED 4989 | Practicum I: Middle Level Education Site-Based Experience | 3 |
| SEC ED 4989 | Practicum I: Site-Based Experience | 3 |

All courses in the minor must be passed with a grade of C- or better. Candidates must have a cumulative grade point average of 2.0 or better in the minor. Courses taken on a satisfactory/unsatisfactory basis may not be applied to the minor. At least 9 hours must be taken while in residence at UMSL.

Education PhD, Counseling Emphasis

Admission Requirements

In addition to meeting the application and admissions requirements of the Graduate School, students must submit:

- Three letters of recommendation (at least two from individuals with earned doctorates, preferably prior instructors).
- A copy of a paper you have written on a scholarly topic, as a writing sample.

- A professional resume.
- Evidence of above-average academic records. A GPA of 3.5 or higher is preferred.
- Answers to these three questions (limit responses to 300 words or less per question)
 - How do you envision the UMSL doctoral program preparing you to meet your career goals?
 - What are your experiences working with diverse populations and what have you learned from these experiences?
 - What personal qualities do you possess that relate to your interest in doctoral education in counseling?
- Optional: GRE scores.

Admission is competitive, and a favorable vote of an admission interview committee, composed of faculty in the emphasis area, is required.

Degree Program

- Coursework: A minimum of 60 credit hours is required beyond the Master's degree, including 6 hours of dissertation research. Students must follow the residency requirements of the Graduate School.
- Dissertation: All students must defend orally a written dissertation proposal to their dissertation committee. A dissertation embodying the results of the original research must be accepted by the dissertation committee and the Graduate School.

Admission Application

To ensure time for review and decision, applicants should submit the Graduate School application, college transcripts, and any program-specific materials (e.g. supplemental application, letters of recommendation, etc.) well in advance of the **November 1st deadline**. Please note that unofficial transcripts can be uploaded with the Graduate School application to expedite admissions decisions; however, official transcripts must be received directly from all prior institutions attended before regular admission to any program will be granted. In addition, applicants are urged to request transcripts and letters or recommendation two weeks before completing the online application. Consideration of applications cannot be undertaken until all materials are available.

Degree Requirements

Students in the Counseling emphasis area complete the following requirements:

Research Methods (21 hours)

| | | |
|-----------------------|--|---|
| ED REM 6710 | Educational Research Methods and Design ¹ | 3 |
| ED REM 6735 | Statistical Analysis for Education Research ² | 3 |
| CNS ED 7020 | Seminar in Counseling Research | 3 |
| CNS ED 7025 | Advanced Counseling Research | 3 |
| ED REM 7781 | Qualitative Methods in Educational Research I | 3 |
| One of the following: | | 3 |
| ED REM 7771 | Quantitative Research Methods I | |
| ED REM 7772 | Quantitative Research Methods II | |
| ED REM 7782 | Qualitative Methods in Educational Research II | |

One of the following: 3

| | | |
|-----------------------------------|---|-----------|
| ED REM 6730 | Educational Program Development and Evaluation | |
| ED REM 7771 | Quantitative Research Methods I (if not taken above) | |
| ED REM 7772 | Quantitative Research Methods II (if not taken above) | |
| ED REM 7782 | Qualitative Methods in Educational Research II (if not taken above) | |
| Counseling Core (59 hours) | | |
| CNS ED 6010 | Theories of Counseling ¹ | 3 |
| CNS ED 6020 | Ethical and Professional Issues in Counseling ¹ | 3 |
| CNS ED 6030 | Foundations for Multicultural Counseling ¹ | 3 |
| CNS ED 6040 | Group Procedures in Counseling ¹ | 3 |
| CNS ED 6050 | Assessment in Counseling ¹ | 3 |
| CNS ED 6270 or CNS ED 6370 | School Counseling Practicum ¹ Clinical Mental Health Counseling Practicum I | 3 |
| CNS ED 6280 or CNS ED 6380 | School Counseling Internship ¹ Clinical Mental Health Counseling Internship | 6 |
| CNS ED 6400 | Career Counseling and Development ¹ | 3 |
| CNS ED 6410 | Advanced Career and Leadership Development | 3 |
| CNS ED 7000 | Advanced Theories and Practice of Counseling | 3 |
| CNS ED 7010 | Advanced Multicultural Counseling | 3 |
| CNS ED 7030 | Counselor Education and Supervision of Individuals and Groups | 3 |
| CNS ED 7035 | Counselor Education and Supervision Internship | 3 |
| CNS ED 7060 | Professional Issues in Counselor Education | 2 |
| CNS ED 7075 | Teaching, Learning, and Technology in Counselor Education | 3 |
| CNS ED 7700 | Advanced Counseling Internship | 3 |
| ED PSY 6210 | Life-Span: Individual and Family Development ¹ | 3 |
| Electives | | 6 |
| Internship | | |
| CNS ED 7780 | Doctoral Internship | 4 |
| Dissertation Research | | |
| EDUC 7999 | Dissertation Research | 6 |
| Total Hours | | 90 |

¹ These courses are normally part of a master's program. Equivalent graduate coursework may count as transfer credit toward the degree with approval of the Ph.D. program.

² ED REM 7771 may be taken if a graduate statistics course has been completed.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate and apply the ethical and culturally relevant practice of counseling
- Be adept at conceptualizing clients using theory and integrating theory and research into counseling practice
- Demonstrate skills in the process and practice of clinical supervision and consultation, including the use of theory, assessment, gatekeeping, and ethical and culturally relevant strategies
- Develop skills in teaching, including course design, assessment, andragogy, differentiation, and gatekeeping.
- Demonstrate the ethical practice of conducting rigorous and intentionally designed counseling research.
- Develop and refine scholarship skills through advanced qualitative and quantitative coursework to be able to disseminate findings through professional presentations or publications
- Demonstrate abilities to serve as leaders in the field and advocates for the profession, for clients, and with marginalized populations to stand up against issues of systemic inequity

Education PhD, Educational Leadership and Policy Studies Emphasis

Admission and General Requirements

In addition to meeting the application and admissions requirements of the Graduate School, students must submit:

- Three letters of recommendation (at least two from individuals with earned doctorates, preferably prior instructors).
- An original essay.
- A professional resume.
- Evidence of above-average academic records. A GPA of 3.5 or higher is preferred.
- GRE scores. Quantitative and verbal scores at or above the 50th percentile are preferred. An analytical writing score of 4.0 or higher is preferred.

Admission is competitive, and a favorable vote of an admission interview committee, composed of faculty in the emphasis area, is required.

Degree Program

- Coursework: A minimum of 60 credit hours is required beyond the master's degree, including 6 hours of dissertation research. A minimum of 42 of these hours must be completed in residence. For students who have not completed a master's degree, a minimum of 90 hours, postbaccalaureate, is required, including 6 hours of dissertation research (the Graduate School's residency requirement applies). Students in the Counseling emphasis area complete the following requirements: a minimum 90 hours, postbaccalaureate, including 12 hours of dissertation research (the Graduate School's residency requirement applies).
- Dissertation: All students must defend orally a written dissertation proposal to their dissertation committee. A dissertation embodying the results of original research must be accepted by the dissertation committee and the Graduate School.

Admission Application

To ensure time for review and decision, applicants should submit the Graduate School application, college transcripts, and any program-specific materials (e.g. supplemental application, letters of recommendation, etc.) well in advance of the **December 1st deadline**. Please note that unofficial transcripts can be uploaded with the Graduate School application to expedite admissions decisions; however, official transcripts must be received directly from all prior institutions attended before regular admission to any program will be granted. In addition, applicants are urged to request transcripts and letters or recommendation two weeks before completing the online application. Consideration of applications cannot be undertaken until all materials are available.

Degree Requirements

Students in the Teaching-Learning Processes, Educational Leadership and Policy Studies, and Educational Psychology emphasis areas complete the following requirements.

1. Research Methods 15-18

Students in the Teaching –Learning Processes, Educational Leadership and Policy Studies, and Educational Psychology emphasis areas should complete the following research methods courses (or equivalent).

| | |
|-------------|--|
| ED REM 6735 | Statistical Analysis for Education Research (Prerequisite) |
|-------------|--|

| | |
|-------------|---------------------------------------|
| ED REM 6750 | Advanced Research Design In Education |
|-------------|---------------------------------------|

Plus any three methods courses from the following:

| | |
|-------------|---------------------------------|
| ED REM 7771 | Quantitative Research Methods I |
|-------------|---------------------------------|

| | |
|-------------|----------------------------------|
| ED REM 7772 | Quantitative Research Methods II |
|-------------|----------------------------------|

| | |
|-------------|---|
| ED REM 7781 | Qualitative Methods in Educational Research I |
|-------------|---|

| | |
|-------------|--|
| ED REM 7782 | Qualitative Methods in Educational Research II |
|-------------|--|

This sequence totals 15 hours of methods courses. Remaining hours can be completed with other ED REM courses numbered 6000 or higher or research courses in another curriculum.

2. Program Area of Study to Develop Discipline Knowledge (as determined by student, advisor, and program) 24-26

3. Core courses 10-14

| | | |
|-----------|--|-----|
| EDUC 7490 | Directed Readings in the Education Research Literature | 1-3 |
|-----------|--|-----|

| | | |
|-----------|--|---|
| EDUC 7050 | The Research Process I: Framing Research Questions in Education Research | 3 |
|-----------|--|---|

| | | |
|-----------|--|---|
| EDUC 7625 | Building Socially Just and Ethical Educational Communities | 3 |
|-----------|--|---|

| | | |
|-----------|--|-----|
| Electives | | 2-4 |
|-----------|--|-----|

4. Dissertation Proposal Writing

| | | |
|-----------|---|-----|
| EDUC 7950 | Preparation for Writing the Dissertation Proposal | 1-3 |
|-----------|---|-----|

5. Dissertation

| | | |
|-----------|-----------------------|---|
| EDUC 7999 | Dissertation Research | 6 |
|-----------|-----------------------|---|

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Access, critically examine, and use theoretically informed literature in human development, the science of learning, and sociocultural factors that explain variation in learning and developmental pathways.
- Examine and apply complex interrelationships that affect issues of diversity, equity and social justice from multiple and cross-disciplinary perspectives to teaching and learning processes contexts.
- Formulate questions, increase knowledge, use statistics intelligently, and make ethical decisions integrating multiple perspectives using reason, evidence, and teaching and learning processes contexts.
- Analyze, categorize, and evaluate qualitative, quantitative, and/or mixed methods approaches within an education context.
- Design and produce rigorous research projects as an independent scholar using qualitative, quantitative, and/or mixed methods approaches.
- Apply and demonstrate leadership skills to promote community engagement or civic action to benefit the public good related to teaching and learning processes settings.
- Communicate effectively and engage with others constructively across contexts, languages, and media.

Education PhD, Educational Psychology Emphasis

Admission and General Requirements

In addition to meeting the application and admissions requirements of the Graduate School, students must submit:

- Three letters of recommendation (at least two from individuals with earned doctorates, preferably prior instructors).
- An original essay.
- A professional resume.
- Evidence of above-average academic records. A GPA of 3.5 or higher is preferred.
- GRE scores. Quantitative and verbal scores at or above the 50th percentile are preferred. An analytical writing score of 4.0 or higher is preferred.

Admission is competitive, and a favorable vote of an admission interview committee, composed of faculty in the emphasis area, is required.

Degree Program

- Coursework: A minimum of 60 credit hours is required beyond the master's degree, including 6 hours of dissertation research. A minimum of 42 of these hours must be completed in residence. For students who have not completed a master's degree, a minimum of 90 hours, postbaccalaureate, is required, including 6 hours of dissertation research (the Graduate School's residency requirement applies). Students in the Counseling emphasis area complete the following requirements: a minimum 90 hours, postbaccalaureate, including 12 hours of dissertation research (the Graduate School's residency requirement applies).
- Dissertation: All students must defend orally a written dissertation proposal to their dissertation committee. A dissertation embodying the results of original research must be accepted by the dissertation committee and the Graduate School.

Admission Application

To ensure time for review and decision, applicants should submit the Graduate School application, college transcripts, and any program-specific

materials (e.g. supplemental application, letters of recommendation, etc.) well in advance of the **December 1st deadline**. Please note that unofficial transcripts can be uploaded with the Graduate School application to expedite admissions decisions; however, official transcripts must be received directly from all prior institutions attended before regular admission to any program will be granted. In addition, applicants are urged to request transcripts and letters of recommendation two weeks before completing the online application. Consideration of applications cannot be undertaken until all materials are available.

Degree Requirements

Students in the Teaching-Learning Processes, Educational Leadership and Policy Studies, and Educational Psychology emphasis areas complete the following requirements.

1. Research Methods

15-18

Students in the Teaching –Learning Processes, Educational Leadership and Policy Studies, and Educational Psychology emphasis areas should complete the following research methods courses (or equivalent).

| | |
|-------------|--|
| ED REM 6735 | Statistical Analysis for Education Research (Prerequisite) |
| ED REM 6750 | Advanced Research Design In Education |

Plus any three methods courses from the following:

| | |
|-------------|--|
| ED REM 7771 | Quantitative Research Methods I |
| ED REM 7772 | Quantitative Research Methods II |
| ED REM 7781 | Qualitative Methods in Educational Research I |
| ED REM 7782 | Qualitative Methods in Educational Research II |

This sequence totals 15 hours of methods courses. Remaining hours can be completed with other ED REM courses numbered 6000 or higher or research courses in another curriculum.

2. Program Area of Study to Develop Discipline Knowledge (as determined by student, advisor, and program)

24-26

3. Core courses

10-14

| | | |
|-----------|--|-----|
| EDUC 7490 | Directed Readings in the Education Research Literature | 1-3 |
| EDUC 7050 | The Research Process I: Framing Research Questions in Education Research | 3 |
| EDUC 7625 | Building Socially Just and Ethical Educational Communities | 3 |
| Electives | | 2-4 |

4. Dissertation Proposal Writing

| | | |
|-----------|---|-----|
| EDUC 7950 | Preparation for Writing the Dissertation Proposal | 1-3 |
|-----------|---|-----|

5. Dissertation

| | | |
|-----------|-----------------------|---|
| EDUC 7999 | Dissertation Research | 6 |
|-----------|-----------------------|---|

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Access, critically examine, and use theoretically informed literature in educational administration, educational leadership, education policy, reform, and practice.

- Examine and apply complex interrelationships that affect issues of diversity, equity and social justice from multiple and cross-disciplinary perspectives to educational leadership and policy studies contexts.
- Formulate questions, increase knowledge, use statistics intelligently, and make ethical decisions integrating multiple perspectives using reason, evidence, and educational leadership and policy studies contexts.
- Analyze, categorize, and evaluate qualitative, quantitative, and/or mixed methods approaches within an education context.
- Design and produce rigorous research projects as an independent scholar using qualitative, quantitative, and/or mixed methods approaches.
- Apply and demonstrate leadership skills to promote community engagement or civic action to benefit the public good related to educational leadership and policy studies settings.
- Communicate effectively and engage with others constructively across contexts, languages, and media.

Education PhD, Teaching-Learning Process Emphasis

Admission and General Requirements

In addition to meeting the application and admissions requirements of the Graduate School, students must submit:

- Three letters of recommendation (at least two from individuals with earned doctorates, preferably prior instructors).
- An original essay.
- A professional resume.
- Evidence of above-average academic records. A GPA of 3.5 or higher is preferred.
- GRE scores. Quantitative and verbal scores at or above the 50th percentile are preferred. An analytical writing score of 4.0 or higher is preferred.

Admission is competitive, and a favorable vote of an admission interview committee, composed of faculty in the emphasis area, is required.

Degree Program

- Coursework: A minimum of 60 credit hours is required beyond the master's degree, including 6 hours of dissertation research. A minimum of 42 of these hours must be completed in residence. For students who have not completed a master's degree, a minimum of 90 hours, postbaccalaureate, is required, including 6 hours of dissertation research (the Graduate School's residency requirement applies). Students in the Counseling emphasis area complete the following requirements: a minimum 90 hours, postbaccalaureate, including 12 hours of dissertation research (the Graduate School's residency requirement applies).
- Dissertation: All students must defend orally a written dissertation proposal to their dissertation committee. A dissertation embodying the results of original research must be accepted by the dissertation committee and the Graduate School.

Admission Application

To ensure time for review and decision, applicants should submit the Graduate School application, college transcripts, and any program-specific materials (e.g. supplemental application, letters of recommendation, etc.) well in advance of the **December 1st deadline**. Please note that

unofficial transcripts can be uploaded with the Graduate School application to expedite admissions decisions; however, official transcripts must be received directly from all prior institutions attended before regular admission to any program will be granted. In addition, applicants are urged to request transcripts and letters or recommendation two weeks before completing the online application. Consideration of applications cannot be undertaken until all materials are available.

Degree Requirements

Students in the Teaching-Learning Processes, Educational Leadership and Policy Studies, and Educational Psychology emphasis areas complete the following requirements.

1. Research Methods 15-18

Students in the Teaching –Learning Processes, Educational Leadership and Policy Studies, and Educational Psychology emphasis areas should complete the following research methods courses (or equivalent).

| | |
|-------------|--|
| ED REM 6735 | Statistical Analysis for Education Research (Prerequisite) |
| ED REM 6750 | Advanced Research Design In Education |

Plus any three methods courses from the following:

| | |
|-------------|--|
| ED REM 7771 | Quantitative Research Methods I |
| ED REM 7772 | Quantitative Research Methods II |
| ED REM 7781 | Qualitative Methods in Educational Research I |
| ED REM 7782 | Qualitative Methods in Educational Research II |

This sequence totals 15 hours of methods courses. Remaining hours can be completed with other ED REM courses numbered 6000 or higher or research courses in another curriculum.

2. Program Area of Study to Develop Discipline Knowledge (as determined by student, advisor, and program) 24-26

3. Core courses 10-14

| | | |
|-----------|--|-----|
| EDUC 7490 | Directed Readings in the Education Research Literature | 1-3 |
| EDUC 7050 | The Research Process I: Framing Research Questions in Education Research | 3 |
| EDUC 7625 | Building Socially Just and Ethical Educational Communities | 3 |

| | |
|-----------|-----|
| Electives | 2-4 |
|-----------|-----|

4. Dissertation Proposal Writing

| | | |
|-----------|---|-----|
| EDUC 7950 | Preparation for Writing the Dissertation Proposal | 1-3 |
|-----------|---|-----|

5. Dissertation

| | | |
|-----------|-----------------------|---|
| EDUC 7999 | Dissertation Research | 6 |
|-----------|-----------------------|---|

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Access, critically examine, and use theoretically informed literature in human development, the science of learning, and sociocultural factors that explain variation in learning and developmental pathways.
- Examine and apply complex interrelationships that affect issues of diversity, equity and social justice from multiple and cross-disciplinary perspectives to teaching and learning processes contexts.

- Formulate questions, increase knowledge, use statistics intelligently, and make ethical decisions integrating multiple perspectives using reason, evidence, and teaching and learning processes contexts.
- Analyze, categorize, and evaluate qualitative, quantitative, and/or mixed methods approaches within an education context.
- Design and produce rigorous research projects as an independent scholar using qualitative, quantitative, and/or mixed methods approaches.
- Apply and demonstrate leadership skills to promote community engagement or civic action to benefit the public good related to teaching and learning processes settings.
- Communicate effectively and engage with others constructively across contexts, languages, and media.

Educational Administration MEd, Community Education Emphasis

The M.Ed. in Administration, Community Education will not be accepting applications for the 2024-2025 Academic Year due to curricular revisions.

Master of Education: Educational Administration with Emphasis in Community Education

This is a 32-credit hour program for students interested in Community Education.

Competencies/Expectations/Outcomes that all students must demonstrate to complete the program successfully:

- School Administrator candidates in the College of Education are held to the Interstate School Leaders Licensure Consortium’s Standards for School Leaders (ISLLC)
- A school administrator is an educational leader who promotes the success of all students by facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by the school community.
- A school administrator is an educational leader who promotes the success of all students by advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth.
- A school administrator is an educational leader who promotes the success of all students by ensuring management of the organization, operations, and resources for a safe, efficient, and effective learning environment.
- A school administrator is an educational leader who promotes the success of all students by collaborating with families and community members, responding to diverse community interests and needs, and mobilizing community resources.
- A school administrator is an educational leader who promotes the success of all students by acting with integrity, fairness and in an ethical manner.
- A school administrator is an educational leader who promotes the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal and cultural context.

- A school administrator is an educational leader who promotes the effective use of technology to maximize student learning and efficiently manage school operations.

The ISLLC standards pertain to Elementary and Secondary Administration and Community Education.

Degree Requirements

2.10

| | | |
|----------------|---|---|
| ED FND 6421 | Philosophy of Education ³ | 3 |
| ED FND 6435 | History of Western Education ³ | 3 |
| or ED FND 4330 | History of American Education ³ | |
| ED ADM 6202 | Race and Culture in Educational Reform and Policy | 3 |

ED ADM 6203

2.20 Research Core

| | | |
|-------------|-------------------------------------|---|
| ED ADM 6301 | Education Policy Analysis | 3 |
| ED REM 5730 | Educational Statistics ³ | 3 |

2.30 Community Education

| | | |
|-------------|---------------------------|---|
| ED ADM 6301 | Education Policy Analysis | 3 |
| ED ADM 6900 | Internship | 6 |

2.40 School Specialization

Select 2.41 or 2.42 listed below: ²

2.41 Elementary School Administration

| | | |
|-------------|---|--|
| ED ADM 6302 | | |
| ELE ED 6411 | Curriculum Leadership Elementary Programs | |

2.42 Secondary School Administration

| | | |
|-------------|------------------------------------|--|
| ED ADM 6304 | | |
| SEC ED 6415 | Curriculum Leadership in Education | |

Total Hours **30**

¹ Exit Requirement--Taken within the last 9 semester hours of the M.Ed. program.

² Students take either section 2.41 or section 2.42, not both sections.

³ This course will not be offered in 2014-2015. Please contact the department for more information.

Educational Administration MEd, School Administration Emphasis

The Master of Education in Education Administration with emphasis in School Administration is intended for K-12 teachers interested in a School Leadership Preparation Program. The program partially fulfills Missouri Department of Elementary and Secondary Education requirements for licensure. This program is designed to prepare highly effective administrators who engage in reflective practice, drive gains in student achievement and create a positive school culture.

Students admitted to the program become members of a cohort that begins study in the fall semester. Those who maintain enrollment complete the degree in two years.

This program consists of 33 credit hours. The second year of the program features a 300-clock-hour field experience as a school leader.

Admission

Admission to the Master of Education in Education Administration degree program is competitive. All application materials should be submitted by March 1 for admission in the cohort which will begin the following fall. In order to graduate in two years, students must remain with their cohort.

To apply, potential students must have or complete the following:

- Application - <http://umsl.edu/go/Apply-Now>. A statement of purpose should included.
- Official transcripts from all universities attended. Successful applicants must have completed a baccalaureate degree in education before beginning the master's program.
- Minimum of 3.0 on 4.0 scale is preferred, however students whose GPA is between 2.75 and 2.99 may be admitted on a restricted basis.
- There are no entrance exams for domestic students. International students are required to document English proficiency by providing scores from an internationally accepted standardized examination before a decision is made on admission.
- Letters of recommendation may be invited for applicants who do not meet the normal criteria for admission.
- Students must have at least two years of teaching experience.

Degree Requirements

| | | |
|--------------------|--|-----------|
| ED ADM 6205 | Legal Contexts of Education | 3 |
| ED ADM 6701 | Leadership for Equity | 3 |
| ED ADM 6702 | Supervision in Education Organizations | 3 |
| ED ADM 6704 | Data-Driven Instruction and Team Leadership I | 3 |
| ED ADM 6705 | School Culture I | 3 |
| ED ADM 6712 | Management of Organizational Systems | 3 |
| ED ADM 6714 | K-12 School Administration | 3 |
| ED ADM 6901 | K-12 School Principal Clinical Experience | 3 |
| ED ADM 6902 | School Principal Clinical Experience: Supplemental | 3 |
| TCH ED 6411 | Curriculum Leadership in Education | 3 |
| ED PSY 6445 | Character Education And Development | 3 |
| Total Hours | | 33 |

Students must complete the courses listed in this program or an equivalent, as approved by the program director. Students who have prior graduate credits may be able to transfer 9-12 credits towards this degree. In this matter, it is important to consult with your academic advisor as specific courses are required for certification. Additionally, the courses must have been completed within the specified time requirements outlined by the Graduate School rules.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Develop and implement a vision for a school in order to guide the learning of all students.(Visionary Leadership)

- Promote effective instructional practices, utilize effective assessments, and ensure professional growth among school faculty. (Instructional Leadership)
- Implement operational systems, oversee personnel, and ensure equitable and strategic use of resources. (Managerial Leadership)
- Interact professionally with students, staff, family, and community, respecting and embracing diversity and inclusion. (Relational Leader)
- Actively engage in reflective practice and apply new knowledge and understanding in order to drive appropriate change. (Innovative Leadership)

Educational Psychology MEd

The Department of Education Sciences and Professional Programs provides training in the theory, research, and practice of the psychological mechanisms underlying teaching, learning, and human development of students as well as the related school processes and structures. The department also specializes in educational research, psychoeducational assessment, and school psychology.

The M.Ed. in Educational Psychology is a flexible degree that allows candidates to tailor the program curriculum to meet individual interests and career goals. The degree is not associated with any particular position or career; rather it is intended to enhance current performance in a variety of educational and community-based settings and roles, to facilitate advancement within one's current position, and to prepare candidates for other advanced degrees in education or psychology. The M.Ed. in Educational Psychology degree consists of 30 hours of graduate coursework in the following areas:

- A. Educational and Psychological Foundations (15 hours)
- B. Electives (12 hours)
- C. Capstone Experience (3 hours)

The foundations courses consist of 6 hours of study regarding the educational and psychological foundations, 3 hours of human development, and 6 hours of educational research and evaluation methods. The specific courses chosen within each category, the electives, and capstone experience will vary according to the candidate's interests.

Admissions Requirements

Admissions requirements include an earned baccalaureate degree from an accredited college or university with an overall grade point average of 3.0 or higher, a completed UMSL Graduate School Application Form, official transcripts from all colleges and universities attended, a statement of purpose, and a curriculum vitae.

Curriculum (30 hours)

Educational and Psychological Foundations

Choose two of the following: 6

| | |
|-------------|---|
| TCH ED 6030 | Instruction, Learning, and Assessment |
| ED PSY 6111 | Educational Psychology |
| ED PSY 6530 | Foundations Of School Psychology ¹ |

Human Development 3

Choose one of the following:

| | |
|-------------|--|
| ED PSY 6210 | Life-Span: Individual and Family Development |
|-------------|--|

| | |
|---|---|
| ED PSY 6215 | Psychology of Early Childhood Development |
| ED PSY 6222 | Advanced Studies in Child and Adolescent Development |
| ED PSY 6226 | Mental Health and Development of Children and Youth |
| ED PSY 6474 | Understanding the Psychosocial Development of Emerging Adults |
| Educational Research and Evaluation Methods 6 | |
| Choose two of the following: | |
| ED REM 6710 | Educational Research Methods and Design |
| ED REM 6716 | Academic Assessment and Intervention |
| ED REM 6718 | Psychoeducational Assessment and Intervention ¹ |
| ED REM 6730 | Educational Program Development and Evaluation |
| ED REM 6735 | Statistical Analysis for Education Research |
| ED REM 6750 | Advanced Research Design In Education |
| TCH ED 6909 | Teacher Action Research I |

Electives 12

12 Hours of graduate-level courses in any combination of the following curricular areas:

| |
|---|
| Educational Foundations (ED FND) |
| Educational Psychology (ED PSY) |
| Educational Research and Evaluation Methods (ED REM) |
| Educational Technology (ED TECH) |
| Other curricular areas (with consent of advisor, maximum of 6 hours) ² |

Capstone Experience 3

| | |
|------------------------------|---|
| Choose one of the following: | |
| ED REM 6719 | Advanced Psychoeducational Assessment and Intervention ¹ |
| ED REM 6732 | Advanced Educational Program Development and Evaluation |
| ED PSY 6990 | Internship |
| TCH ED 6910 | Teacher Action Research Capstone ³ |

Total Hours 30

¹ Admission to School Psychology Program required.

² Up to 6 hours from other disciplines may be chosen in consultation with an advisor.

³ TCH ED 6909, Teacher Action Research I is a prerequisite for TCH ED 6910, Teacher Action Research Capstone.

Educational Studies BES, Early Childhood Emphasis

The Bachelor of Educational Studies (BES) is perfect for students excited about education, but looking for challenges outside the traditional classroom. The BES will prepare you for a career as an educator in

many agencies. Many institutions emphasize informal learning and many different settings. Employers at these institutions are eager to hire people who have training and relevant experience in education, management, marketing, and technology. This degree is designed to be a creative, flexible, and inter-disciplinary bachelor's degree that emphasizes practical skills in multiple settings.

General Education Requirements

Students follow the University's General Education Requirements (p. 30), Mathematical Skills, Advanced Expository Writing, American History and Government, and Cultural Diversity Requirements. Students pursuing the Exercise Science emphasis area must take BIOL 1012 and BIOL 1013.

Foundations (Required Courses)

| | | |
|--------------------|--|-----------|
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| EDUC 2002 | Social Entrepreneurship | 3 |
| CNS ED 2030 | Cultural Diversity and Social Advocacy | 3 |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| PHY ED 2136 | Facilities Management | 3 |
| EDUC 3170 | Grant Proposal Writing for Educators | 3 |
| CNS ED 3200 | Interpersonal Skills in Helping Relationships | 3 |
| ED FND 3251 | Black Americans in Education | 3 |
| MKTG 3721 | Introduction to Digital Marketing Strategies | 3 |
| ED TECH 4302 | Educational Technology Instruction in Educational Agencies | 3 |
| Total Hours | | 32 |

Emphasis Area Requirements

Required Courses

| | | |
|-------------|---|---|
| ECH ED 3302 | Introduction to Inclusive Early Childhood Education | 3 |
| ECH ED 3303 | Curriculum and Practice Laboratory: Infant/Toddler | 1 |
| ECH ED 3304 | Curriculum and Practice Laboratory: Preschool | 1 |
| ECH ED 3313 | Curriculum and Practice: Infant/Toddler | 2 |
| ECH ED 3314 | Curriculum and Practice: Preschool Education | 2 |
| ECH ED 3332 | Literacy, Learning, and Instruction For The Young Child | 3 |
| ECH ED 3350 | Family and Professional Partnerships within School/Community | 3 |
| ECH ED 4317 | Implementation, Evaluation, and Assessment in Early Childhood Education | 3 |

| | | |
|--------------------|----------------------|-----------|
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| Total Hours | | 21 |

Clinical Experiences

| | | |
|-----------|----------------|---|
| EDUC 4989 | Internship I | 1 |
| EDUC 4990 | Internship II | 6 |
| EDUC 4991 | Internship III | 6 |

Suggested Courses

| | | |
|--------------------|--|-----------|
| MEDIA ST 2211 | Introduction to Digital Multimedia Production | 3 |
| MEDIA ST 2222 | Convergence and Digital Media | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| or SOC 3600 | Management and Organizational Behavior | |
| SOC WK 2000 | Social Work and Social Issues | 3 |
| HLTH PE 3380 | Introduction to Nutrition for Health and Performance | 3 |
| Total Hours | | 15 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Engage their clients while adding diverse perspectives that articulate how difference shapes experience and human identity.
- Apply their unique understanding of social justice by addressing institutional and social barriers that limit access, equity, and achievement.
- Conduct themselves in a respectful and professional manner that views failure as an opportunity to learn, as they effectively work on multiple projects.
- Apply reasoning and critical thinking while making connections between information, data, and arguments to synthesize and interpret information, forming valid conclusions.
- Apply unique leadership, management and communication skills to articulate thoughts/ideas effectively using oral, written, nonverbal, and visual communication skills in a variety of formats and contexts.
- Apply knowledge and skills as innovative childhood educators, managers, directors, program planners, or curriculum developers to effectively manage early childhood programs.
- Demonstrate a unique application of best practices of teaching young children outside a traditional classroom setting.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-----------|--------------------------------------|-----------|
| TCH ED 1000 | | 1 HIST 1001 or 1002 | 3 |
| ENGL 1100 | | 3 ED TECH 2230 | 3 |
| COMM 1040 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| MATH 1020 or 1030 | | 3 EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | | 3 EXPLORE - Math and Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 | |
| | 16 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|-------------|-------|---------------|-------|
| ED PSY 2212 | | 3 EDUC 2002 | 3 |
| CNS ED 3200 | | 3 ECH ED 3302 | 3 |
| TCH ED 1001 | | 1 ECH ED 3303 | 1 |

| | | | |
|------------------------------------|-------|-----------------------------|-------|
| TCH ED 2000 | 1 | ECH ED 3313 | 2 |
| EXPLORE - Humanities and Fine Arts | 3 | ECH ED 3332 | 3 |
| EXPLORE - Math and Sciences | 3 | EXPLORE - Math and Sciences | 3 |
| 14 | | 15 | |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ED FND 3251 | | 3 PHY ED 2136 | 3 |
| ED TECH 4302 | | 3 EDUC 3170 | 3 |
| ENGL 3100 | | 3 CNS ED 2030 | 3 |
| ECH ED 3304 | | 1 BES Elective | 3 |
| ECH ED 3314 | | 2 BES Elective | 3 |
| ECH ED 3350 | | 3 | |
| 15 | | 15 | |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ECH ED 4317 | | 3 EDUC 4990 | 6 |
| EDUC 4989 | | 3 EDUC 4991 | 6 |
| EDUC 2222 | | 3 BES Elective | 3 |
| MKTG 3721 | | 3 | |
| SPEC ED 3318 | | 3 | |
| 15 | | 15 | |
| Total Hours: 120 | | | |

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Educational Studies BES, Exercise Science and Wellness Emphasis

The Bachelor of Educational Studies (BES) is perfect for students excited about education, but looking for challenges outside the traditional classroom. The BES will prepare you for a career as an educator in many agencies. Many institutions emphasize informal learning and many different settings. Employers at these institutions are eager to hire people who have training and relevant experience in education, management, marketing, and technology. This degree is designed to be a creative, flexible, and inter-disciplinary bachelor's degree that emphasizes practical skills in multiple settings.

General Education Requirements

Students follow the University's General Education Requirements (p. 30), Mathematical Skills, Advanced Expository Writing, American History and Government, and Cultural Diversity Requirements. Students pursuing the Exercise Science emphasis area must take BIOL 1012 and BIOL 1013.

Foundations (Required Courses)

| | | |
|-------------|--|---|
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| EDUC 2002 | Social Entrepreneurship | 3 |
| CNS ED 2030 | Cultural Diversity and Social Advocacy | 3 |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |

| | | |
|--------------------|--|-----------|
| ED PSY 2212 | Child and Adolescent Development | 3 |
| PHY ED 2136 | Facilities Management | 3 |
| EDUC 3170 | Grant Proposal Writing for Educators | 3 |
| CNS ED 3200 | Interpersonal Skills in Helping Relationships | 3 |
| ED FND 3251 | Black Americans in Education | 3 |
| MKTG 3721 | Introduction to Digital Marketing Strategies | 3 |
| ED TECH 4302 | Educational Technology Instruction in Educational Agencies | 3 |
| Total Hours | | 32 |

Emphasis Area Requirements

Required Courses

| | | |
|--------------------|--|-----------|
| PHY ED 1124 | Principles and Practice in 1st Aid and Cardiopulmonary Resuscitation | 1 |
| HLTH PE 3434 | Teaching of Health and Wellness | 4 |
| HLTH PE 3284 | Physiology of Human Exercise | 3 |
| HLTH PE 3285 | Safety and Emergency Care for Health and Physical Education | 3 |
| HLTH PE 3380 | Introduction to Nutrition for Health and Performance | 3 |
| HLTH PE 3280 | Human Anatomy and Physiology | 4 |
| PHY ED 2134 | Personal Physical Fitness | 3 |
| PHY ED 3287 | Seminar in Exercise Science | 3 |
| PHY ED 3283 | Kinesiology | 3 |
| PHY ED 3330 | Designing Physical Activity Programs | 3 |
| PHY ED 3931 | Adult Exercise Leadership | 3 |
| Total Hours | | 33 |

Clinical Experiences

| | | |
|--------------------|----------------|-----------|
| EDUC 4989 | Internship I | 1 |
| EDUC 4990 | Internship II | 6 |
| EDUC 4991 | Internship III | 6 |
| Total Hours | | 13 |

Suggested Courses

| | | |
|--------------------|---|----------|
| MEDIA ST 2211 | Introduction to Digital Multimedia Production | 3 |
| MEDIA ST 2222 | Convergence and Digital Media | 3 |
| MGMT/SOC 3600 | Management and Organizational Behavior | 3 |
| Total Hours | | 9 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Engage their clients while adding diverse perspectives that articulate how difference shapes experience and human identity.
- Apply their unique understanding of social justice by addressing institutional and social barriers that limit access, equity, and achievement.

- Conduct themselves in a respectful and professional manner that views failure as an opportunity to learn, as they effectively work on multiple projects.
- Apply reasoning and critical thinking while making connections between information, data, and arguments to synthesize and interpret information, forming valid conclusions.
- Apply unique leadership, management and communication skills to articulate thoughts/ideas effectively using oral, written, nonverbal, and visual communication skills in a variety of formats and contexts.
- Apply wellness and exercise principles and practices needed in emergency sports and exercise regimens.
- Design unique fitness programs based on the acquired knowledge on safety, nutrition, and wellness, to benefit clients in a diverse fitness industry, including adult exercise programs.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|------------------------------------|-------|
| TCH ED 1000 | | 1 HIST 1001 or 1002 | 3 |
| ENGL 1100 | 3 | ED TECH 2230 | 3 |
| COMM 1040 | 3 | EXPLORE - Social Sciences | 3 |
| MATH 1020 or 1030 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Social Sciences | 3 | EXPLORE - Math and Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | | |
| | 16 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|-----------------------------|-------|
| BIOL 1012 | | 3 EDUC 2002 | 3 |
| CNS ED 3200 | 3 | EDUC 3170 | 3 |
| ED PSY 2212 | 3 | HLTH PE 3280 | 4 |
| TCH ED 1001 | 1 | PHY ED 2136 | 3 |
| TCH ED 2000 | 1 | EXPLORE - Math and Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | | |
| | 14 | | 16 |

Third Year

| Fall | Hours | Spring | Hours |
|--------------|-------|----------------|-------|
| ED FND 3251 | | 3 HLTH PE 3380 | 3 |
| ENGL 3100 | 3 | PHY ED 1124 | 1 |
| HLTH PE 3284 | 3 | PHY ED 3287 | 3 |
| HLTH PE 3285 | 3 | PHY ED 3330 | 3 |
| PHY ED 2134 | 3 | PHY ED 3931 | 3 |
| | 15 | | 13 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------|-------|-------------|-------|
| ED TECH 4302 | | 3 EDUC 4990 | 6 |
| EDUC 2222 | 3 | EDUC 4991 | 6 |
| EDUC 4989 | 3 | CNS ED 2030 | 3 |
| HLTH PE 3434 | 4 | | |
| MKTG 3721 | 3 | | |
| | 16 | | 15 |

Total Hours: 120

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Educational Studies BES, Park and Museum Programs Emphasis

General Education Requirements

Students follow the University's General Education Requirements (p. 30), Mathematical Skills, Advanced Expository Writing, American History and Government, and Cultural Diversity Requirements. Students pursuing the Exercise Science emphasis area must take BIOL 1012 and BIOL 1013.

Foundations (Required Courses)

| | | |
|--------------------|--|-----------|
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| EDUC 2002 | Social Entrepreneurship | 3 |
| CNS ED 2030 | Cultural Diversity and Social Advocacy | 3 |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| PHY ED 2136 | Facilities Management | 3 |
| EDUC 3170 | Grant Proposal Writing for Educators | 3 |
| CNS ED 3200 | Interpersonal Skills in Helping Relationships | 3 |
| ED FND 3251 | Black Americans in Education | 3 |
| MKTG 3721 | Introduction to Digital Marketing Strategies | 3 |
| ED TECH 4302 | Educational Technology Instruction in Educational Agencies | 3 |
| Total Hours | | 32 |

Emphasis Area Requirements

Students must complete the requirements for one Academic Minor chosen in consultation with the advisor. The minor and electives in a related area must total 21 hours.

Suggested Minors

- Anthropology (p. 399)
- Biology (p. 418)
- Environmental Studies (p. 572)
- History (p. 589)
- History of Art and Visual Culture (p. 589)
- Philosophy of Science and Technology (p. 683)

Suggested Courses

| | | |
|---------------|---|---|
| MEDIA ST 2211 | Introduction to Digital Multimedia Production | 3 |
| MEDIA ST 2222 | Convergence and Digital Media | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| or SOC 3600 | Management and Organizational Behavior | |
| SOC WK 2000 | Social Work and Social Issues | 3 |

| | | |
|--------------------|--|-----------|
| HLTH PE 3380 | Introduction to Nutrition for Health and Performance | 3 |
| Total Hours | | 15 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Engage their clients while adding diverse perspectives that articulate how difference shapes experience and human identity.
- Apply their unique understanding of social justice by addressing institutional and social barriers that limit access, equity, and achievement.
- Conduct themselves in a respectful and professional manner that views failure as an opportunity to learn, as they effectively work on multiple projects.
- Apply reasoning and critical thinking while making connections between information, data, and arguments to synthesize and interpret information, forming valid conclusions.
- Apply unique leadership, management and communication skills to articulate thoughts/ideas effectively using oral, written, nonverbal, and visual communication skills in a variety of formats and contexts.
- Integrate knowledge from disciplines such as anthropology, biology, environmental studies, history and philosophy to deliver effective parks and museum programs.
- Apply knowledge of national and international policies toward land, air, and water pollution; energy use; solid and toxic waste disposal; climate change; population; biodiversity; and conservation; to deliver sustainable programs.

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| TCH ED 1000 | 1 | HIST 1001 or 1002 | 3 |
| ENGL 1100 | 3 | ED TECH 2230 | 3 |
| EXPLORE - Social Sciences | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| COMM 1040 | 3 | EXPLORE - Math and Sciences | 3 |
| MATH 1020 or 1030 | 3 | EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | 3 | | |
| EXPLORE - Humanities and Fine Arts | 3 | | |
| | | 19 | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| CNS ED 3200 | 3 | EDUC 2002 | 3 |
| ED PSY 2212 | 3 | EXPLORE - Math and Sciences | 3 |
| TCH ED 1001 | 1 | Academic Minor | 3 |
| TCH ED 2000 | 1 | Academic Minor | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | BES Elective | 3 |
| EXPLORE - Math and Sciences | 3 | | |
| | | 14 | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ED FND 3251 | 3 | CNS ED 2030 | 3 |
| ED TECH 4302 | 3 | EDUC 3170 | 3 |
| ENGL 3100 | 3 | PHY ED 2136 | 3 |
| Academic Minor | 3 | Academic Minor | 3 |
| Academic Minor | 3 | Academic Minor or Elective | 3 |
| | | 15 | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| MKTG 3721 | 3 | EDUC 4990 | 6 |

| | | | |
|----------------------------|---|--------------|-----------|
| EDUC 4989 | 3 | EDUC 4991 | 6 |
| EDUC 2222 | 3 | BES Elective | 3 |
| Academic Minor or Elective | 3 | | |
| Academic Minor or Elective | 3 | | |
| | | 15 | 15 |

Total Hours: 123

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Educational Studies BES, Social Entrepreneurship Emphasis

General Education Requirements

Students follow the University's General Education Requirements (p. 30), Mathematical Skills, Advanced Expository Writing, American History and Government, and Cultural Diversity Requirements. Students pursuing the Exercise Science emphasis area must take BIOL 1012 and BIOL 1013.

Foundations (Required Courses)

| | | |
|--------------------|--|-----------|
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| EDUC 2002 | Social Entrepreneurship | 3 |
| CNS ED 2030 | Cultural Diversity and Social Advocacy | 3 |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| PHY ED 2136 | Facilities Management | 3 |
| EDUC 3170 | Grant Proposal Writing for Educators | 3 |
| CNS ED 3200 | Interpersonal Skills in Helping Relationships | 3 |
| ED FND 3251 | Black Americans in Education | 3 |
| MKTG 3721 | Introduction to Digital Marketing Strategies | 3 |
| ED TECH 4302 | Educational Technology Instruction in Educational Agencies | 3 |
| Total Hours | | 32 |

Emphasis Area Requirements

Required Courses

| | | |
|----------|---------------------|---|
| ENT 1001 | | 3 |
| ENT 3040 | | 3 |
| ENT 4001 | Accelerate Capstone | 3 |

Elective Courses ¹

| | | |
|---------------------------------------|---|--|
| Choose four of the following courses: | | |
| MKTG 3785 | Women in International Entrepreneurship | |

| | |
|--------------------|--|
| ST ART 2285 | Entrepreneurship for the Visual Arts (Entrepreneurship for the Visual Arts) |
| MGMT 4614 | Entrepreneurship/Small Business Management |
| INTL BUS 4281 | Entrepreneurship in the Global Environment |
| SCMA 3301 | Introduction to Supply Chain Management |
| SCMA 4347 | Introduction to Project Management |
| Total Hours | 21 |

¹ Additional entrepreneurship courses may be taken with the approval of the B.E.S. coordinator.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Engage their clients while adding diverse perspectives that articulate how difference shapes experience and human identity.
- Apply their unique understanding of social justice by addressing institutional and social barriers that limit access, equity, and achievement.
- Conduct themselves in a respectful and professional manner that views failure as an opportunity to learn, as they effectively work on multiple projects.
- Apply reasoning and critical thinking while making connections between information, data, and arguments to synthesize and interpret information, forming valid conclusions.
- Apply unique leadership, management and communication skills to articulate thoughts/ideas effectively using oral, written, nonverbal, and visual communication skills in a variety of formats and contexts.
- Apply professional skills acquired through interactions with other social entrepreneurs during field placements and conferences.
- Apply knowledge from an array of in-class and field experiences to design a unique social entrepreneurship product.

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-----------|--------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| COMM 1040 | | 3 HIST 1001 or 1002 | 3 |
| ENGL 1100 | | 3 ED TECH 2230 | 3 |
| MATH 1020 or 1030 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| TCH ED 1000 | | 1 EXPLORE - Social Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Math and Sciences | 3 |
| EXPLORE - Social Sciences | | 3 | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ED PSY 2212 | | 3 EDUC 2002 | 3 |
| CNS ED 3200 | | 3 ENT 1100 | 3 |
| TCH ED 1001 | | 1 ST ART 2285 | 3 |
| TCH ED 2000 | | 1 EXPLORE - Math and Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 BES Elective | 3 |
| EXPLORE - Math and Sciences | | 3 | |
| | 14 | | 15 |

| Third Year | | | |
|-------------------------|-----------|----------------|-----------|
| Fall | Hours | Spring | Hours |
| ED FND 3251 | | 3 PHY ED 2136 | 3 |
| ED TECH 4302 | | 3 EDUC 3170 | 3 |
| ENGL 3100 | | 3 CNS ED 2030 | 3 |
| ENT 3140 | | 3 MGMT 4614 | 3 |
| SCMA 3301 | | 3 BES Elective | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| EDUC 2222 | | 3 EDUC 4990 | 6 |
| EDUC 4989 | | 3 EDUC 4991 | 6 |
| ENT 4100 | | 3 BES Elective | 3 |
| MKTG 3721 | | 3 | |
| SCMA 4347 | | 3 | |
| | 15 | | 15 |
| Total Hours: 120 | | | |

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Educational Studies BES, Youth and Adult Development Emphasis

The Bachelor of Educational Studies (BES) is perfect for students excited about education, but looking for challenges outside the traditional classroom. The BES will prepare you for a career as an educator in many agencies. Many institutions emphasize informal learning and many different settings. Employers at these institutions are eager to hire people who have training and relevant experience in education, management, marketing, and technology. This degree is designed to be a creative, flexible, and inter-disciplinary bachelor's degree that emphasizes practical skills in multiple settings.

General Education Requirements

Students follow the University's General Education Requirements (p. 30), Mathematical Skills, Advanced Expository Writing, American History and Government, and Cultural Diversity Requirements. Students pursuing the Exercise Science emphasis area must take BIOL 1012 and BIOL 1013.

Foundations (Required Courses)

| | | |
|-------------|--|---|
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| EDUC 2002 | Social Entrepreneurship | 3 |
| CNS ED 2030 | Cultural Diversity and Social Advocacy | 3 |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| PHY ED 2136 | Facilities Management | 3 |
| EDUC 3170 | Grant Proposal Writing for Educators | 3 |
| CNS ED 3200 | Interpersonal Skills in Helping Relationships | 3 |

| | | |
|--------------------|--|-----------|
| ED FND 3251 | Black Americans in Education | 3 |
| MKTG 3721 | Introduction to Digital Marketing Strategies | 3 |
| ED TECH 4302 | Educational Technology Instruction in Educational Agencies | 3 |
| Total Hours | | 32 |

Emphasis Area Requirements

Students must complete the requirements for one Academic Minor chosen in consultation with the advisor. The minor and electives in a related area must total 21 hours.

Suggested Minors

- Child Advocacy Studies (p. 472)
- Criminology and Criminal Justice (p. 499)
- Gender Studies (p. 577)
- Gerontology (p. 579)
- Public Policy Administration (p. 723)
- Social Work (p. 742)

Suggested Courses

| | | |
|--------------------|--|-----------|
| MEDIA ST 2211 | Introduction to Digital Multimedia Production | 3 |
| MEDIA ST 2222 | Convergence and Digital Media | 3 |
| MGMT/SOC 3600 | Management and Organizational Behavior | 3 |
| SOC WK 2000 | Social Work and Social Issues | 3 |
| HLTH PE 3380 | Introduction to Nutrition for Health and Performance | 3 |
| Total Hours | | 15 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Engage their clients while adding diverse perspectives that articulate how difference shapes experience and human identity.
- Apply their unique understanding of social justice by addressing institutional and social barriers that limit access, equity, and achievement.
- Conduct themselves in a respectful and professional manner that views failure as an opportunity to learn, as they effectively work on multiple projects.
- Apply reasoning and critical thinking while making connections between information, data, and arguments to synthesize and interpret information, forming valid conclusions.
- Apply unique leadership, management and communication skills to articulate thoughts/ideas effectively using oral, written, nonverbal, and visual communication skills in a variety of formats and contexts.
- Integrate knowledge from disciplines such as child advocacy, gerontology, social work, and public policy administration to deliver effective youth and adult programs.
- Apply knowledge of educational theories and practice in relation to not-for-profit and non-government institutions, to deliver sustainable youth and adult programs.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|--------------------------------------|-----------|
| TCH ED 1000 | | 1 HIST 1001 or 1002 | 3 |
| ENGL 1100 | | 3 ED TECH 2230 | 3 |
| COMM 1040 | | 3 EXPLORE - Social Sciences | 3 |
| MATH 1020 or 1030 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Math and Sciences | 3 |
| EXPLORE - Social Sciences | | 3 | |
| | | 16 | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|-------------------------------|-----------|
| ED PSY 2212 | | 3 EDUC 2002 | 3 |
| CNS ED 3200 | | 3 EXPLORE - Math and Sciences | 3 |
| TCH ED 1001 | | 1 Academic Minor | 3 |
| TCH ED 2000 | | 1 Academic Minor | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 BES Elective | 3 |
| EXPLORE - Math and Sciences | | 3 | |
| | | 14 | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|----------------|-------|------------------------------|-----------|
| ED FND 3251 | | 3 PHY ED 2136 | 3 |
| ED TECH 4302 | | 3 EDUC 3170 | 3 |
| ENGL 3100 | | 3 CNS ED 2030 | 3 |
| Academic Minor | | 3 Academic Minor | 3 |
| Academic Minor | | 3 Academic Minor or Elective | 3 |
| | | 15 | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|----------------------------|-------|----------------|-----------|
| MKTG 3721 | | 3 EDUC 4990 | 6 |
| EDUC 4989 | | 3 EDUC 4991 | 6 |
| EDUC 2222 | | 3 BES Elective | 3 |
| Academic Minor or Elective | | 3 | |
| Academic Minor or Elective | | 3 | |
| | | 15 | 15 |

Total Hours: 120

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Electrical Engineering BSEE

Admission

Students are admitted to the upper-division program after they have completed an acceptable pre-engineering program. The pre-engineering program can be taken at University of Missouri-St. Louis or at community colleges in the area. Normally, admission is granted to persons who have completed the pre-engineering program with a minimum grade point average of 2.5 over all their mathematics, chemistry, physics, and introductory (statics and dynamics) engineering courses. Students with less than a 2.5 grade point average, but at least a C, in all their science, engineering and mathematics courses may be admitted on a conditional basis.

For more information, please contact the program advisor at (314) 516-7018.

Degree Requirements

A program of 124 semester hours is required for the Bachelor of Science in Electrical Engineering.

- Majors must complete the University General Education (p. 30) and Graduation (p. 16) requirements, the Pre-Engineering Requirements, the Core Engineering Requirements, and Major Requirements.
- Majors must first complete J E MATH 3170, Engineering Mathematics, with a minimum grade of C-.
- Majors must also complete J E ENGR 2300, Introduction to Electrical Networks, with a minimum grade of C-.
- A minimum grade of C- is necessary to meet the prerequisite requirement for any course.

General Education and Graduation Requirements

The following courses fulfill general education and graduation requirements and are required of Electrical Engineering majors:

| | | |
|--|---|-----------|
| PHIL 2259 | Engineering Ethics | 3 |
| PHIL 3380 | Philosophy of Science | 3 |
| HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | 3 |
| or HIST 1002 | American Civilization 1865 to Present (MOTR HIST 102) | |
| Three additional Social Science courses ¹ | | 9 |
| Total Hours | | 18 |

¹ One course must meet the Cultural Diversity requirement. Humanities and social sciences electives must meet both the University of Missouri-St. Louis General Education Requirements and the Humanities and Social Sciences Requirements of the Joint Undergraduate Engineering Program. Check with your advisor for details.

Pre-Engineering Requirements

Students seeking to major in engineering are first designated as 'Undeclared with an interest in Engineering majors' until they have completed Math 1800 Analytical Geometry & Calculus I. Upon successful completion of Math 1800 with a grade of C or better, students will be allowed to declare pre-engineering as their major. Math 1800 must be completed successfully within two attempts.

| | | |
|---------------|---|---|
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 2020 | Introduction to Differential Equations | 3 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2111L | Mechanics and Heat Laboratory | 1 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory | 1 |
| ENGR 2310 | Statics | 3 |
| ENGR 2320 | Dynamics | 3 |

| | | |
|--------------------|------------------------------------|-----------|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| Total Hours | | 42 |

Engineering Core Requirements

| | | |
|--------------------|---------------------------|-----------|
| CMP SCI 1250 | Introduction to Computing | 3 |
| J E COMM 2000 | Engineering Studio I | 1 |
| J E MATH 3170 | Engineering Mathematics | 4 |
| ENGL 3130 | Technical Writing | 3 |
| Total Hours | | 11 |

Electrical Engineering Major Requirements

| | | |
|--|---|-----------|
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| J CMP SC 1002 | Introduction to Computing Tools: Matlab Skills | 1 |
| J E ENGR 2320 | Introduction to Electronic Circuits | 3 |
| J E ENGR 2300 | Introduction to Electrical Networks | 3 |
| J E ENGR 2330 | Electrical and Electronic Circuits Laboratory | 3 |
| J E ENGR 2600 | Introduction to Digital Logic and Computer Design | 3 |
| J E ENGR 3300 | Engineering Electromagnetic Principles | 3 |
| J E ENGR 3310 | Electronics Laboratory | 3 |
| J E ENGR 3320 | Power, Energy and Polyphase Circuits | 3 |
| J E ENGR 3510 | Signals and Systems | 3 |
| J E ENGR 4350 | Electrical Energy Laboratory | 3 |
| J E ENGR 4410/ J M ENGR 4310 | Control Systems I | 3 |
| J E ENGR 4980 | Electrical Engineering Design Projects | 3 |
| J E ENGR 4990 | Electrical Engineering Senior Seminar | 1 |
| J M ENGR 3200 | Thermodynamics | 3 |
| Electrical Engineering Electives 3000-4990 | | 12 |
| Total Hours | | 53 |

Graduation Requirements

In addition to the requirements of the University of Missouri-St. Louis that apply to all candidates for undergraduate degrees, the student must earn a minimum campus grade point average of 2.0 and a minimum grade point average of 2.0 for all engineering courses attempted at the University of Missouri-St. Louis.

Upon completion of the program, graduates will have an ability to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- Communicate effectively with a range of audiences
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the

- impact of engineering solutions in global, economic, environmental, and societal contexts
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
 - Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
 - Acquire and apply new knowledge as needed, using appropriate learning strategies

Sample Degree Plans

Sample Four-Year Plan

| First Year | | | | | |
|---------------------------|-------|-----------------------------|-------|-------------------|-------|
| Fall | Hours | Spring | Hours | | |
| MATH 1800 | | 5 MATH 1900 | 5 | | |
| CHEM 1111 | | 5 HIST 1001 or 1002 | 3 | | |
| ENGL 1100 | | 3 EXPLORE – Social Sciences | 3 | | |
| ENGR 1010 | | 1 EXPLORE - Social Sciences | 3 | | |
| 14 | | 14 | | | |
| Second Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| MATH 2000 | | 5 MATH 2020 | 3 | ENGR 2320 | 3 |
| PHYSICS 2111 | | 4 PHYSICS 2112 | 4 | | |
| PHYSICS 2111L | | 1 PHYSICS 2112L | 1 | | |
| PHIL 2259 | | 3 ENGR 2310 | 3 | | |
| EXPLORE – Social Sciences | | 3 PHIL 3380 | 3 | | |
| 16 | | 14 | | 3 | |
| Third Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| J E ENGR 2300 | | 3 J E ENGR 3300 | 3 | J E ENGR 3510 | 3 |
| J CMP SC 1002 | | 1 J E ENGR 2330 | 3 | J E ENGR Elective | 3 |
| CMP SCI 1250 | | 3 J E ENGR 2320 | 3 | | |
| ENGL 3130 | | 3 J M ENGR 3200 | 3 | | |
| J E MATH 3170 | | 4 MATH 1320 | 3 | | |
| J E COMM 2000 | | 1 | | | |
| 15 | | 15 | | 6 | |
| Fourth Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| J E ENGR 4410 | | 3 J E ENGR Elective | 3 | | |
| J E ENGR elective | | 3 J E ENGR Elective | 3 | | |
| J E ENGR 2600 | | 3 J E ENGR 4350 | 3 | | |
| J E ENGR 3310 | | 3 J E ENGR 3320 | 3 | | |
| | | J E ENGR 4980 | 3 | | |
| | | J E ENGR 4990 | 1 | | |
| 12 | | 16 | | | |
| Total Hours: 125 | | | | | |

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Sample Five-Year Plan

| First Year | | | | | |
|---------------------------|-------|--------------------------------------|-------|---------------|-------|
| Fall | Hours | Spring | Hours | | |
| MATH 1800 | | 5 HIST 1001 or 1002 | 3 | | |
| CHEM 1111 | | 5 MATH 1900 | 5 | | |
| ENGL 1100 | | 3 EXPLORE - Humanities and Fine Arts | 3 | | |
| ENGR 1010 | | 1 EXPLORE - Social Sciences | 3 | | |
| 14 | | 14 | | | |
| Second Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| PHIL 2259 | | 3 ENGR 2310 | 3 | ENGR 2320 | 3 |
| PHYSICS 2111 | | 4 MATH 2020 | 3 | | |
| PHYSICS 2111L | | 1 PHIL 3380 | 3 | | |
| MATH 2000 | | 5 PHYSICS 2112 | 4 | | |
| EXPLORE - Social Sciences | | 3 PHYSICS 2112L | 1 | | |
| 16 | | 14 | | 3 | |
| Third Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| J E ENGR 2300 | | 3 J E ENGR 3300 | 3 | J E ENGR 3510 | 3 |
| J CMP SC 1002 | | 1 J E ENGR 2320 | 3 | | |
| CMP SCI 1250 | | 3 J E ENGR 2330 | 3 | | |
| ENGL 3130 | | 3 J M ENGR 3200 | 3 | | |
| J E MATH 3170 | | 4 | | | |
| J E COMM 2000 | | 1 | | | |
| 15 | | 12 | | 3 | |
| Fourth Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| J E ENGR 2600 | | 3 J E ENGR Elective | 3 | | |
| J E ENGR 3310 | | 3 J E ENGR Elective | 3 | | |
| J E ENGR 4410 | | 3 J E ENGR 3320 | 3 | | |
| J E ENGR Elective | | 3 J E ENGR 4350 | 3 | | |
| | | J E ENGR 4990 | 1 | | |
| 12 | | 13 | | | |
| Fifth Year | | | | | |
| Fall | Hours | | | | |
| J E ENGR 4980 | 3 | | | | |
| J E ENGR Elective | 3 | | | | |
| MATH 1320 | 3 | | | | |
| 9 | | | | | |

Electrical Engineering Minor

Minor in Electrical Engineering

Admission to the Joint Engineering program is required. A minimum of 18 credit hours in Joint Electrical Engineering courses are required.

Required Courses:

| | | |
|---------------|---|---|
| J E ENGR 2300 | Introduction to Electrical Networks | 3 |
| J E ENGR 2330 | Electrical and Electronic Circuits Laboratory | 3 |

Take three courses from the following list: 9

| | |
|---------------|---|
| J E ENGR 2320 | Introduction to Electronic Circuits |
| J E ENGR 2600 | Introduction to Digital Logic and Computer Design |

| | | |
|--|--|-----------|
| J E ENGR 3300 | Engineering Electromagnetic Principles | |
| J E ENGR 3310 | Electronics Laboratory | |
| J E ENGR 3320 | Power, Energy and Polyphase Circuits | |
| J E ENGR 3510 | Signals and Systems | |
| J E ENGR 4350 | Electrical Energy Laboratory | |
| J E ENGR 4410 | Control Systems I | |
| J E ENGR 4470 | Robotics Laboratory | |
| At least one additional J E ENGR Course | | 3 |
| Total Hours | | 18 |

Elementary and Special Education Teaching Graduate Certificate

This program of study is for individuals with a bachelor's degree who would like to prepare for teacher certification in Elementary Education and Special Education. This graduate certificate program option leads to Missouri Initial Teacher Certification in Elementary Teaching 1-6 with an add-on in Mild/Moderate Cross-Categorical Disabilities, K-12 Special Education.

Admission Requirements for the Option in Teacher Certification:

1. A passing score on the designated Missouri Content Examination or an approved program of study
2. A 2.75 or higher overall GPA
3. Approved results of the Family Care Safety Registry
4. A clear TB test or chest x-ray, if appropriate

Applicants must meet the application deadlines set by the Graduate School.

Required Certification Courses

| | | |
|--------------|---|---|
| TCH ED 5001 | Advanced Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 6030 | Instruction, Learning, and Assessment | 3 |
| TCH ED 6565 | Integrating the Fine Arts into Elementary Classrooms | 2 |
| TCH ED 6566 | Teaching Health and Physical Education Skills and Concepts for the Elementary Teacher | 2 |
| ED PSY 6222 | Advanced Studies in Child and Adolescent Development | 3 |
| TCH ED 5310 | Instructional Design and Technology Integration for Educators | 3 |
| ELE ED 6337 | Teaching and Learning Literacy in the Elementary Classrooms: Teaching Reading and Writing | 3 |
| SPEC ED 6412 | Foundations of Inclusive Education | 3 |
| SPEC ED 6325 | Positive Behavior Interventions for Individual, Classroom, and School-wide Systems | 3 |
| ELE ED 6338 | Literacy Assessment for Guided Instruction | 3 |

| | | |
|--------------------|--|-----------|
| ELE ED 6241 | Science Content, Inquiry-Based Instruction, and Assessment: STEM-Integrated Pedagogy | 2 |
| ELE ED 6246 | Math Content Pedagogy, Inquiry-Based Instruction, and Assessment | 3 |
| ELE ED 6253 | Teaching Social Studies through Reading, Writing, and English Language Learning | 3 |
| ELE ED 5989 | Practicum I: Elementary/Special Education Site-Based Experience | 2 |
| ELE ED 5990 | Practicum II: Elementary/Special Education Site-Based Experience | 8 |
| Total Hours | | 44 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Continually reflect on professional growth to improve student learning outcomes/enhance student learning.
- Integrate technology to create meaningful student learning within the context of a global digital society.
- Apply content and pedagogical knowledge to create authentic and deep learning experiences.
- Use learning science principles to design, implement, and evaluate curriculum based on learning standards.
- Foster effective working relationships with students, school colleagues, families, and community members to enhance student learning and well-being.
- Design and establish a safe, inclusive, and respectful learning environment that nurtures the intellectual, social, and personal development of all students.
- Use equitable frameworks and inclusive practices to create a variety of instructional and assessment opportunities adapted to diverse learners to encourage all students' critical thinking, problem solving, and performance skills.

Elementary Education BSEd, Middle School Education Emphasis

The Bachelor of Science in Education (B.S.Ed.) in Elementary Education prepares those who desire to teach grades 1 - 6. The core courses are combined with one of three emphasis areas: **Special Education**, **Teaching English to Speakers of Other Languages (TESOL)**, or **Middle School**. It is also possible to select the Special Education emphasis area and take the TESOL courses for TESOL endorsement. Please see each of the Emphasis Area Requirements listed below.

Undergraduate educator preparation is both engaging and innovative. Our high quality undergraduate educator preparation programs are designed around research-based scholarship and practical community-based contexts. To prepare our undergraduate students as the highest quality educators for our region, we contribute to and harness the resources of our deep community partnerships. The community-based experiences broaden candidates' understanding of their own identity as educators as well as enhancing their ability to build relationships, extend their skills, and understand family/community dynamics and interactions.

For their final year-long practicum, teacher candidates are immersed in Studio Schools. These partnering K-12 schools participate in our innovative, collaborative approach to educator preparation. Rather than being placed as individuals with one cooperating teacher, our candidates work with multiple teachers learning from each one, this process is supported and facilitated on-site by a specially trained UMSL clinical educator who leads a weekly seminar, conducts observations and provides candidates with regular feedback to guide their growth.

The focus of candidates' work is to explore challenges of student learning, envision solutions based on their research-based coursework, recent school initiatives, and carefully studied practices, and then enact innovative solutions to increase student learning. Candidates inquire deeply into how their students are learning, and use data to inform their instruction. Teacher candidates participate in all appropriate school and district professional development and school-wide activities, thereby becoming professionals who are part of the fabric of a studio school, not a just a temporary teacher candidate. Graduating educators have experienced an innovative education which prepares them for their future career as educational leaders in our region and beyond.

This area of specialization in elementary education prepares students to teach in grades 5-9.

University General Education and Graduation Requirements

B.S. Ed. degree candidates must complete the following General Education Requirements and Graduation Requirements of the University as outlined in this Bulletin.

The courses listed below fulfill general education requirements and best prepare students for advanced education coursework and licensure exams.

| First Year Writing | | |
|---|---|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| Math Proficiency | | |
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |
| Communication Proficiency | | |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |
| Information Literacy | | |
| ED TECH 2230 | Information Literacy | 3 |
| American History and Government | | |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |
| Humanities and Fine Arts | | |
| Choose any 9 hours from at least two approved fields. | | 9 |
| Social Sciences | | |
| Choose any 9 hours from at least two approved fields. At least one course must meet the cultural diversity requirement. | | 9 |
| Math and Life/Natural Sciences | | |

| Choose any 9 hours from at least two approved fields. | | 9 |
|---|----------------------|-----------|
| Junior-Level Writing | | |
| ENGL 3100 | Junior-Level Writing | 3 |
| Total Hours | | 45 |

Program Requirements

All students in the B.S.Ed. in Elementary Education, Middle School program are required to take the following Teacher Education courses. Each student must also select a content area and complete the required courses and certification assessments as specified by the Missouri Department of Elementary and Secondary Education.

Note for all emphasis areas:

Professional Education courses must be completed with a grade of C or better (a grade of C- or below must be retaken):

Beginning with those students graduating in May 2017 and receiving teacher certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Students must pass all required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for Teacher Education

| The following courses must be completed prior to applying for admission to the Teacher Education Program: | | |
|---|--|---|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |

Teacher Education Program

| The following courses are completed after acceptance into the Teacher Education Program: | | |
|--|---|---|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 3212 | Sociolinguistics and Communication in the Classroom | 3 |
| ED PSY 3312 | | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| SPEC ED 4323 | Classroom Management and Positive Behavioral Supports in Inclusive Educational Settings | 3 |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| MID ED 4315 | The Middle Level School | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| SEC ED 4880 | Writing for Teachers | 3 |

In addition to the above courses, students must complete a minimum of 24 credit hours in one specific content area, as well as the appropriate methods course:

| | |
|---|---|
| MID ED or SEC ED 4XXX: Methods Course in Certification Area | 3 |
|---|---|

The program will culminate in the following practicum courses:

| | | |
|-------------|--|----|
| MID ED 4989 | Practicum I: Middle Level Education Site-Based Experience | 3 |
| MID ED 4990 | Practicum II: Middle Level Education Site-Based Experience | 12 |

Total: minimum 122 hours

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plans

First Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|--------------------------------------|-------|
| ENGL 1100 | | 3 COMM 1040 | 3 |
| HIST 1001 or 1002 | | 3 TCH ED 1001 | 1 |
| MATH 1030 | | 3 TCH ED 2000 | 1 |
| TCH ED 1000 | | 1 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Math and Sciences | 3 |
| EXPLORE - Social Sciences | | 3 EXPLORE - Social Sciences | 3 |
| | 16 | | 14 |

Second Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|--|-------|
| ED TECH 2230 | | 3 ED PSY 2212 | 3 |
| TCH ED 2001 | | 1 EXPLORE - Math and Sciences | 3 |
| TCH ED 2209 | | 2 EXPLORE - Social Sciences ² | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 Specialty Elective ¹ | 3 |
| EXPLORE - Math and Sciences | | 3 Specialty Elective ¹ | 3 |
| Specialty Elective ¹ | | 3 | |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|---------------------------------|-------|---|-------|
| ENGL 3100 | | 3 MID ED XXXX: Appropriate Methods Course, as advised | 3 |
| MID ED 4315 | | 3 TCH ED 3310 | 3 |
| SPEC ED 3318 | | 3 TCH ED 3212 | 3 |
| TCH ED 3001 | | 1 Specialty Elective ¹ | 3 |
| TCH ED 3312 | | 3 Specialty Elective ¹ | 3 |
| Specialty Elective ¹ | | 3 Specialty Elective ¹ | 3 |
| | 16 | | 18 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------|-------|---------------|-------|
| MID ED 4989 | | 3 MID ED 4990 | 12 |
| SEC ED 4880 | | 3 | |
| SPEC ED 4323 | | 3 | |

| | |
|---------------------------------|----|
| TCH ED 4391 | 3 |
| Specialty Elective ¹ | 3 |
| | 15 |
| | 12 |

Total Hours: 121

¹ Specialty Elective course hours vary based on content area per DESE.

See your advisor for more information.

² Course should also satisfy the Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Elementary Education BSEd, Special Education and TESOL Emphasis

The Bachelor of Science in Education (B.S.Ed.) in Elementary Education prepares those who desire to teach grades 1 - 6. The core courses are combined with one of three emphasis areas: **Special Education**, **Teaching English to Speakers of Other Languages (TESOL)**, or **Middle School**. It is also possible to select the Special Education emphasis area and take the TESOL courses for TESOL endorsement. Please see each of the Emphasis Area Requirements listed below.

Undergraduate educator preparation is both engaging and innovative. Our high quality undergraduate educator preparation programs are designed around research-based scholarship and practical community-based contexts. To prepare our undergraduate students as the highest quality educators for our region, we contribute to and harness the resources of our deep community partnerships. The community-based experiences broaden candidates' understanding of their own identity as educators as well as enhancing their ability to build relationships, extend their skills, and understand family/community dynamics and interactions.

For their final year-long practicum, teacher candidates are immersed in Studio Schools. These partnering K-12 schools participate in our innovative, collaborative approach to educator preparation. Rather than being placed as individuals with one cooperating teacher, our candidates work with multiple teachers learning from each one, this process is supported and facilitated on-site by a specially trained UMSL clinical educator who leads a weekly seminar, conducts observations and provides candidates with regular feedback to guide their growth.

The focus of candidates' work is to explore challenges of student learning, envision solutions based on their research-based coursework, recent school initiatives, and carefully studied practices, and then enact innovative solutions to increase student learning. Candidates inquire deeply into how their students are learning, and use data to inform their instruction. Teacher candidates participate in all appropriate school and district professional development and school-wide activities, thereby becoming professionals who are part of the fabric of a studio school, not a just a temporary teacher candidate. Graduating educators have experienced an innovative education which prepares them for their future career as educational leaders in our region and beyond.

The Bachelor's of Science in Elementary Education degree prepares students to teach in elementary or middle school settings. This program

requires the selection and completion of required coursework in one of the following emphasis areas: Special Education; Teaching English to Speakers of Other Languages (TESOL); Special Education and TESOL; or Middle School.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education Requirements (p. 30) and Graduation Requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill these requirements and best prepare students for advanced education coursework and licensure exams.

First Year Writing

| | | |
|-----------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
|-----------|------------------------------------|---|

Math Proficiency

| | | |
|--------------|--|---|
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |

Communication Proficiency

| | | |
|--------------|--|---|
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |

Information Literacy

| | | |
|--------------|----------------------|---|
| ED TECH 2230 | Information Literacy | 3 |
|--------------|----------------------|---|

American History and Government

| | | |
|--------------|---|---|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |

Humanities and Fine Arts

| | | |
|---|--|---|
| Choose any 9 hours from at least two approved fields. | | 9 |
|---|--|---|

Social Sciences

| | | |
|---|--|---|
| Choose any 9 hours from at least two approved fields. At least one course must meet the cultural diversity requirement. | | 9 |
|---|--|---|

Math and Life/Natural Sciences

| | | |
|---|--|---|
| Choose any 9 hours from at least two approved fields. | | 9 |
|---|--|---|

Junior-Level Writing

| | | |
|-----------|----------------------|---|
| ENGL 3100 | Junior-Level Writing | 3 |
|-----------|----------------------|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 45 |
|--------------------|--|-----------|

Program Requirements

All students in the B.S.Ed. in Elementary Education program are required to take the following Teacher Education courses, as well as the required courses for the selected emphasis area. Each student must also complete all required courses and certification assessments as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|-----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| TCH ED 3310 | Instructional Design and Technology Integration | 3 |
| Total Hours | | 12 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 3212 | Sociolinguistics and Communication in the Classroom | 3 |
| TCH ED 3312 | Psychology of Learning, Instruction, and Assessment | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| SPEC ED 4323 | Classroom Management and Positive Behavioral Supports in Inclusive Educational Settings | 3 |
| Total Hours | | 13 |

In addition to the above courses, students must select at least one emphasis area and complete all required coursework for the emphasis area.

The program will culminate in the completion of two sequential site-based practicum experience courses.

Emphasis Area Requirements

This emphasis area in elementary education prepares students for teaching in inclusive classrooms and for teaching English to speakers of other languages (TESOL).

All candidates must complete the Beginning Teacher Education Program and Teacher Education Program course work above in the College of Education.

Elementary education majors must also complete the following Teacher Education Program courses:

| | | |
|-------------|--|---|
| ELE ED 3338 | Teaching Elementary Literacy in Inclusive Settings: Literacy Assessment and Learning | 3 |
| ELE ED 3339 | Teaching Elementary Literacy in Inclusive Settings: Literacy Instruction and Learning | 4 |
| ELE ED 4253 | Teaching Elementary Social Studies in Inclusive Settings | 3 |
| ELE ED 4341 | Teaching Science in Inclusive Elementary Schools | 3 |
| ELE ED 4246 | Teaching Elementary Mathematics in Inclusive Settings I | 3 |
| ELE ED 4342 | Teaching Elementary Mathematics in Inclusive Settings II | 3 |
| TCH ED 3565 | Fine Arts Integration for the Elementary Classroom | 2 |
| TCH ED 3566 | Teaching Health and Physical Education Skills and Concepts in the Elementary Classroom | 2 |

In addition, students must complete the following Special Education and TESOL courses:

| | | |
|--------------|--|---|
| SPEC ED 3349 | Instructional Practices in Inclusive Education | 3 |
| TCH ED 3210 | General Linguistics in Teaching English to Speakers of Other Languages | 3 |
| TCH ED 3211 | Basic Principles of Second and Foreign Language Acquisition | 3 |
| TCH ED 3213 | Performance-based Assessment for TESOL | 3 |
| TCH ED 3214 | Material Development and Methods for TESOL | 3 |
| TCH ED 3224 | Curriculum Development for Content Teaching of English Language Learners | 3 |
| SPEC ED 4315 | Language and Communication of Children with Disabilities | 3 |
| SPEC ED 4342 | Transition Issues and Planning | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|--|----|
| ELE ED 4992 | Practicum I: Elementary/Special Education/TESOL Site-Based Experience | 3 |
| ELE ED 4993 | Practicum II: Elementary/Special Education/TESOL Site-Based Experience | 12 |

Total Credit Hours: 123

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Continually reflect on professional growth to improve student learning outcomes/enhance student learning.

- Integrate technology to create meaningful student learning within the context of a global digital society.
- Apply content and pedagogical knowledge to create authentic and deep learning experiences.
- Use learning science principles to design, implement, and evaluate curriculum based on learning standards.
- Foster effective working relationships with students, school colleagues, families, and community members to enhance student learning and well-being.
- Design and establish a safe, inclusive, and respectful learning environment that nurtures the intellectual, social, and personal development of all students.
- Use equitable frameworks and inclusive practices to create a variety of instructional and assessment opportunities adapted to diverse learners to encourage all students' critical thinking, problem solving, and performance skills.

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-----------|--|-----------|
| Fall | Hours | Spring | Hours |
| ENGL 1100 | | 3 COMM 1040 | 3 |
| HIST 1001 or 1002 | | 3 MATH 1025 | 3 |
| MATH 1020 or 1030 | | 3 TCH ED 1001 | 1 |
| TCH ED 1000 | | 1 TCH ED 2000 | 1 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Social Sciences | | 3 EXPLORE - Social Sciences ¹ | 3 |
| | 16 | | 14 |

| Second Year | | | |
|------------------------------------|-----------|-------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| ED PSY 2212 | | 3 ENGL 3100 | 3 |
| ED TECH 2230 | | 3 SPEC ED 3318 | 3 |
| TCH ED 2001 | | 1 TCH ED 3565 | 2 |
| TCH ED 2209 | | 2 TCH ED 3566 | 2 |
| TCH ED 3310 | | 3 EXPLORE - Math and Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Math and Sciences | 3 |
| | 15 | | 16 |

| Third Year | | | |
|--------------|-----------|----------------|-----------|
| Fall | Hours | Spring | Hours |
| ELE ED 3338 | | 3 ELE ED 3339 | 4 |
| ELE ED 4246 | | 3 ELE ED 4341 | 3 |
| SPEC ED 4323 | | 3 ELE ED 4342 | 3 |
| TCH ED 3001 | | 1 SPEC ED 3349 | 3 |
| TCH ED 3210 | | 3 TCH ED 3211 | 3 |
| TCH ED 3312 | | 3 TCH ED 3212 | 3 |
| | 16 | | 19 |

| Fourth Year | | | |
|--------------|-----------|---------------|-----------|
| Fall | Hours | Spring | Hours |
| ELE ED 4253 | | 3 ELE ED 4993 | 12 |
| ELE ED 4992 | | 3 TCH ED 3214 | 3 |
| SPEC ED 4315 | | 3 | |
| SPEC ED 4342 | | 3 | |
| TCH ED 3213 | | 3 | |
| TCH ED 3224 | | 3 | |
| | 18 | | 15 |

Total Hours: 129

¹ Course should also satisfy the Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as

the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Elementary Education BSEd, Special Education Emphasis

The Bachelor of Science in Education (B.S.Ed.) in Elementary Education prepares those who desire to teach grades 1 - 6. The core courses are combined with one of three emphasis areas: **Special Education, Teaching English to Speakers of Other Languages (TESOL), or Middle School**. It is also possible to select the Special Education emphasis area and take the TESOL courses for TESOL endorsement. Please see each of the Emphasis Area Requirements listed below.

Undergraduate educator preparation is both engaging and innovative. Our high quality undergraduate educator preparation programs are designed around research-based scholarship and practical community-based contexts. To prepare our undergraduate students as the highest quality educators for our region, we contribute to and harness the resources of our deep community partnerships. The community-based experiences broaden candidates' understanding of their own identity as educators as well as enhancing their ability to build relationships, extend their skills, and understand family/community dynamics and interactions.

For their final year-long practicum, teacher candidates are immersed in Studio Schools. These partnering K-12 schools participate in our innovative, collaborative approach to educator preparation. Rather than being placed as individuals with one cooperating teacher, our candidates work with multiple teachers learning from each one, this process is supported and facilitated on-site by a specially trained UMSL clinical educator who leads a weekly seminar, conducts observations and provides candidates with regular feedback to guide their growth.

The focus of candidates' work is to explore challenges of student learning, envision solutions based on their research-based coursework, recent school initiatives, and carefully studied practices, and then enact innovative solutions to increase student learning. Candidates inquire deeply into how their students are learning, and use data to inform their instruction. Teacher candidates participate in all appropriate school and district professional development and school-wide activities, thereby becoming professionals who are part of the fabric of a studio school, not a just a temporary teacher candidate. Graduating educators have experienced an innovative education which prepares them for their future career as educational leaders in our region and beyond.

The Bachelor's of Science in Elementary Education degree prepares students to teach in elementary or middle school settings. This program requires the selection and completion of required coursework in one of the following emphasis areas: Special Education; Teaching English to Speakers of Other Languages (TESOL); Special Education and TESOL; or Middle School.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education Requirements (p. 30) and Graduation Requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill these requirements and best prepare students for advanced education coursework and licensure exams.

| | | |
|---|---|-----------|
| First Year Writing | | |
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| Math Proficiency | | |
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |
| Communication Proficiency | | |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |
| Information Literacy | | |
| ED TECH 2230 | Information Literacy | 3 |
| American History and Government | | |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |
| Humanities and Fine Arts | | |
| Choose any 9 hours from at least two approved fields. | | 9 |
| Social Sciences | | |
| Choose any 9 hours from at least two approved fields. At least one course must meet the cultural diversity requirement. | | 9 |
| Math and Life/Natural Sciences | | |
| Choose any 9 hours from at least two approved fields. | | 9 |
| Junior-Level Writing | | |
| ENGL 3100 | Junior-Level Writing | 3 |
| Total Hours | | 45 |

Program Requirements

All students in the B.S.Ed. in Elementary Education program are required to take the following Teacher Education courses, as well as the required courses for the selected emphasis area. Each student must also complete all required courses and certification assessments as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|-----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| TCH ED 3310 | Instructional Design and Technology Integration | 3 |
| Total Hours | | 12 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 3212 | Sociolinguistics and Communication in the Classroom | 3 |
| TCH ED 3312 | Psychology of Learning, Instruction, and Assessment | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| SPEC ED 4323 | Classroom Management and Positive Behavioral Supports in Inclusive Educational Settings | 3 |
| Total Hours | | 13 |

In addition to the above courses, students must select at least one emphasis area and complete all required coursework for the emphasis area.

The program will culminate in the completion of two sequential site-based practicum experience courses.

Emphasis Area Requirements

This emphasis area in elementary education prepares candidates for teaching in inclusive classrooms.

All candidates must complete the Beginning Teacher Education Program and Teacher Education Program course work above in the College of Education.

Elementary education majors must also complete the following Teacher Education Program courses:

| | | |
|-------------|---|---|
| ELE ED 3338 | Teaching Elementary Literacy in Inclusive Settings: Literacy Assessment and Learning | 3 |
| ELE ED 3339 | Teaching Elementary Literacy in Inclusive Settings: Literacy Instruction and Learning | 4 |
| ELE ED 4253 | Teaching Elementary Social Studies in Inclusive Settings | 3 |

| | | |
|-------------|--|---|
| ELE ED 4246 | Teaching Elementary Mathematics in Inclusive Settings I | 3 |
| ELE ED 4341 | Teaching Science in Inclusive Elementary Schools | 3 |
| ELE ED 4342 | Teaching Elementary Mathematics in Inclusive Settings II | 3 |
| TCH ED 3565 | Fine Arts Integration for the Elementary Classroom | 2 |
| TCH ED 3566 | Teaching Health and Physical Education Skills and Concepts in the Elementary Classroom | 2 |

In addition, candidates must complete the following Special Education courses:

| | | |
|--------------|--|---|
| SPEC ED 3349 | Instructional Practices in Inclusive Education | 3 |
| SPEC ED 4315 | Language and Communication of Children with Disabilities | 3 |
| SPEC ED 4342 | Transition Issues and Planning | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|--|----|
| ELE ED 4989 | Practicum I: Elementary/Special Education Site-Based Experience | 3 |
| ELE ED 4990 | Practicum II: Elementary/Special Education Site Based Experience | 12 |

Total Credit Hours: 123

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Continually reflect on professional growth to improve student learning outcomes/enhance student learning.
- Integrate technology to create meaningful student learning within the context of a global digital society.
- Apply content and pedagogical knowledge to create authentic and deep learning experiences. Use learning science principles to design, implement, and evaluate curriculum based on learning standards.
- Foster effective working relationships with students, school colleagues, families, and community members to enhance student learning and well-being. Design and establish a safe, inclusive, and respectful learning environment that nurtures the intellectual, social, and personal development of all students.
- Use equitable frameworks and inclusive practices to create a variety of instructional and assessment opportunities adapted to diverse learners to encourage all students' critical thinking, problem solving, and performance skills.

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| ENGL 1100 | | 3 COMM 1040 | 3 |
| HIST 1001 or 1002 | | 3 TCH ED 1001 | 1 |
| MATH 1020 or 1030 | | 3 TCH ED 2000 | 1 |
| TCH ED 1000 | 1 | EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | EXPLORE - Math and Sciences | 3 |
| EXPLORE - Social Sciences | 3 | EXPLORE - Social Sciences | 3 |
| 16 | | 14 | |

| Second Year | | | |
|--|-------|-----------------------------|-------|
| Fall | Hours | Spring | Hours |
| ED TECH 2230 | 3 | ED PSY 2212 | 3 |
| TCH ED 2001 | 1 | MATH 1025 | 3 |
| TCH ED 2209 | 2 | TCH ED 3310 | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | TCH ED 3565 | 2 |
| EXPLORE - Math and Sciences | 3 | TCH ED 3566 | 2 |
| EXPLORE - Social Sciences ¹ | 3 | EXPLORE - Math and Sciences | 3 |
| | 15 | | 16 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ELE ED 3338 | 3 | ELE ED 3339 | 4 |
| ELE ED 4246 | 3 | ELE ED 4342 | 3 |
| ENGL 3100 | 3 | SPEC ED 3349 | 3 |
| SPEC ED 3318 | 3 | SPEC ED 4323 | 3 |
| TCH ED 3001 | 1 | TCH ED 3212 | 3 |
| TCH ED 3312 | 3 | | |
| | 16 | | 16 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ELE ED 4253 | 3 | ELE ED 4990 | 12 |
| ELE ED 4341 | 3 | | |
| ELE ED 4989 | 3 | | |
| SPEC ED 4315 | 3 | | |
| SPEC ED 4342 | 3 | | |
| | 15 | | 12 |
| Total Hours: 120 | | | |

1 Course should also satisfy the Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Elementary Education BSEd, TESOL Emphasis

Elementary Education

The Bachelor of Science in Education (B.S.Ed.) in Elementary Education prepares those who desire to teach grades 1 - 6. The core courses are combined with one of three emphasis areas: **Special Education, Teaching English to Speakers of Other Languages (TESOL), or Middle School**. It is also possible to select the Special Education emphasis area and take the TESOL courses for TESOL endorsement. Please see each of the Emphasis Area Requirements listed below.

Undergraduate educator preparation is both engaging and innovative. Our high quality undergraduate educator preparation programs are designed around research-based scholarship and practical community-based contexts. To prepare our undergraduate students as the highest quality educators for our region, we contribute to and harness the resources of our deep community partnerships. The community-based experiences broaden candidates' understanding of their own identity as educators as well as enhancing their ability to build relationships, extend their skills, and understand family/community dynamics and interactions.

For their final year-long practicum, teacher candidates are immersed in Studio Schools. These partnering K-12 schools participate in our innovative, collaborative approach to educator preparation. Rather than being placed as individuals with one cooperating teacher, our candidates work with multiple teachers learning from each one, this process is supported and facilitated on-site by a specially trained UMSL clinical educator who leads a weekly seminar, conducts observations and provides candidates with regular feedback to guide their growth.

The focus of candidates' work is to explore challenges of student learning, envision solutions based on their research-based coursework, recent school initiatives, and carefully studied practices, and then enact innovative solutions to increase student learning. Candidates inquire deeply into how their students are learning, and use data to inform their instruction. Teacher candidates participate in all appropriate school and district professional development and school-wide activities, thereby becoming professionals who are part of the fabric of a studio school, not a just a temporary teacher candidate. Graduating educators have experienced an innovative education which prepares them for their future career as educational leaders in our region and beyond.

The Bachelor's of Science in Elementary Education degree prepares students to teach in elementary or middle school settings. This program requires the selection and completion of required coursework in one of the following emphasis areas: Special Education; Teaching English to Speakers of Other Languages (TESOL); Special Education and TESOL; or Middle School.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education Requirements (p. 30) and Graduation Requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill these requirements and best prepare students for advanced education coursework and licensure exams.

First Year Writing

| | | |
|-----------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
|-----------|------------------------------------|---|

Math Proficiency

| | | |
|--------------|--|---|
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |

Communication Proficiency

| | | |
|--------------|--|---|
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |

Information Literacy

| | | |
|--------------|----------------------|---|
| ED TECH 2230 | Information Literacy | 3 |
|--------------|----------------------|---|

American History and Government

| | | |
|--------------|---|---|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |

Humanities and Fine Arts

| | |
|---|---|
| Choose any 9 hours from at least two approved fields. | 9 |
|---|---|

Social Sciences

Choose any 9 hours from at least two approved fields. At least one course must meet the cultural diversity requirement. 9

Math and Life/Natural Sciences

Choose any 9 hours from at least two approved fields. 9

Junior-Level Writing

| | | |
|-----------|----------------------|---|
| ENGL 3100 | Junior-Level Writing | 3 |
|-----------|----------------------|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 45 |
|--------------------|--|-----------|

Program Requirements

All students in the B.S.Ed. in Elementary Education program are required to take the following Teacher Education courses, as well as the required courses for the selected emphasis area. Each student must also complete all required courses and certification assessments as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|-----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| TCH ED 3310 | Instructional Design and Technology Integration | 3 |
| Total Hours | | 12 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------|---|---|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 3212 | Sociolinguistics and Communication in the Classroom | 3 |
| TCH ED 3312 | Psychology of Learning, Instruction, and Assessment | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |

| | | |
|--------------|---|---|
| SPEC ED 4323 | Classroom Management and Positive Behavioral Supports in Inclusive Educational Settings | 3 |
|--------------|---|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 13 |
|--------------------|--|-----------|

In addition to the above courses, students must select at least one emphasis area and complete all required coursework for the emphasis area.

The program will culminate in the completion of two sequential site-based practicum experience courses.

Emphasis Area Requirements

This emphasis area in elementary education prepares students for teaching English to speakers of other languages (TESOL).

All candidates must complete the Beginning Teacher Education Program and Teacher Education Program course work above in the College of Education.

Elementary education majors must also complete the following Teacher Education Program courses:

| | | |
|-------------|--|---|
| ELE ED 3338 | Teaching Elementary Literacy in Inclusive Settings: Literacy Assessment and Learning | 3 |
| ELE ED 3339 | Teaching Elementary Literacy in Inclusive Settings: Literacy Instruction and Learning | 4 |
| ELE ED 4341 | Teaching Science in Inclusive Elementary Schools | 3 |
| ELE ED 4342 | Teaching Elementary Mathematics in Inclusive Settings II | 3 |
| ELE ED 4246 | Teaching Elementary Mathematics in Inclusive Settings I | 3 |
| ELE ED 4253 | Teaching Elementary Social Studies in Inclusive Settings | 3 |
| TCH ED 3565 | Fine Arts Integration for the Elementary Classroom | 2 |
| TCH ED 3566 | Teaching Health and Physical Education Skills and Concepts in the Elementary Classroom | 2 |

In addition, students must complete the following TESOL courses:

| | | |
|-------------|--|---|
| TCH ED 3210 | General Linguistics in Teaching English to Speakers of Other Languages | 3 |
| TCH ED 3211 | Basic Principles of Second and Foreign Language Acquisition | 3 |
| TCH ED 3213 | Performance-based Assessment for TESOL | 3 |
| TCH ED 3214 | Material Development and Methods for TESOL | 3 |
| TCH ED 3224 | Curriculum Development for Content Teaching of English Language Learners | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|--|----|
| ELE ED 4994 | Practicum I: Elementary/TESOL Site-Based Experience | 3 |
| ELE ED 4995 | Practicum II: Elementary/TESOL Site-Based Experience | 12 |

Total Credit Hours: 123

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Continually reflect on professional growth to improve student learning outcomes/enhance student learning.
- Integrate technology to create meaningful student learning within the context of a global digital society.
- Apply content and pedagogical knowledge to create authentic and deep learning experiences.
- Use learning science principles to design, implement, and evaluate curriculum based on learning standards.
- Foster effective working relationships with students, school colleagues, families, and community members to enhance student learning and well-being.
- Design and establish a safe, inclusive, and respectful learning environment that nurtures the intellectual, social, and personal development of all students.
- Use equitable frameworks and inclusive practices to create a variety of instructional and assessment opportunities adapted to diverse learners to encourage all students' critical thinking, problem solving, and performance skills.

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| ENGL 1100 | 3 | COMM 1040 | 3 |
| HIST 1001 or 1002 | 3 | TCH ED 1001 | 1 |
| MATH 1020 or 1030 | 3 | TCH ED 2000 | 1 |
| TCH ED 1000 | 1 | EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | EXPLORE - Math and Sciences | 3 |
| EXPLORE - Social Sciences | 3 | EXPLORE - Social Sciences | 3 |
| | 16 | | 14 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ED PSY 2212 | 3 | ENGL 3100 | 3 |
| ED TECH 2230 | 3 | TCH ED 3310 | 3 |
| TCH ED 2001 | 1 | TCH ED 3565 | 2 |
| TCH ED 2209 | 2 | TCH ED 3566 | 2 |
| TCH ED 3565 | 2 | EXPLORE - Math and Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | | |
| | 14 | | 13 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ELE ED 3338 | 3 | ELE ED 3339 | 4 |
| ELE ED 4246 | 3 | ELE ED 4342 | 3 |
| SPEC ED 3318 | 3 | SPEC ED 4323 | 3 |
| TCH ED 3001 | 1 | TCH ED 3211 | 3 |
| TCH ED 3210 | 3 | TCH ED 3212 | 3 |
| TCH ED 3312 | 3 | | |
| | 16 | | 16 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ELE ED 4253 | 3 | ELE ED 4995 | 12 |

| | | | |
|-------------|----|-------------|----|
| ELE ED 4341 | 3 | TCH ED 3214 | 3 |
| ELE ED 4994 | 3 | | |
| TCH ED 3213 | 3 | | |
| TCH ED 3224 | 3 | | |
| | 15 | | 15 |

Total Hours: 119

1 Course should also satisfy the Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Elementary Mathematics Specialist Graduate Certificate

The Elementary Mathematics Specialist (Grades 1-6) certificate recognizes teachers with special training and expertise in mathematics content at the elementary school level. The program includes online courses and school-based internships. This program is designed for full-time classroom teachers.

Note: For those candidates who wish to pursue a Master's degree in Education, the M.Ed. can be earned using 18 of the credit hours required for the Elementary Math Specialist Certificate and 12 hours of additional coursework at the graduate level as required by the UMSL College of Education.

To be recommended for Missouri Department of Elementary and Secondary Education Elementary Math Specialist Certification (Grades 1-6), teachers must have a valid Missouri teacher's certificate, two years of appropriate classroom teaching experience as determined by DESE, and successful completion of any required DESE assessments.

Required Coursework

| Mathematics Content and Pedagogy | | |
|----------------------------------|---|-----|
| TCH ED 6271 | Teaching and Learning of Number and Operations from an Advanced Perspective | 3 |
| TCH ED 6272 | Teaching and Learning Rational Numbers from an Advanced Perspective | 3 |
| TCH ED 6273 | Geometry and Measurement for Elementary Mathematics Specialists | 3 |
| TCH ED 6274 | Algebraic Reasoning for Elementary Mathematics Specialists | 3 |
| TCH ED 6281 | Internship - Number and Operations in Elementary Schools | 1-2 |
| TCH ED 6282 | Internship - Rational Numbers in Elementary Schools | 1-2 |
| TCH ED 6283 | Internship-Geometry/Measurement in Elementary Schools | 1-2 |
| TCH ED 6284 | Internship-Algebraic Reasoning in Elementary Schools | 1-2 |
| TCH ED 6276 | Data and Probability for Elementary Mathematics Specialists | 3 |

| | | |
|---------------------------------------|--|--------------|
| Leadership Development in Mathematics | | |
| TCH ED 6277 | Foundations of Mathematics Leadership for Elementary Mathematics Specialists | 2 |
| TCH ED 6278 | Mathematical Leadership for Elementary Schools Advanced | 3 |
| Total Hours | | 24-28 |

Elementary School Teaching Graduate Certificate

The Graduate Certificate in Elementary School Teaching prepares those with at least a bachelor's degree, who are not pursuing an M.Ed., for teaching in the Elementary classroom.

This program of study is for individuals with a bachelor's degree who would like to prepare for teacher certification in Elementary Education. This graduate certificate program option leads to Missouri Initial Professional Teacher Certification in Elementary Teaching 1-6.

Admission Requirements for the Graduate Certificate in Elementary School Teaching:

1. A passing score on the designated Missouri Content Examination or an approved program of study
2. A 2.75 or higher overall GPA
3. Approved results of the Family Care Safety Registry
4. A clear TB test or chest x-ray, if appropriate

Applicants must meet the application deadlines set by the Graduate School

Required Certification Courses

| | | |
|--------------|---|---|
| TCH ED 6565 | Integrating the Fine Arts into Elementary Classrooms | 2 |
| TCH ED 6566 | Teaching Health and Physical Education Skills and Concepts for the Elementary Teacher | 2 |
| TCH ED 5310 | Instructional Design and Technology Integration for Educators | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment | 3 |
| ED PSY 6222 | Advanced Studies in Child and Adolescent Development | 3 |
| ELE ED 6337 | Teaching and Learning Literacy in the Elementary Classrooms: Teaching Reading and Writing | 3 |
| SPEC ED 6412 | Foundations of Inclusive Education | 3 |
| SPEC ED 6325 | Positive Behavior Interventions for Individual, Classroom, and School-wide Systems | 3 |
| ELE ED 6338 | Literacy Assessment for Guided Instruction | 3 |
| ELE ED 6253 | Teaching Social Studies through Reading, Writing, and English Language Learning | 3 |
| ELE ED 6246 | Math Content Pedagogy, Inquiry-Based Instruction, and Assessment | 3 |

| | | |
|--------------------|--|-----------|
| ELE ED 6241 | Science Content, Inquiry-Based Instruction, and Assessment: STEM-Integrated Pedagogy | 2 |
| ELE ED 5989 | Practicum I: Elementary/Special Education Site-Based Experience | 2 |
| ELE ED 5990 | Practicum II: Elementary/Special Education Site-Based Experience | 8 |
| TCH ED 5001 | Advanced Mid-Level Clinical Experience: Diverse Learners | 1 |
| Total Hours | | 44 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Continually reflect on professional growth to improve student learning outcomes/enhance student learning.
- Integrate technology to create meaningful student learning within the context of a global digital society.
- Apply content and pedagogical knowledge to create authentic and deep learning experiences.
- Use learning science principles to design, implement, and evaluate curriculum based on learning standards.
- Foster effective working relationships with students, school colleagues, families, and community members to enhance student learning and well-being.
- Design and establish a safe, inclusive, and respectful learning environment that nurtures the intellectual, social, and personal development of all students.
- Use equitable frameworks and inclusive practices to create a variety of instructional and assessment opportunities adapted to diverse learners to encourage all students' critical thinking, problem solving, and performance skills.

English BA

Engaging with and changing the world starts with reading and writing your way through it. The Department of English offers classroom, research, internship, and creative opportunities that will help you critically approach and insightfully analyze the diverse texts and situations you encounter every day. From reading and discussing important literary works, to impressing people with your outstanding writing, to becoming a more critical consumer and composer of digital media, the English BA positions you to advocate for awareness and change in both professional and public spheres. English majors love words, and our department offers insight into wielding their power and using them for the greater good.

General Education Requirements

All undergraduate english majors must meet the university and college general education requirements (p. 30).

The college's foreign language requirement may be met in any language

Satisfactory/Unsatisfactory Option

Majors may take no more than 6 satisfactory/unsatisfactory hours in the department. Any English course may be taken on a satisfactory/unsatisfactory basis **except** the following:

| | | |
|-----------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
|-----------|------------------------------------|---|

| | | |
|-----------|---|---|
| ENGL 1110 | First-Year Writing for International Students | 3 |
| ENGL 3090 | Turning the Kaleidoscope: How We Look at Texts | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| ENGL 3110 | Junior-Level Writing for International Students | 3 |
| ENGL 3120 | Business Writing | 3 |
| ENGL 3130 | Technical Writing | 3 |
| ENGL 3160 | Writing in the Sciences | 3 |

Degree Requirements

English majors must complete at least 39, but no more than 48, hours in English exclusive of:

| | | |
|----------------------------------|---|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| ENGL 1110 | First-Year Writing for International Students | 3 |
| Junior-Level Writing Requirement | | 3 |

Students majoring in English must take one three-hour 2000-level course in each of the following areas: Literature in English, Language and Writing Studies, and Creative Writing. Collectively, the three 2000-level courses introduce all majors to the intellectual work people in English Studies do, and help them explore the range of skills, processes, areas of knowledge, and practices we work with and the texts we produce.

| | | |
|-------------------------------------|--|----------|
| Literature in English | | 3 |
| ENGL 2330 | Poetry: The Greatest Hits | |
| ENGL 2350 | Our Stories, Ourselves | |
| ENGL 2360 | Hey, Have You Read _____? | |
| ENGL 2370 | Drama: The Greatest Hits | |
| Language and Writing Studies | | 3 |
| ENGL 2400 | Rhetorical Ways with Words | |
| ENGL 2410 | Literate Lives | |
| ENGL 2830 | Introduction to English Language Variety | |
| Creative Writing | | 3 |
| ENGL 2020 | Introduction to Creative Writing | |
| ENGL 2030 | Poetry Writing Jumpstart | |
| ENGL 2040 | Fiction Writing Jumpstart | |
| Total Hours | | 9 |

Junior-Level Writing Requirement

Students choose one three-hour course from the following list to meet the junior-level writing requirement:

| | | |
|-----------|---|---|
| ENGL 3090 | Turning the Kaleidoscope: How We Look at Texts ¹ | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| ENGL 3110 | Junior-Level Writing for International Students | 3 |
| ENGL 3120 | Business Writing | 3 |
| ENGL 3130 | Technical Writing | 3 |
| ENGL 3160 | Writing in the Sciences | 3 |

| | | |
|-------------|---|---|
| HONORS 3100 | Honors Advanced Composition: Writing The City | 3 |
|-------------|---|---|

¹ This course is strongly advised for literature majors and students anticipating graduate study in English.

3000 Level Major Courses: required total of 9 hours, at least six of which are literature.

Courses at this level feature a more narrow range of content, deepening the skills and habits of mind learned at the 2000 level.

| | |
|---|----------|
| One 3000-level British Literature Course | 3 |
| One 3000-level American Literature Course | 3 |
| An additional 3000-level English Course | 3 |
| Total Hours | 9 |

4000 Level Courses: required total of 12 hours. Pre-requisite: students must pass all three 2000-level core curriculum courses before enrolling in 4000-level courses.

Senior level courses are more specialized in content and more challenging in the kinds of work students produce. A wide range of these is available, in literature in English, writing and language, and creative writing. A student can focus on one of those three areas or may remain a generalist.

Electives: 9 hours of English courses at any level, exclusive of courses used to satisfy the first-year and junior-level writing requirements.

Bachelor of Arts (B.A.) in English Learning Outcomes

English BA Graduates Will Be Strong Writers, Compose Ideas with Clarity and Utilize Effective Writing Processes. They Will:

- Experiment with and enact various textual and discursive forms
- Integrate audience expectations and/or needs into texts they create
- Challenge audience expectations when appropriate
- Construct purposeful texts
 - (i.e. texts may include but are not limited to: literature, rhetoric, language, film, music, and other media/interactions)
- Practice revision processes, with complexity and concision complementing each other
- Make use of grammatically and mechanically correct prose when the rhetorical situation requires it
- Adapt and experiment with grammatical and mechanical conventions when the rhetorical situation requires it

English BA Graduates Participate in Conversations via Reading, Writing, Speaking, Listening, and Critical Thinking. They Will:

- Read, write, and interact with a variety of texts
 - Read broadly and widely
 - Read closely and critically
- Engage with increasingly complex texts as readers and writers
- Contribute their own perspectives to scholarly and public conversations involving texts they read
- Develop their own ideas and elaborate on them in relation to the ideas of others

- Discuss texts thoughtfully, inside and outside of classrooms
- Listen to others and synthesize perspectives when discussing texts
- Develop and master listening rhetorically, and listening to understand, not merely to argue against.

English BA Graduates Will Engage with a Wide Variety of Texts and Become Astute Analysts and Creators. They will:

- Define and describe texts
- Identify patterns in texts
- Analyze patterns in texts
- Make claims based on evidence found in texts
- Develop and propose alternative claims about texts
- Create original texts in response to texts
- Create and articulate original ideas in texts

English BA Graduates Will Be Culturally and Historically Aware Citizens and Professionals. They will:

- Explore and explain the interrelatedness of texts with culture, race, ethnicity, gender, disability, sexuality, class, and power, and the intersectional and sometimes fluid nature of such concepts
- Articulate worldviews from varied perspectives and evidence-based positions
- Discuss the historical dimensions and contemporary implications of texts
- Explore the structure and history of the English language
- Demonstrate strong social awareness

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|---------------------------|-------|----------------------------------|-------|
| INTDSC 1003 ¹ | 1 | ENGL 2360 | 3 |
| ENGL 1100 | 3 | ENGL 2040 (ENGL 2410, ENGL 2400) | 3 |
| MATH 1020 | 3 | Foreign Language 1002 | 5 |
| Foreign Language 1001 | 5 | CORE - Communication Proficiency | 3 |
| EXPLORE - Social Sciences | 3 | Elective or minor | 1 |
| | 15 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|-----------------------------------|-------|-----------------------------|-------|
| ENGL 2410 (or ENGL 2XXX Elective) | 3 | ENGL 3530 | 3 |
| ENGL 3320 | 3 | ENGL 3710 | 3 |
| Foreign Language 2101 | 3 | CORE - Information Literacy | 3 |
| CORE - US History and Government | 3 | EXPLORE - Social Sciences | 3 |
| EXPLORE - Math and Sciences | 3 | Elective or minor | 3 |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|---|-------|---|-------|
| ENGL 3090, 3100, 3120, 3130, or 3160 | 3 | ENGL 4000 Level elective | 3 |
| ENGL 4000-level course | 3 | ENGL elective | 3 |
| ENGL elective | 3 | EXPLORE - Mathematics and Life/Natural Sciences | 3 |
| EXPLORE - Social Sciences | 3 | Cultural Diversity Requirement | 3 |
| EXPLORE - Mathematics and Life/Natural Sciences | 3 | Elective or minor | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---------------------------|-------|---------------------------|-------|
| ENGL 4000+ level elective | 3 | ENGL 4000+ level elective | 3 |
| ENGL elective | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in English

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in English with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

English MA

Admission Requirements

To enter the graduate program in English a candidate must satisfy the requirements both of the Graduate School and the Department of English. A candidate should have a bachelor's degree, with at least 18 hours in English above the freshmen level, 12 of which must be in literature. Normally, only students with a grade point average of 3.0 in undergraduate English courses and an overall undergraduate average of 2.75 will be considered. Though the English department welcomes scores from the

Graduate Record Aptitude Exam and letters of recommendation, it does not require either of these. (Students applying for Teaching Assistantships, please see "Financial Aid and Teaching Assistantships.")

The graduate coordinator of the English Department with the advice of the graduate committee will use the undergraduate record and, and if available, the scores of the GRE general test as the basis for a decision. We welcome letters of recommendation from the applicant's former English instructors and a sample of expository prose. Applications to the MA in English are considered at all times. However, because spaces in graduate courses are limited, it is strongly advised that prospective students submit their applications well before the semester begins in order to gain admission into their appropriate classes.

Teaching Assistantships

A number of teaching assistantships are available for qualified applicants. In addition to the undergraduate record and the scores on the GRE general test, applications should include two letters of recommendation from former English instructors. Applications should be submitted to the graduate coordinator of the English department no later than March 15 preceding the academic year for which the appointment is desired.

Degree Requirements

In addition to the Graduate School requirements, students must complete at least 30 hours, 18 hours of which must be in 5000-level courses. Up to 12 hours may be taken in 4000-level courses approved by the department and Graduate School.

Required of both concentrations, literature and writing studies:

- ENGL 5000: Introduction to Graduate Study in English. Focuses upon bibliography, research methods, and literary criticism. Should be taken at the outset of the program, for graduate (not undergraduate) credit.

Students who choose a literature track must also take at least one course in each of the following six areas:

- Area 1, British literature before 1660
- Area 2, British literature between 1660 and 1900
- Area 3, Twentieth-century literature (British, American, post-colonial, or in translation)
- Area 4, American literature
- Area 5, Theories of writing, criticism, language, and/or culture
- Area 6, Literature in translation study of a particular literary genre, or a course in another relevant discipline

Students who choose the writing studies track must take:

- 15 hours in literature courses providing broad coverage rather than a narrow focus on a particular genre or historical period (ENGL 5000 constitutes three of these required literature credits)
- 15 hours in writing studies courses (including ENGL 5840)

If students choose the thesis option (6 hours) they will take 12 hours in literature and 12 hours in writing studies.

Thesis Options

Students may elect the thesis option, which requires a total of 6 hours of thesis credit. The thesis will engage the student in sustained and self-motivated study through the processes of research, conferring with advisors, drafting and revising text. The thesis must be approved and assigned a grade by a thesis committee. The student will select a

major professor who, after consulting with the chair and the graduate coordinator, will select two other members of the committee.

Literature Emphasis: The thesis should demonstrate original thought and substantial research and may be a critical study of literary works or a theoretical exploration of issues related to literature.

Writing Studies Emphasis: The final document will demonstrate significant familiarity with scholarship in Writing Studies through the critical analysis and clear synthesis of published research, observational data (where appropriate) and the student's thoughts/views/reflections/positions. The thesis may be a critical study, theoretical exploration or descriptive assessment of fieldwork drawing on writing, language, rhetorical, socio-cultural or reading theories; literacy; and the history of writing instruction; composition pedagogies; technologies.

English Minor

Minor in English

Students minoring in English may choose to specialize in literature, language and writing, or creative writing. Alternatively, students may choose a mixture of courses and remain generalists.

The minor will include a total of 18 hours of required English courses, exclusive of first-year composition and junior-level writing:

- One 2000-level core curriculum course in each of the following areas: one in literature, one in writing and language, and one in creative writing.
- Nine more hours of English courses of the student's choosing. At least three of those hours must be at the 4000 level.

Learning Outcomes

English Minor Graduates Will Be Able To:

- Demonstrate a knowledge that what counts as text is broader than traditionally assumed
- Interpret and compose for numerous contexts
- Demonstrate knowledge about audience and apply that understanding in shaping texts
- Compose purposeful texts
- Exhibit the ability to practice revision processes
- Make use of correct grammar and writing mechanics when rhetorically appropriate
- Engage with sources
- Analyze texts
- Develop and propose claims about texts
- Respond to texts with originality and purpose
- Contribute to scholarly and public conversations
- View the world from varied perspectives and evidence-based positions
- Apply skills and knowledge from the minor into their major course of study
- Discuss texts thoughtfully, inside and outside of classrooms
- Listen to others and synthesize perspectives when discussing texts

Enterprise Systems Development Graduate Certificate

The Graduate Certificate in Enterprise Systems Development is designed to help students from all backgrounds achieve competence in the development and management of web-based or legacy information systems including the interface with contemporary programming languages, frameworks, platforms, testing methodologies, and security standards.

This 12 credit hour certificate program also counts toward the 30 credit hour Master of Science in Information Systems and Technology degree program requirements. Students may choose to combine this certificate with other courses and/or certificates to obtain the Master of Science in Information Systems and Technology degree.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs.

| | | |
|--|--|-----------|
| INFSYS 6806 | Managerial Applications of Object-Oriented Technologies | 3 |
| or INFSYS 6808 | Advanced Object-Oriented Programming for Business | |
| Electives | | |
| Choose one of the following sequences: | | 6 |
| INFSYS 6807 & INFSYS 6817 | Contemporary z/OS COBOL and Advanced COBOL and Modern z/OS System Tools | |
| INFSYS 6814 & INFSYS 6815 | Web Applications for Business and Advanced Web Applications for Business | |
| Choose one of the following: | | 3 |
| INFSYS 6818 | Management of Software Testing | |
| INFSYS 6847 | Project Management | |
| INFSYS 6868 | Software Assurance | |
| Total Hours | | 12 |

The required courses may be substituted with other courses with the approval of the Chair of the Information Systems and Technology Department.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Develop business information systems
- Exhibit specialized technical expertise
- Apply software testing methodologies to ensure high quality business applications
- Apply software security standards in business applications
- Communicate effectively with information systems users

Entrepreneurship Graduate Certificate

The Graduate Certificate in Entrepreneurship is an applied program of study designed for individuals who seek to develop skills enabling them to lead venture creation processes and sustainable growth efforts in all types of organizations. Course experiences will enable students develop an entrepreneurial mindset and a deep understanding of problem identification, opportunity recognition, customer discovery, design thinking, and lean startup processes. Students may pursue a general track of study or may pursue either social or technology specialized tracks of study.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

The Graduate Certificate in Entrepreneurship is an experientially-based 12-credit-hour program. Students complete 6 credit hours of required coursework and 6 credit hours of specialized track coursework. Students can select technology, social, or general entrepreneurship tracks. Students must complete both elective courses from the same track of study. All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs. All 12 credit hours taken as part of this certificate transfer to the MBA degree program.

Required Courses

| | | |
|--------------------------------------|---------------------------------------|---|
| Choose two of the following courses: | | 6 |
| EDUC 5612 | Intrapreneurial Leadership | |
| ENT 5614 | Entrepreneurship and Innovation | |
| EDUC 5616 | Accelerate Intrapreneurial Experience | |
| ENT 5618 | Accelerate Entrepreneurial Experience | |

General Track

| | | |
|--------------------------------------|---|---|
| Choose two of the following courses: | | 6 |
| BUS AD 5001 | Managerial Economic Analysis | |
| BUS AD 5100 | Managerial Communication | |
| ED TECH 5420 | Advanced Computer Programming and Pedagogy | |
| EDUC 6442 | Leadership in Community Education | |
| ENT 5650 | Advanced Experiential Entrepreneurship | |
| INFSYS 6808 | Advanced Object-Oriented Programming for Business | |
| INFSYS 6815 | Advanced Web Applications for Business | |
| INFSYS 6862 | Artificial Intelligence Applications for Business and Cybersecurity | |
| FINANCE 6570 | Introduction to Fintech | |
| FINANCE 6572 | Financial Data Analytics | |
| FINANCE 6574 | Artificial Intelligence and Machine Learning in Finance | |

| | |
|--------------|-------------------------------------|
| FINANCE 6576 | Blockchain: Applications in Finance |
| TCH ED 6440 | Innovation in Education |

Social Track

Choose two of the following courses:

6

| | |
|--------------|--|
| ED TECH 5420 | Advanced Computer Programming and Pedagogy |
| EDUC 5612 | Intrapreneurial Leadership |
| EDUC 5616 | Accelerate Intrapreneurial Experience |
| EDUC 6442 | Leadership in Community Education |
| ENT 5650 | Advanced Experiential Entrepreneurship |
| TCH ED 6440 | Innovation in Education |

Technology Track

Choose two of the following courses: ¹

6

| | |
|--------------|---|
| ENT 5650 | Advanced Experiential Entrepreneurship |
| INFSYS 6806 | Managerial Applications of Object-Oriented Technologies |
| INFSYS 6808 | Advanced Object-Oriented Programming for Business |
| INFSYS 6815 | Advanced Web Applications for Business |
| INFSYS 6862 | Artificial Intelligence Applications for Business and Cybersecurity |
| FINANCE 6570 | Introduction to Fintech |
| FINANCE 6572 | Financial Data Analytics |
| FINANCE 6576 | Blockchain: Applications in Finance |
| FINANCE 6574 | Artificial Intelligence and Machine Learning in Finance |

Entrepreneurship Undergraduate Certificate

Requirements

This 15-credit hour certificate, which includes 9 hours of required coursework, will allow students from different majors and with different professional interests to investigate the foundations of entrepreneurial practice. This certificate is appropriate for any student who has an interest in advancing his or her knowledge, creativity, and skills necessary to become or work with entrepreneurs, bring entrepreneurial thinking to his or her workplace, and who seeks a competitive edge in the job market.

Required Courses

| | | |
|----------|----------------------------------|---|
| ENT 3100 | Applications of Entrepreneurship | 3 |
| ENT 4001 | Accelerate Capstone | |

Elective Courses

Students must complete nine credit hours of ENT courses at the 3000-level or above. ¹

9

Total Hours

12

¹ Students may enroll in EDUC 2002 in lieu of one of the ENT electives. Other Entrepreneurship related courses may be used with the approval of the program coordinator.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Understand and apply the language of entrepreneurship and innovation
- Apply entrepreneurship concepts in both personal and professional contexts
- Articulate and communicate new opportunities by writing and presenting elevator pitches, slide decks, and performing class presentations
- Use interdisciplinary theories and concepts to identify root causes and solve problems in any setting

Environmental Studies Minor

Minor in Environmental Studies

This is an interdisciplinary program that integrates the natural and physical sciences with the social sciences and humanities to study current environmental problems resulting from human population growth, global climate change, overuse of natural resources, pollution and biodiversity loss. A minimum 18 hours are required, 9 of which must be in the natural and physical sciences, including the listed Honors College courses, and 9 must be from the social sciences and humanities. Both BIOL 1202 (Environmental Biology) and POL SCI 3480 Environmental Politics must be completed as part of the total 18 hours. A total of 12 hours must be taken at or above the 2000 level, with one additional course at or above the 3000 level besides POL SCI 3480. At least 9 hours must be taken while in residence at UMSL. A minimum GPA of 2.0 is required.

| | | |
|-------------|--|---|
| ANTHRO 1005 | Introduction to Human Evolution | 4 |
| ANTHRO 2126 | Archaeology Of Greater St Louis | 3 |
| ANTHRO 3228 | People and Plants | 3 |
| ANTHRO 3232 | | 3 |
| ANTHRO 3270 | | 3 |
| BIOL 1202 | Environmental Biology | 3 |
| BIOL 1821 | Introductory Biology: Organisms and the Environment (MOTR BIOL 150L) | 5 |
| BIOL 2102 | Ecology | 3 |
| BIOL 2103 | Ecology Laboratory | 2 |
| BIOL 2501 | | 5 |
| BIOL 3202 | Conservation Biology | 3 |
| BIOL 3203 | Conservation Biology Laboratory | 2 |
| BIOL 3302 | Evolution | 3 |
| BIOL 4102 | Behavioral Ecology | 3 |
| BIOL 4192 | | 5 |
| BIOL 4222 | | 3 |
| BIOL 4245 | | 3 |
| BIOL 4270 | | |
| BIOL 4402 | Ornithology | 3 |
| BIOL 4403 | Ornithology Laboratory | 2 |
| BIOL 4422 | Entomology | 3 |

| | | |
|---------------|--|------|
| BIOL 4423 | Entomology Laboratory | 2 |
| BIOL 4501 | | 5 |
| ECON 3500 | | 3 |
| ECON 4160 | Geospatial Analysis in the Social Sciences | 3 |
| ECON 4170 | Fundamentals of Cost-Benefit Analysis | 3 |
| ECON 4550 | Natural Resource Economics | 3 |
| GEOL 1002 | Historical Geology | 4 |
| HONORS 2050 | Inquiries in the Natural Sciences | 1-3 |
| HONORS 2051 | Inquiries in the Sciences: Laboratory or Field Work | 1 |
| INTL BUS 4281 | Entrepreneurship in the Global Environment | 3 |
| PHIL 2255 | Environmental Ethics | 3 |
| POL SCI 3480 | Environmental Policy | 3 |
| POL SCI 3595 | | 3 |
| POL SCI 3850 | International Organizations and Global Problem-Solving | 3 |
| POL SCI 3900 | Special Readings | 1-10 |

Learning Outcomes

Foundational Knowledge

Students obtaining a minor in environmental studies will be able to integrate knowledge from multiple disciplines including natural sciences, physical sciences, social sciences, and economics as they pertain to environmental issues and policies.

Practical skills and problem solving

Students earning a minor in environmental studies will be able to appreciate the biological methods and applications to solving environmental issues while recognizing the cultural and ethical context of environmental issues. Moreover, the minor will be able to reflect on his or her contribution as a citizen and consumer to global environmental issues.

Exercise Science Minor

A minor in Exercise Science is available for students pursuing any undergraduate degree program. It is intended for those who wish to join careers in prescribed physical activity such as personal training, strength and conditioning, rehabilitation and human performance. Students completing this minor could work with clients in recreational and wellness programs as well.

Minor Requirements:

| | | |
|--------------|--|---|
| PHY ED 2134 | Personal Physical Fitness | 3 |
| HLTH PE 3280 | Human Anatomy and Physiology | 4 |
| HLTH PE 3380 | Introduction to Nutrition for Health and Performance | 3 |
| PHY ED 3283 | Kinesiology | 3 |
| HLTH PE 3284 | Physiology of Human Exercise | 3 |
| PHY ED 3287 | Seminar in Exercise Science | 1 |
| PHY ED 3330 | Designing Physical Activity Programs | 3 |

Total Hours

20

Family Nurse Practitioner Post-Graduate Certificate

Post-graduate certificate (PGC) requirements are tailored to the individual student, depending on past academic work, experience, the student's goals, and specialty requirements. Upon completion of the PGC requirements, a certificate is awarded by the College of Nursing (CON) and Graduate School. Graduates are eligible to apply to take board certification exams in the advanced practice role and population for which they have been prepared.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsl.edu/services/ctl/onlinelearning/state_authorization.html.

Admission Criteria

- Admission to the University by completing the UMSL Graduate School application
- MSN, DNP from a nationally accredited nursing program
- MSN or DNP 3.0 minimum GPA
- Current professional licensure
- Acute Care Pediatric Nurse Practitioner (PNP-AC) post-graduate certificate requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) post-graduate certificate requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Certificate Requirements

Students must complete a minimum of 12 credit hours of coursework from the University of Missouri - St. Louis College of Nursing. Courses must be from the list below.

| | | |
|------------|---|-----|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology For Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| NURSE 6741 | Family Health I: Diagnosis and Management of Advanced Practice Nursing | 4 |
| NURSE 6742 | Family Health II: Diagnosis and Management in Advanced Practice Nursing | 4 |
| NURSE 6954 | Advanced Practice Nursing: Practicum I | 2-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II | 2-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III | 2-4 |

All students must complete 8 credit hours of Residency. Once credit hour is equivalent to 75 residency hours.

Finance Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

Available to all students except those pursuing the Bachelor of Science in Business Administration degree. Students must complete:

| | | |
|--|----------------------|----|
| FINANCE 3500 | Financial Management | 3 |
| Select any four upper division finance electives | | 12 |
| Total Hours | | 15 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Describe fundamental concepts in finance.
- Interpret financial data and describe firm financial performance.
- Demonstrate competency to identify and assess financial risk and return.

Financial Technology MS

Admission Requirements

Students must meet the general admission requirements for the Graduate School (p. 45).

Degree Requirements

| Required Courses | | |
|--------------------------------------|---|---|
| FINANCE 6500 | Financial Management ¹ | 3 |
| FINANCE 6503 | Computer Applications in Finance | 3 |
| FINANCE 6521 | Financial Forensics: The Science of Derivatives | 3 |
| FINANCE 6570 | Introduction to Fintech | 3 |
| FINANCE 6572 | Financial Data Analytics | 3 |
| FINANCE 6574 | Artificial Intelligence and Machine Learning in Finance | 3 |
| FINANCE 6576 | Blockchain: Applications in Finance | 3 |
| FINANCE 6590 | Seminar in Finance | 3 |
| Electives | | 6 |
| Choose two of the following courses: | | |
| FINANCE 6520 | Security Analysis | |

| | |
|--------------------|--|
| FINANCE 6540 | Financial Institutions and Financial Markets |
| FINANCE 6542 | Real Estate |
| FINANCE 6545 | Venture Capital and Private Equity |
| FINANCE 6580 | International Financial Management |
| Total Hours | |
| | 30 |

¹ FINANCE 6500 course may be waived depending on the candidate's previous educational experience. If so, the candidate will need to take an extra course from the elective course list. In total, a student is required to take a minimum of 30 credit hours. The 30-credit-hour program is tailored for students with an undergraduate degree in business or other degree that satisfies the FINANCE 6500 pre-requisites; otherwise, they need to take additional courses to meet the requirements for the FINANCE 6500 class.

Financial Technology MS Accelerated Master's Degree

The Department of Finance & Legal Studies offers an Accelerated MS degree program that allows students to simultaneously earn their BSBA with an emphasis in finance and their MS in Fintech in as few as ten semesters. Students in the Accelerated MS program will complete the MS through coursework.

The combined program requires a minimum of 138 credit hours. Students accepted to the Accelerated MS degree program will be permitted to count up to 12 credit hours at the 4000-level or higher toward both the BSBA and MS degrees; these courses will require additional work by the instructor. The remaining 18 credit hours must be at the 5000/6000 level.

Students are encouraged to work closely with the Undergraduate and Graduate Business Programs Directors to ensure that required courses are timed appropriately.

Eligibility

Students will need to have fulfilled the core curriculum requirements prior to applying for the Accelerated MS program.

Admission Requirements

Provisional Admission

Applicants are considered for provisional admission if they meet the following four criteria:

- Earned 60 hours as an undergraduate
- Completed the core curriculum requirements for the BSBA/ Finance emphasis
- Have a minimum GPA of 3.0
- Have met with both the Undergraduate and Graduate Business Programs Director

The Graduate Business Programs Director, in consultation with the Undergraduate Director, will determine whether the student can apply for provisional status. Graduate courses completed by undergraduate students who have been provisionally admitted to Accelerated master's program will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. These courses must be approved before the semester starts. Therefore, it is recommended to

apply for provisional status as a junior, preferably in the first semester of junior year.

Graduate Admission

Students are considered for admission to the graduate school in their final semester in their undergraduate degree program. Students should meet with the Graduate Business Programs Director each semester. Applicants are considered for graduate admission if they meet the following criteria:

- Are in the last semester of their undergraduate degree.
- Have a minimum GPA of 3.0 since being granted provisional status; and
- Have met with the Graduate Business Programs Director in the College of Business Administration

The Graduate Business Programs Director, in consultation with the Undergraduate Director, will determine whether the student can apply for graduate admission. Final decisions concerning graduate admission are made by the Graduate School in consultation with the Graduate Business Programs Director. Students admitted to the graduate program have graduate status and must take graduate courses until completing the master's degree.

Program Requirements

Students with provisional admission in the 5th semester (Junior year) will continue the status of undergraduate standing until the end of 8th semester (Senior year) and will complete up to 12 graduate credits.

Junior/Senior Year Courses ¹

| | | |
|---|---|---|
| FINANCE 6500 | Financial Management | 3 |
| Choose three of the following courses (9 hours) | | |
| FINANCE 6520 | Security Analysis | 3 |
| FINANCE 6503 | Computer Applications in Finance | 3 |
| FINANCE 6521 | Financial Forensics: The Science of Derivatives | 3 |
| FINANCE 6540 | Financial Institutions and Financial Markets | 3 |

Final Year Courses (choose 6 courses, 18 hours)

| | | |
|--------------------|---|-----------|
| Fall | | |
| FINANCE 6570 | Introduction to Fintech | 3 |
| FINANCE 6572 | Financial Data Analytics | 3 |
| FINANCE 6576 | Blockchain: Applications in Finance | 3 |
| Spring | | |
| FINANCE 6542 | Real Estate | 3 |
| FINANCE 6545 | Venture Capital and Private Equity | 3 |
| FINANCE 6574 | Artificial Intelligence and Machine Learning in Finance | 3 |
| FINANCE 6590 | Seminar in Finance | 3 |
| Total Hours | | 36 |

¹ All courses listed are 3-credit hour courses.

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The

student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Fintech Graduate Certificate

The Graduate Certificate in Fintech is designed for finance professionals at all levels and other professionals interested in seeking specialized training in financial technology and data analytics to keep up with transformative changes in the financial industry and advance their careers. This 15-hour program focuses on financial technology (fintech), including topics like an introduction to fintech, blockchain, statistical inference, dynamic modeling, big data analytics, artificial intelligence and machine learning, robo advisors, algorithmic trading, financial derivatives, and portfolio analysis and management.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements (p. 45).

Certificate Requirements

Required

| | | |
|--------------|-------------------------------------|---|
| FINANCE 6570 | Introduction to Fintech | 3 |
| FINANCE 6576 | Blockchain: Applications in Finance | 3 |

Electives

Choose three of the following:

| | |
|--------------|---|
| FINANCE 6503 | Computer Applications in Finance |
| FINANCE 6520 | Security Analysis |
| FINANCE 6524 | Portfolio Analysis and Management |
| FINANCE 6572 | Financial Data Analytics |
| FINANCE 6574 | Artificial Intelligence and Machine Learning in Finance |

Total Hours **15**

French Minor

A minor in French, German, Japanese or Spanish requires the completion of four courses in the language beyond the basic foundation sequence (Language 1001, Language 1002, and Language 2101). Transfer students must complete at least two courses for the minor at UMSL. All courses must be passed with a grade of C- or better.

Specific Requirements for the French Minor

| | | |
|---|--|-----------|
| FRENCH 2170 | Intermediate French Language and Culture | 3 |
| FRENCH 2180 | Readings in French | 3 |
| Select two French courses 3000-level or above | | 6 |
| Total Hours | | 12 |

Gender and Politics Minor

Requirements for Political Science Minors

A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor. Students may count no more than 3 hours in political science taken on a satisfactory/unsatisfactory basis toward the minor. Students taking an internship POL SCI 3940 may count no more than three hours of the internship toward the minor.

Specific Requirements for the Minor

| | | |
|-------------------------------|---|----|
| Select five of the following: | | 15 |
| POL SCI 2102 | | |
| POL SCI 2290 | Gender and the Law | |
| POL SCI 2370 | The Politics of Identity and Social Justice | |
| POL SCI 2380 | The Politics of Gender in the United States | |
| POL SCI 3460 | The Politics of Poverty and Welfare | |
| POL SCI 3900 | Special Readings ¹ | |
| POL SCI 3940 | Public Affairs Internship ¹ | |
| Total Hours | | 15 |

¹ May be taken with approval of the faculty advisor.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Explain the major events, laws, and court findings regarding gender and politics.
- Compare and contrast multiple social movements and policies.
- Assess issues of inequity, formulate evidence-based recommendations that take into account areas of privilege and oppression and existing political and societal structures, and communicate them with clarity and coherence.

Gender Studies Graduate Certificate

Requirements for Admission

- Applicants must meet the general University of Missouri-St. Louis Graduate School admission requirements
- Two letters of recommendation

This certificate is available to students with Bachelor's or Master's degrees and students enrolled in graduate degree programs. A student need not be enrolled in a degree program to earn the Gender Studies graduate certificate. Post B.A./B.S. students may enroll in the undergraduate or graduate certificate program.

Certificate Requirements

At least 18 hours of Gender Studies courses at the 4000, 5000, and/or 6000 level

1. 3 hours must include a graduate feminist or gender theory course, which may be GS 5100 Feminist Theory, GS 4600 Masculinities, or other theory course.
2. 3 hours must include either a graduate internship or practicum, or final writing project, which may be an independent study GS 6452 Special Readings in Gender Studies, or a substantial research and writing project for a GS graduate seminar, which may be GS 6450 Seminar in Gender Studies, or other cross-listed, 5000 or 6000-level seminar
3. 9 hours must be at the 5000 level or above, while up to 9 hours of 4000-level courses may be taken for graduate credit, as long as student completes graduate level work for the course.
4. No more than 6 hours may be taken as Directed or Independent Study credit.

Most Gender Studies courses are cross-listed with other departments and count toward a department's degree requirements as well as toward the certificate.

Learning Outcomes

Upon completion of the certificate earners will be able to:

Knowledge

- Contrast different theoretical approaches to understanding gender and their implications for advocacy and activism
- Develop in-depth knowledge of one aspect of gendered experience examined through the lens of a time period, literary genre, a geographic region, or other focus on a narrowed topic

Writing Research and Communications

- Apply feminist theories and methods to analyze, interpret, and discuss the role of gender in written, oral, visual, and/or multimedia texts
- Apply feminist research methods to identify and investigate a problem relating to gender in order to design an original research project that contributes to the scholarship on a topic in the field of Gender Studies by conducting a comprehensive and critical literature review, identifying and utilizing at least one appropriate method of original data collection, evaluating sources, and interpreting and disseminating the results

Professional

- Network with local and global leaders in the field of gender studies or fields appropriate to students' interests and career goals
- Develop the skills and knowledge necessary to compete for and be successful in a wide range of fields both local and global including non-profit management, education, academia, social work, the sciences, business, law, and transnational feminist work

Gender Studies Minor

Minor Requirements

For a Minor in Gender Studies, students must take at least 12 hours of Gender Studies courses. 6 hours must include 2 core courses:

1. GS 2102 Introduction to Gender Studies
2. GS 4100 Introduction to Feminist and Gender Theory, GS 4600 Masculinities, or other upper division course in feminist or gender theory.

The remaining 6 hours must be 3000-level or 4000-level GS courses. Enrolling in GS 4352 Independent Study in Gender Studies or GS 4353 Internship in Gender Studies is encouraged. Courses in the student's major department (not cross-listed as a GS course) may be accepted with the prior approval of the Gender Studies Program Coordinator.

Learning Outcomes

Upon completion of the Gender Studies Minor and Undergraduate Certificate, a student will be able to:

Knowledge

- Analyze how gender affects individuals and society historically and currently, locally and globally, including how systems of power and oppression operate and how gender intersects with other facets of identity such as ethnicity, nationality, class, sexuality, age, and ability
- Describe key figures, concepts, and debates within the discipline of gender studies, such as "the Other," sex vs. gender, gender as a social construct vs. essentialism, and intersectionality
- Utilize gender as a variable to explain historical, social, cultural, technological, and/or symbolic phenomena
- Evaluate ideological assumptions underlying social institutions and systems of representation

Writing Research and Communications

- Articulate complex ideas coherently to diverse audiences.
- Relate how personal experience connects to institutions and systems of privilege and oppression.
- Apply traditional and new media literacies to locate, evaluate, utilize, and produce knowledge.
- Synthesize evidence obtained from research to compose texts that advance, support, and defend an argument about gender.

Professional

- Develop strategies for promoting equality and combating oppression
- Connect personal experience and the ideas explored in the classroom to apply the insights gained to other classes and personal and professional life
- Describe the importance of respect, civility, sensitivity, civic engagement, and appreciation for diversity and demonstrate these traits

Gender Studies Undergraduate Certificate

Requirements for Admission

Undergraduate certificate candidates must meet the University's general education requirements. Applicants must have a cumulative G.P.A. of at least 2.5 and must maintain a minimum 2.5 G.P.A. in Gender Studies courses. Candidates for undergraduate certificates are asked to register with Gender Studies after taking one or two courses. Students will then be enrolled in the program and will be placed on our mailing list for class information and announcements of upcoming events.

Certificate Requirements

Students must take at least 18 hours in Gender Studies courses. 9 hours must include 3 core courses:

1. GS 2102 Introduction to Gender Studies
2. GS 4100 Introduction to Feminist and Gender Theory, GS 4600 Masculinities, or other upper-division course in feminist or gender theory.
3. Capstone Experience: Students must complete a final research project or practicum. The Capstone requirement may be satisfied by GS 4352 Independent Study in Gender Studies, GS 4353 Internship in Gender Studies, or by a 4000-level Gender Studies course or other 4000-level seminar where student completes a final research and writing project that focuses on gender studies.

9 hours may be cross-listed courses with student's major department or Gender Studies electives from various disciplines.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Demonstrate an understanding of the complex ways gender and other culturally constructed categories inform social, cultural, economic, and political practices that both reproduce and resist hierarchies of power in the U.S. and global contexts.
- Articulate the central questions of gender studies scholarship, including foundational theories in feminist thought and action.
- Conduct interdisciplinary research that applies gender as a central category of analysis.
- Apply gained knowledge, research skills, and gender studies concepts in an independent study, experience of direct engagement with professionals in their field, and/or community service-oriented activity.

Geographic Information Systems Undergraduate Certificate

The Undergraduate Certificate in Geographic Information Systems introduces students to broad concepts, technologies, tools, and techniques related to the gathering and sharing of geographic data across various disciplines. Students will learn how to acquire geographic information from a variety of sources; manage, interpret, and present geospatial data for a given purpose; and how to use geographic information system (GIS) software for storage, manipulation, and analysis of geospatial data.

Core

| | | |
|--------------|---|---|
| SOC 2501 | Introduction to Geographic Information Systems and Sciences | 3 |
| SOC 4501 | Advanced Geographic Information Systems and Sciences | 3 |
| CMP SCI 3990 | Undergraduate Internship | 1 |

Electives

Choose one course from the following list of methods/visualization electives 3

| | | |
|--------------|---|--|
| GEOG 1001 | Introduction to Geography (MOTR GEOG 101) | |
| HONORS 2002 | Topics in Information Literacy ^{2,3} | |
| SCMA 3331 | Data Visualization for Business Applications ² | |
| POL SCI 3350 | Political Parties and Elections ² | |
| CMP SCI 3411 | Introduction to Data Visualization ² | |
| SOC 3501 | Social Mapping for Change | |
| INFSYS 3830 | Data Programming | |
| CMP SCI 4420 | Introduction to Digital Image Processing and Computer Vision ² | |

Choose one course from the following list of broadening electives 3

| | | |
|--------------|--|--|
| GEOG 1002 | World Regions (MOTR GEOG 101) | |
| GEOG 2001 | Cultural Geography | |
| HONORS 2020 | Inquiries in the Fine and Performing Arts ³ | |
| HONORS 2040 | Inquiries In Mathematics And Computing ^{2,3} | |
| POL SCI 2600 | The Geography of Governance ² | |
| HIST 4142 | Inquiries in U.S. History ^{2,3} | |
| ECON 4160 | Geospatial Analysis in the Social Sciences ² | |
| CMP SCI 4200 | Python for Scientific Computing and Data Science ² | |
| PHIL 4460 | Topics in Logic ^{2,3} | |
| SOC WK 4755 | Introduction to Poverty, Human Rights, and Social Justice ² | |
| MGMT 5634 | Sustainability Management ² | |

Total Hours 13

Other UMSL courses and courses from other UM campuses, through ICCS or other formats, may be included as electives with prior approval of the program coordinator.

¹ Must be approved by the program coordinator

² This course has departmental prerequisites, please consult an advisor for more information

³ Only specific section offerings (those with formalized GIS content) may count toward certificate and must be approved by program director

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Explain the important role of the geospatial dimension in data analysis and presentation

- Apply foundational concepts and methods of acquisition, management, visualization, and analysis of geographic data and apply these skills to problems in various disciplines
- Use GIS tools and methods to create maps, images, and other media to communicate in a meaningful way to others
- Solve GIS focused problems independently and as a member of a team

German Minor

A minor in French, German, Japanese or Spanish requires the completion of four courses in the language beyond the basic foundation sequence (Language 1001, Language 1002, and Language 2101). Transfer students must complete at least two courses for the minor at UMSL. All courses must be passed with a grade of C- or better.

Specific Requirements for the German minor

| | | |
|-------------|--|---|
| GERMAN 2170 | Intermediate Practice in Speaking and Writing German | 3 |
|-------------|--|---|

| | | |
|---|---------------------------------|---|
| GERMAN 2180 | Intermediate Readings in German | 3 |
| Select two German courses 3000-level or above | | 6 |

Total Hours 12

Gerontological Studies Undergraduate Certificate

Opportunities and challenges of human aging intersect with most academic and professional disciplines. Older adults receive a range of health, social, economic and other support services (e.g. through government programs, medical centers, senior centers, long-term care facilities, not-for-profit agencies) in order to age successfully at home or elsewhere.

The proportion of older adults in the US population will grow substantially in coming decades. The 15 credit hour Undergraduate Certificate in Gerontological Studies (UCGS) is designed to prepare students for entry level, service-oriented positions in this growing marketplace.

The UCGS adds a tangible credential for future work with and for older adults, and it can be pursued with any major area of study with proper planning. Please contact the Gerontology Program Coordinator to learn more and for an advising appointment.

General Requirements

The certificate is 15 credit hours. All students must take SOC 2170/GERON 2170: Aging in America: Concepts & Controversies (3-credit hours). An additional 9 credit hours of GERON elective courses must include at least 6 credit hours at the 3000-level or above. Students will complete a capstone (minimum of 3 credit hours) that entails an internship or practicum in an aging setting, or research or readings resulting in an aging-related paper or project.

Substitutions or alternative courses may be included with approval of the Program Coordinator for Gerontology. At least 9 of the 15 hours required for the certificate must be taken at UMSL. Students must achieve a grade of C- or higher in the required course, elective courses, and the capstone to qualify for this minor.

Required Course

| | | |
|----------------|--|---|
| SOC/GERON 2170 | Aging in America: Concepts & Controversies | 3 |
|----------------|--|---|

Electives

9

Select 9 hours from the list below. At least 6 hours must be at the 3000-level or above.

Any GERON courses

| | | |
|----------------|---|--|
| PSYCH 2268 | Lifespan Developmental Psychology (MOTR PSYC 200) | |
| SOC WK 3510 | Human Behavior in the Social Environment | |
| SOC WK/GS 3700 | Diversity and Social Justice | |

Capstone

Complete at least 3 hours from the following courses. This course must be approved, in advance, by the Gerontology Program Coordinator.¹

3

| | | |
|-------------|---|--|
| GERON 4490 | Directed Readings | |
| PSYCH 3295 | Selected Projects in Field Placement | |
| SOC 4350 | Special Study | |
| SOC 4385 | Internship in Sociology | |
| SOC WK 4800 | Supervised Field Experience in Social Work I | |
| SOC WK 4850 | Supervised Field Experience in Social Work II | |

Total Hours

15

¹ Capstone course is distinct from the electives.

Other UMSL courses and courses from other UM campuses, through ICCS or other formats, may be included as electives with prior approval of the program coordinator.

Learning Outcomes:

Upon completion of the program, certificate earners will be able to:

- Employ lifespan/life course perspective and biological, psychological, and sociological theories to examine human development and aging.
- Distinguish factors related to aging outcomes through critical thinking and empirical research.
- Adhere to ethical principles to guide work with and on behalf of older persons.
- Engage collaboratively with others to promote integrated approaches to aging in practice.

Gerontology Minor

Opportunities and challenges of human aging intersect with most academic and professional disciplines. Older adults receive a range of health, social, economic and other support services (e.g. through government programs, medical centers, senior centers, long-term care facilities, not-for-profit agencies) in order to help them age successfully at home or elsewhere. The 12 credit hour Undergraduate Minor in Gerontology is designed to introduce students to this important field.

General Requirements

The minor is 12 credit hours. All students must take SOC 2170/GERON 2170: Aging in America: Concepts & Controversies (3-

credit hours). The remaining 9 GERON credit hours must include at least 6 credit hours at the 3000-level or above.

Substitutions or alternative courses may be included with approval of the Gerontology Program Coordinator. At least 6 of the 12 credit hours required for the minor must be taken at UMSL. Students must achieve a grade of C- or higher in the required and elective courses to qualify for this minor.

Required Course

| | | |
|----------------|--|---|
| SOC/GERON 2170 | Aging in America: Concepts & Controversies | 3 |
|----------------|--|---|

Select 9 hours from the list below. At least 6 hours must be at the 3000-level or above.

9

| | | |
|-------------------|---|--|
| Any GERON courses | | |
| PSYCH 2268 | Lifespan Developmental Psychology (MOTR PSYC 200) | |
| SOC WK 3510 | Human Behavior in the Social Environment | |
| SOC WK/GS 3700 | Diversity and Social Justice | |

Total Hours

12

Other UMSL courses and courses from other UM campuses, through ICCS or other formats, may be included as electives with prior approval of the program coordinator.

Learning Outcomes

Upon completion of a Minor in Gerontology at the University of Missouri St. Louis, students will be able to:

- Employ lifespan/life course perspective and biological, psychological, and sociological theories to examine human development and aging.
- Distinguish factors related to aging outcomes through critical thinking and empirical research.

Global Biodiversity Conservation and Leadership Graduate Certificate

The Graduate Certificate in Biodiversity Conservation and Leadership is intended for students who wish to pursue a career in conservation biology or ecology from either a research or practical standpoint. Cooperating institutions include the Missouri Botanical Garden, St. Louis Zoo, Center for International Studies at UMSL, and the Departments of Economics, History, Political Science, and Social Work.

The Graduate Certificate in Global Biodiversity Conservation and Leadership is intended for students who wish to pursue a career in conservation biology or ecology from either a research or practical standpoint. Cooperating institutions include the Missouri Botanical Garden, the Saint Louis Zoo, the Center for International Studies at UMSL, and the Departments of Economics, History, and Political Science, and the Business School.

Admission

Graduate students enrolled in UMSL who intend to receive a Graduate Certificate in Global Biodiversity Conservation and Leadership must complete the Application for Graduate Certificate (G10) once completing the required coursework. Students not enrolled in a course of graduate

studies at UMSL who have a baccalaureate degree or are enrolled in graduate work elsewhere must apply for admission to the UMSL Graduate School as graduate certificate-seeking students. The minimum admission requirements include: (1) completion of a baccalaureate degree and the prerequisites of the certificate program; 2) at least a 3.0 GPA for undergraduate course work or a 3.2 GPA for 12 credit hours of graduate course work. The minimum prerequisites are undergraduate courses in ecology, evolution and genetics.

Requirements

The certificate is awarded after completion of 18 credit hours of core courses and electives with a minimum of 12 credits at the 5000 or 6000 level. Electives must include a minimum of 3 credits outside biology with a maximum of 7 outside biology. A maximum of 3 credits may be taken at institutions other than UMSL. Students may simultaneously earn a graduate degree and count credits earned in their degree program toward the certificate when appropriate.

Required Core Courses

| | | |
|---------------------------|---|-----|
| BIOL 6250/POL SCI 6452 | Public Policy of Conservation and Sustainable Development | 3 |
| BIOL 6299 | Internship in Conservation Biology | 2-4 |
| BIOL 6222 or BIOL 6270 | | 3 |

Electives 10

Biology

| | |
|-----------|-----------------------------|
| BIOL 4182 | Population Biology |
| BIOL 4402 | Ornithology |
| BIOL 4403 | Ornithology Laboratory |
| BIOL 4422 | Entomology |
| BIOL 4423 | Entomology Laboratory |
| BIOL 4501 | |
| BIOL 5192 | Community Ecology |
| BIOL 6182 | Advanced Population Biology |
| BIOL 6192 | |
| BIOL 6222 | |
| BIOL 6270 | |
| BIOL 6889 | Graduate Seminar |

Economics

| | |
|-----------|--|
| ECON 3500 | |
| ECON 4160 | Geospatial Analysis in the Social Sciences |
| ECON 4170 | Fundamentals of Cost-Benefit Analysis |
| ECON 4550 | Natural Resource Economics |

History

| | |
|-----------|---------------------------|
| HIST 3000 | Special Topics in History |
|-----------|---------------------------|

International Business

| | |
|---------------|--|
| INTL BUS 4281 | Entrepreneurship in the Global Environment |
|---------------|--|

Political Science

| | |
|--------------|--|
| POL SCI 3440 | Public and Nonprofit Budgeting |
| POL SCI 3480 | Environmental Policy |
| POL SCI 3590 | |
| POL SCI 3710 | Nonprofits, Civil Society and Volunteerism |

| | |
|--------------|--|
| POL SCI 3830 | International Political Economy |
| POL SCI 3850 | International Organizations and Global Problem-Solving |
| POL SCI 4850 | International Law |
| POL SCI 6448 | Political Economy and Public Policy |

Total Hours 18-20

Global Health and Social Medicine Minor

Select one of the following 1000-level courses: 3-4

| | |
|------------------|---------------------------------|
| ANTHRO 1005 | Introduction to Human Evolution |
| ANTHRO/HIST 1021 | The Body in Culture |
| BIOL 1131 | Human Physiology and Anatomy I |

Select one of the following 1000 or 2000 level courses: 3

| | | |
|------------------|---|---|
| ANTHRO/HIST 1021 | The Body in Culture ¹ | 3 |
| ANTHRO 2104 | Medicine in Culture and History | |
| BIOL 1110 | Nutrition in Health | |
| HIST 2425 | Food and Drink in Japan: A Cultural History | |

| | |
|----------|--|
| SOC 2170 | Aging in America: Concepts & Controversies |
| SOC 2180 | Alcohol, Drugs and Society |
| SOC 2338 | Health and Society |

Select two of the following 3000-4000 level elective courses: 6

| | |
|------------------|---|
| ANTHRO/HIST 3246 | Medicine and Disease in the Ancient World |
| ANTHRO 4314 | The Archaeology of Death |
| SOC 3300 | The Social Construction of Aging and Ageism |
| SOC 3501 | Social Mapping for Change |

Select one of the following courses: 3

| | |
|-----------------|--|
| ANTHRO/SOC 4307 | Community Based Research in Anthropology |
| SOC 3221 | Qualitative Methods in Social Research |
| SOC 4200 | Applied Social Research |

Total Hours 18-19

¹ If not taken above.

Students may substitute the above courses with other courses upon approval by the advisor of the minor program. All required courses for the minor must be completed with a grade of C- or better.

Health Communication Undergraduate Certificate

The Department of Communication and Media offers a certificate program for those students interested in careers in health communication. Our certificate program addresses the dynamics of health communication from varying perspectives. The core classes in the program focus on a breadth

of health communication topics, such as the influence of mass media, interpersonal communication, organizational communication, and culture. After completing the certificate, students will be able to recognize, analyze, and design effective communication strategies for promoting individual and public health.

The certificate program is comprised of 18 credit hours of coursework, as indicated. All students must earn a C or better in all courses applied to the certificate program.

Core Course List:

| | | |
|--------------------|---|-----------|
| COMM 1369 | Introduction to Health Communication | 3 |
| COMM 2235 | Professional Communication | 3 |
| COMM 3150 | Crisis, Disaster, and Risk Communication | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| COMM 3368 | Advanced Health Communication | 3 |
| COMM 4360 | Applied Health Communication ¹ | 3 |
| Total Hours | | 18 |

¹ COMM 4360 may count toward the internship credit for the BA in Communication.

For more information on this certificate, please contact the Department of Communication and Media's Health Communication Certificate Coordinator.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Effectively apply theory and best practices to design messages to enhance health
- Critically analyze and evaluate health strategies and messages using relevant theory and best practices
- Understand the roles of communication and other factors that contribute to and/or alleviate health issues
- Practice effective, professional communication in a variety of health-related settings

Higher Education MEd

The Master's degree with an emphasis in Higher Education is flexibly designed to provide a unique academic experience for practitioners who are or aspire to be employed in higher education or K-12 institutions, or private, community or government agencies focused in postsecondary transition opportunities. They would perform work related to a variety of career paths, which are provided below. The program includes an expanded focus which pertains to college access, equity and affordability, and workforce preparation, which complements the student services and higher education leadership emphases. The revised and integrated curriculum considers higher education student services practitioners, as well as K-12 teacher leaders and college and career preparation professionals who aim to transform the college access and workforce preparation culture for K-12 and postsecondary education institutions in order to champion success for all students.

Admission Requirements

This degree program follows the policies of The College of Education and the Graduate School relating to academic standards, residency, transfer credit, time limitations, and thesis options (see Graduate Study (p. 45) in the Bulletin).

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL Bulletin. Students are considered for admission to the graduate program in Adult and Higher Education only after they have formally applied for admission through the Graduate School. Applications are completed online.

Degree Requirements

| | | |
|--------------------|---|-----------|
| ED PSY 6474 | Understanding the Psychosocial Development of Emerging Adults | 3 |
| or HIGHERED 6474 | Understanding the Psychosocial Development of Emerging Adults | |
| HIGHERED 6405 | Financial Issues in Higher Education | 3 |
| HIGHERED 6408 | Legal Issues in Student Affairs | 3 |
| HIGHERED 6430 | The Community College | 3 |
| HIGHERED 6473 | Curriculum in Higher Education | 3 |
| HIGHERED 6475 | College Access and Career Preparation for the Emerging Adult | 3 |
| HIGHERED 6476 | Organization and Administration of Higher Education | 3 |
| HIGHERED 6477 | History and Philosophy of American Higher Education | 3 |
| HIGHERED 6478 | Enrollment Management and Student Retention | 3 |
| HIGHERED 6900 | Internship (may be taken over 1-3 semesters) | 3 |
| Total Hours | | 30 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Analyze and evaluate issues related to students and postsecondary/higher education institution practices using the history and sociology of higher education, organizational, and learning and development theories to support student success.
- Apply learning and development theories of program development/planning to diverse practice settings in postsecondary/higher education.
- Apply leadership, organizational, evaluation, assessment, and management practices to professional work in postsecondary/higher education.
- Apply professional standards and principles of law, ethics, and social justice to postsecondary/higher education work.
- Collaborate with others related to the field of postsecondary/higher education to effectively facilitate problem solving and decision making through critical reflective practice.
- Demonstrate high-quality interpersonal skills, including academic and professional writing and presentation skills.

Higher Education MEd Accelerated Master's Degree

The Bachelor of Educational Studies and Master's in Education (B.E.S./M.Ed.) accelerated program in Higher Education allows students to complete the requirements for both degrees within five years of full-time study. The number of credit hours that are normally required to pursue the undergraduate Bachelor of Educational Studies and the Master of Education degrees separately will be reduced from 150 credit hours to a total of 138 credit hours if the accelerated option is selected.

Admission Requirements

Provisional Admission

Applicants will be considered for provisional admission if they have a minimum GPA of 3.00.

After provisional admission to the Accelerated Master's degree program in Higher Education, undergraduate students who pursue the Bachelor of Educational Studies degree program, Youth and Adult development emphasis, can apply two internship courses, EDUC 4990 (Internship II) and EDUC 4991 (Internship III), twelve (12) credit hours total, toward the Higher Education master's program. Students must apply for the Accelerated Master's degree program prior to enrolling in these internship courses in order to count these courses towards the graduate degree. Students will be charged the undergraduate tuition rate for EDUC 4990 and EDUC 4991.

Students should apply for provisional status no later than the first semester of their senior year.

Graduate Admission

Students are considered for formal admission to the Graduate School each semester after being granted provisional status. Applicants are considered for formal admission if they meet the following criteria.

- Enrolled in the final semester of their undergraduate degree program and applied to graduate with the B.E.S. degree in MyView
- Received provisional admission to the Accelerated M.Ed. in Higher Education;
- Consulted with their academic advisor to develop an academic plan for the Accelerated M.Ed.

Final graduate admissions decisions are made by the Graduate School in consultation with the College of Education Graduate Program Director. Students admitted to the graduate program must take graduate courses until the completion of the master's degree.

Applicable Coursework

Twelve (12) credit hours of internship coursework, EDUC 4990 (Internship II) and EDUC 4991 (Internship III), as shown under the section "Program Requirements" below, may be applied toward the credit hour requirements for both the B.E.S. and Higher Education degree programs. An additional 18 credit hours of graduate coursework, also outlined in the "Program Requirements" section, must be completed for conferral of the Accelerated Master's degree.

The courses that will count toward both degrees must be approved by both the Undergraduate and Graduate Program Directors. All other requirements for the B.E.S. degree remain in effect.

Program Requirements

Candidates for the Accelerated Master's Degree in Higher Education must complete the following courses, for a total of 30 credit hours:

Internship Courses

| | | |
|-----------|----------------|---|
| EDUC 4990 | Internship II | 6 |
| EDUC 4991 | Internship III | 6 |

Graduate Courses

| | | |
|----------------------|---|---|
| HIGHERED 6430 | The Community College | 3 |
| HIGHERED 6473 | Curriculum in Higher Education | 3 |
| ED PSY/HIGHERED 6474 | Understanding the Psychosocial Development of Emerging Adults | 3 |
| HIGHERED 6475 | College Access and Career Preparation for the Emerging Adult | 3 |
| HIGHERED 6476 | Organization and Administration of Higher Education | 3 |
| HIGHERED 6478 | Enrollment Management and Student Retention | 3 |

Total Hours **30**

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

History BA

Do you often ask "how" and "why"? Are you curious and analytical and up for a challenge? A History degree is for those who answer "Yes!" Studying history introduces you to the fascinating and familiar in ancient and modern societies, to cultures in faraway places, and to the complexities of our own neighborhoods. A history major will help you understand the present in new ways and build your professional future through hands-on research. By honing the skills demanded by employers in a wide variety of fields, history is a versatile and marketable major.

General Education Requirements

History majors must meet the university and college general education requirements (p. 30).

Majors may not take required history courses on a satisfactory/unsatisfactory basis. Students enrolled in variable credit reading courses for 5 credit hours must complete a seminar paper.

Students may take any language that fulfills the college's foreign language requirement.

Degree Requirements

Majors must complete at least 33, but not more than 45, hours in history with no grade below C-. Students are encouraged to move from

introductory courses at the 1000 level to more advanced courses at the 2000 and 3000 levels then to research oriented courses at the 4000 level.

| | | |
|---|--|-----------|
| 1000 Level | | |
| Select three courses at the 1000 level | | 9 |
| 2000 Level | | |
| HIST 2999 | Introduction to Historical Inquiry | 3 |
| HIST 2199 | Real History and Fake News | 3 |
| or HIST 2050 | Museums, Monuments and American Life: Introduction to Public History | |
| Select at least one additional course at the 2000 level | | 3 |
| 3000 Level | | |
| Select at least one course at the 3000 level | | 3 |
| 4000 Level ¹ | | |
| Select at least two courses at the 4000 level | | 6 |
| Additional Coursework | | |
| Select at least two additional courses at the 2000-4000 level | | 6 |
| Total Hours | | 33 |

¹ Students may only count up to 3 credit hours of HIST 4001, Special Readings toward the degree.

Students seeking a degree with distinction must enroll in HIST 4100 for 5 credit hours to satisfy their 4000-level requirements, adding an additional 2 credits to the total number of degree hours.

Undergraduate majors must complete a residency minimum of 15 hours of 2000/3000/4000 level History courses including 6 credit hours of 4000 level courses at UMSL.

Alternative courses to satisfy the History requirements

Some courses may satisfy the History requirement even though they are not listed as such, depending the content. These include courses at the Honors College, and in other departments. If a course covers some aspect of History, a student may request to include it as satisfying a degree requirement. The student should obtain a description and syllabus and submit both to the History undergraduate advisor for approval.

Departmental Honors

Students who have achieved the following: a) at least a 3.2 overall GPA; b) at least a 3.5 GPA for all hours attempted in history courses; and c) an outstanding research paper in the Senior Seminar as certified by the faculty member responsible for directing it, may be awarded departmental honors upon graduation.

B.A. in History Learning Outcomes

Graduates of this program will be able to:

- Build historical knowledge.
 - Gather and contextualize information in order to convey both the particularity of past lives and the scale of human experience.
 - Recognize how humans in the past shaped their own unique historical moments and were shaped by those moments.
 - Develop a body of historical knowledge with breadth of time and place—as well as depth of detail—in order to discern context.
 - Distinguish the past from our very different present.

- Develop research methods.
 - Recognize history as an interpretive account of the human past—one that historians create in the present from surviving evidence.
 - Collect, sift, organize, question, synthesize, and interpret complex material.
 - Practice ethical historical inquiry that makes use of and acknowledges sources from the past as well as the scholars who have interpreted that past.
 - Develop empathy toward people in the context of their distinctive historical moments.
- Recognize that Historical knowledge is complex, sometimes ambiguous, and subject to ongoing reexamination.
 - Welcome contradictory perspectives and data, which enable us to provide more accurate accounts and construct stronger arguments.
 - Describe past events from multiple perspectives.
 - Explain and justify multiple causes of complex events and phenomena using conflicting sources.
 - Identify, summarize, appraise, and synthesize other scholars' historical arguments.
- Apply the range of historical thinking skills to evidence that is often incomplete, complex, and contradictory.
 - Consider a variety of historical sources for credibility, position, perspective, and relevance.
 - Evaluate historical arguments, explaining how they were constructed and might be improved.
 - Revise analyses and narratives when new evidence requires it.
- Create historical arguments and narratives and effectively communicate them.
 - Generate substantive, open-ended questions about the past and develop research strategies to answer them.
 - Craft well-supported historical narratives, arguments, and reports of research findings in a variety of media for a variety of audiences.
- Use historical perspective as central to active citizenship.
 - Apply historical knowledge and historical thinking to contemporary issues.
 - Develop positions that reflect deliberation, cooperation, and diverse perspectives.

Sample Four Year Plan

| First Year | | | |
|---|-------|---|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 HIST 1XXX History Core | 3 |
| HIST 1001 or 1002 | | 3 HIST 2101 | 1 |
| ENGL 1100 | | 3 FGN LANG 1002 Language and Culture II | 5 |
| CORE - Mathematics Proficiency | | 3 CORE - Communication Proficiency | 3 |
| FNG LANG 1001 Language and Culture I | | 5 EXPLORE - Social Sciences | 3 |
| | 15 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| HIST 1XXX History Core | | 3 HIST 2000-3999 History Core | 3 |
| HIST 2000-3999 History Core | | 3 HIST 2100 | 1 |
| FGN LANG 2101 Language and Culture III | | 3 HIST 3199 | 4 |
| EXPLORE - Mathematics and Life/Natural Sciences | | 3 ENGL 3100 | 3 |

| | | | |
|-----------------------------------|--------------|--|--------------|
| EXPLORE - Social Sciences | 3 | EXPLORE - Math and Sciences | 3 |
| | 15 | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| HIST 2000-3999 History Core | 3 | HIST 2000-3999 level course | 3 |
| EXPLORE - Math and Sciences | 3 | Cultural Diversity Requirement (choose a History course) | 3 |
| EXPLORE - Social Sciences | 3 | CORE - Information Literacy | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| HIST 3999 (or HIST 3XXX Elective) | 3 | HIST 4999 (or HIST 4XXX History Elective) | 4-5 |
| HIST 4XXX History Elective | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 16-17 |
| Total Hours: 120-121 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in History

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification.

Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in History with Master's Level Coursework for Secondary Teacher Certification

Students may opt to complete a B.A. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12 or a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

History BA, Public History and Museums in the Digital Age Emphasis

The emphasis in Public History and Museums in the Digital Age is designed for students interested in pursuing careers in the fields of museums, heritage, and public history. It will familiarize students with the major issues confronted by cultural institutions that interpret the past for and in collaboration with public audiences and introduce students to the skills and digital competencies required for successful professional careers in these fields. Students are prepared to apply for graduate level work in Museum Studies and Public History.

General Education Requirements

History majors must meet the university and college general education requirements (p. 30).

Majors may not take required history courses on a satisfactory/unsatisfactory basis. Students enrolled in variable credit reading courses for 5 credit hours must complete a seminar paper.

Students may take any language that fulfills the college's foreign language requirement.

Degree Requirements

Majors must complete at least 33, but not more than 45, hours in history with no grade below C-. Students are encouraged to move from introductory courses at the 1000 level to more advanced courses at the 2000 and 3000 levels then to research oriented courses at the 4000 level.

1000 Level

| | |
|--|---|
| Select three courses at the 1000 level | 9 |
|--|---|

2000 Level

| | | |
|--------------|--|---|
| HIST 2999 | Introduction to Historical Inquiry | 3 |
| HIST 2199 | Real History and Fake News | 3 |
| or HIST 2050 | Museums, Monuments and American Life: Introduction to Public History | |

| | |
|---|---|
| Select at least one additional course at the 2000 level | 3 |
|---|---|

3000 Level

| | |
|--|---|
| Select at least one course at the 3000 level | 3 |
|--|---|

4000 Level ¹

| | |
|---|---|
| Select at least two courses at the 4000 level | 6 |
|---|---|

Additional Coursework

| | |
|---|---|
| Select at least two additional courses at the 2000-4000 level | 6 |
|---|---|

| | |
|--------------------|-----------|
| Total Hours | 33 |
|--------------------|-----------|

¹ Students may only count up to 3 credit hours of HIST 4001, Special Readings toward the degree.

Students seeking a degree with distinction must enroll in HIST 4100 for 5 credit hours to satisfy their 4000-level requirements, adding an additional 2 credits to the total number of degree hours.

Undergraduate majors must complete a residency minimum of 15 hours of 2000/3000/4000 level History courses including 6 credit hours of 4000 level courses at UMSL.

Alternative courses to satisfy the History requirements

Some courses may satisfy the History requirement even though they are not listed as such, depending the content. These include courses at the Honors College, and in other departments. If a course covers some aspect of History, a student may request to include it as satisfying a degree requirement. The student should obtain a description and syllabus and submit both to the History undergraduate advisor for approval.

Specific Requirements for the Emphasis Area

| | | |
|---|--|----------|
| HIST 2050 | Museums, Monuments and American Life: Introduction to Public History | 3 |
| HIST 1020 or HIST 3999 | St. Louis: People, Place, and Food Internship | 3 |
| Elective | | 3 |
| Candidates must also complete a three-hour elective course, which may include one of the following if not already taken for the core: | | |
| HIST 1020 | St. Louis: People, Place, and Food | |
| HIST 3999 | Internship | |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | |
| SOC 3501 | Social Mapping for Change | |
| Total Hours | | 9 |

History BA/MA Dual Degree Program

The 2+3 B.A./B.S. – Ed and M.A. in History enables students of demonstrated academic ability and educational maturity to complete the requirements for both degrees in five years of full-time study. Because of its accelerated nature, the program requires the completion of lower-division requirements (15 hours) before entry into the three-year portion of the program. It also has prerequisites numbered 5000-5999 for graduate readings courses numbered 6000-6999. When all the requirements of the B.A./B.S. – Ed. and M.A. program have been completed, students will be awarded both the baccalaureate and master's degrees. A carefully designed program can permit a student to earn both degrees within as few as ten semesters.

The combined program requires a minimum of 137 hours, at least 5 of which must be at the senior level (HIST 4999) and at least 32 of which must be at the graduate level (courses numbered in the 5000 and 6000 range). In qualifying for the B.A. or B.S. – Ed., students must meet all university and college requirements, including the requirements of the undergraduate major. In qualifying for the M.A., students must meet all university and Graduate School requirements, including satisfactory completion of at least 32 credit hours at the graduate level.

The semester they will complete 62 undergraduate credit hours, (including 15 credit hours of appropriate 1000-level coursework in the History Department) interested students should apply to the Graduate Director of the Department of History for admission to the 2+3 combined degree program in History. A cumulative grade point average of 3.4 or higher in history courses, a writing sample, and three letters of recommendation from faculty are required for consideration. Students will be admitted to the 2+3 program under provisional status until they have completed 105

total credit hours toward their BA degree with a grade point average of 3.0 or higher. After completion of the provisional period, and with the recommendation of the graduate director, and approval of the graduate dean, students can be granted full admission into the program. Students will not be admitted to the program, if they have accumulated more than 105 credits. Students in the 2+3 program begin to pay graduate credit hour fees once they exceed the 105 credit hour threshold. Students must maintain a grade point average of 3.0 or higher throughout the combined program. Students who officially withdraw from the 2+3 combined degree program will be awarded the B.A. or B.S. – Ed. Degree when they have successfully completed all the requirements for the degree.

Undergraduate History Requirements For Students in the 2+3 Program

The following requirements must be completed prior to enrolling in the 2+3 Program:

| | |
|--|-----------|
| Three 1000-level courses | 9 |
| HIST 3199 Introduction to Historical Inquiry | 4 |
| Two additional 2000-3000 level courses | 6 |
| Total Hours | 19 |

Once admitted to the program students must take the following courses:

Additional Undergraduate History Requirements For Students in the 2+3 Program:

HIST 4999, Senior Seminar (5).

Graduate History Requirements For Students in the 2+3 Program

- Three courses at the **5000-level** for 9 credit hours.
- Five courses at the **6000-level** for 17 credits beginning with **HIST 6000** (students must take two of their three 5000-level courses prior to enrolling in HIST 6000), followed by at least three courses in a major field of study and one 5-credit course.
- In addition to this core, each candidate must select one of the two following degree options:
 - a. Thesis Option –32 hours total

In addition to the fulfilling the requirements listed above, the candidate choosing this option must enroll for 6 hours of thesis credit and submit an acceptable thesis. The thesis is based on original research in primary sources. Normally, theses do not exceed 100 pages of text. Candidates receive a grade for the thesis upon its approval by an advisory committee. The committee consists of professors selected by the candidate after consultation with the major professor. One member of the committee must be from the department but outside the candidate's general area of study, and one may be outside the history department.

The advisory committee conducts an oral examination on the thesis during the candidate's last semester of residence.

The committee decides whether the candidate shall pass, fail or fail with the option to repeat the oral examination at a later date. Students may not take the oral examination more than twice. The

second examination must be held no less than one and no more than two semesters following the date of the first examination. Summer session may be counted as a semester under this procedure, but students should be aware of the difficulties involved in assembling faculty committees during the summer.

Thesis candidates must demonstrate competence in one foreign language or in quantitative methods as applied to historical study. Candidates shall demonstrate foreign language competence by translating, with the use of a dictionary, 500 words in one hour. A member of the history faculty will conduct this examination and choose the test for translation. Candidates shall demonstrate quantitative methods competence by satisfactory completion of either PSYCH 2201, Psychological Statistics or SOC 3220, Sociological Statistics, or their equivalent.

b. Research Paper Option

To complete this option, the candidate must complete two additional 5-credit hour seminars (each consisting of a 6000-level reading seminar plus 2 credit hours of supplementary work on a substantial research paper.) The candidate may choose a fourth field in addition to the three already represented in the core to complete this option.

History Education Graduate Certificate

The Graduate Certificate in History Education is designed for practicing teachers, instructional coordinators, and history educators in the community who are seeking to deepen their knowledge of history education. It offers history and social studies educators a program that integrates historical and educational knowledge, theory, and practice. The purpose of the certificate is to improve the practice of history education in schools and the community, to introduce history educators to research in the field, to deepen their historical knowledge, and to encourage sophisticated teaching and curriculum development built on research at the intersection of history and the learning sciences.

Admission Requirements

Applicants wishing to pursue the Graduate Certificate in History Education in conjunction with an MA degree or an MED should follow the normal application procedures for their respective Master's level program.

Applicants wishing to pursue the Graduate Certificate in History Education alone normally must have a GPA of 3.0 or higher and should apply specifically for this certificate program and submit three letters of recommendation and a writing sample along with their application.

Program Requirements

All candidates for Graduate Certificate in History Education must complete:

| | | |
|------------------|--|---|
| HIST 6013 | History Education in Schools and Communities | 3 |
| HIST/TCH ED 6115 | | 3 |

Students must take an additional twelve credits at the graduate level in History or Education courses as approved by the Program Director.

History MA

The History M.A. program offers study in U.S. History, World History, History Education, Public History and Cultural Heritage, and Museum Studies. All students receive disciplined advanced work in preparation for doctoral programs or advanced training leading to teaching or other careers. Students select one of two options for completing the Master of Arts degree: thesis or research papers. The first path requires a substantial master's thesis; this path emphasizes depth of knowledge and research competence. The second path requires several research papers.

This path emphasizes breadth of historical knowledge. Students should consult with the Director of Graduate Studies to be sure that they have properly selected their fields of study.

The M.A. in History provides a broad-based program of study that emphasizes historical writing, research, and analysis. Students pursuing an M.A. in History can specialize in World History, U.S. History, Public History, or History Education.

Admission Requirements

Applicants must meet several departmental admission requirements in addition to the general criteria of the Graduate School. The applicant's undergraduate studies need not have been in history, but they must demonstrate high academic potential. We also welcome applications from returning students with high motivation to study in the field.

Applicants must submit three letters of recommendation, preferably from former teachers, and a sample of their written work. The History Department bases its admission decisions upon the undergraduate transcript, the letters of recommendation, and the sample of written work. The department admits applications throughout the year. Students should consult the Graduate School's Admission timeline

Core

All candidates for the M.A. degree in history must complete a core of 26 hours of course work (excluding thesis credit), with no more than nine hours of history and related fields at the 5000 level. This 26-hour core must include seven courses at 3 credit hours each (21 hours in all), and one 5-credit-hour writing seminar consisting of a 2-credit-hour research paper supplement to a 3-credit-hour, 6000-level history readings course.

To earn the 26-hour core, candidates must complete HIST 6000, complete one section of either HIST 5142 or HIST 5143 and select at least one field of study with a minimum of three courses (each at 3 credit hours or more.) Students may use the remaining hours to complete a second field.

In addition to this core, each candidate must select one of the two following degree options:

1. Thesis Option--32 hours total

In addition to the core, the candidate choosing this option must enroll for 6 hours of thesis credit and submit an acceptable thesis. The thesis is based on original research in primary sources. Normally, theses do not exceed 100 pages of text. Candidates receive a grade for the thesis upon its approval by an advisory committee. The committee consists of professors selected by the candidate after consultation with the major professor. One member of the committee must be from the department but outside the candidate's general area of study, and one may be outside the history department.

The advisory committee conducts an oral examination on the thesis during the candidate's last semester of residence.

The committee decides whether the candidate shall pass, fail, or fail with the option to repeat the oral examination at a later date. Students may not take the oral examination more than twice. The second examination must be held no less than one and no more than two semesters following the date of the first examination. Summer session may be counted as a semester under this procedure, but students should be aware of the difficulties involved in assembling faculty committees during the summer.

Thesis candidates must demonstrate competence in one foreign language or in quantitative methods as applied to historical study. Prior to beginning thesis research, candidates shall demonstrate foreign language competence by translating, with the use of a dictionary, 500 words in one hour. Normally a member of the history faculty will conduct this examination and choose the test for translation. Candidates shall demonstrate quantitative methods competence by satisfactory completion of either PSYCH 2201 Psychological Statistics or SOC 3220 Sociological Statistics, or their equivalent.

2. Research Paper Option-36 hours total

To complete this option, the candidate must complete two 5-credit-hour seminars (each consisting of a 6000-level reading seminar plus 2 credit hours of supplementary work on a substantial research paper), in addition to the core. The candidate may choose a fourth field in addition to the three already represented in the core to complete this option.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Conduct empirical historical research based on primary source evidence
- Compose publishable-quality scholarship that makes an original contribution to knowledge
- Evaluate recent scholarship within chosen subfield of study in the context of historiographical trends
- Synthesize historical research in interpretive formats, including written papers and essays
- Demonstrate facility for presenting historical argument orally and describing research and findings to an audience
- Distinguish between different methodological approaches to historical research, writing, and interpretation

History MA Accelerated Master's Degree

The Department of History offers an Accelerated MA degree program that allows students to finish their BA and earn their MA in History in as few as 10 semesters. Students in the Accelerated MA program will complete the MA with their choice of completing either research papers or a thesis.

The combined program requires a minimum of 146 credit hours. Students accepted to the Accelerated MA degree program will be permitted to count

up to 6 credit hours at the 4000-level or higher toward both the BA and MA degrees; these courses will require additional work by the instructor. The remaining credit hours must be at the 5000/6000 level.

Any 4000-level courses taken before admission to the Accelerated MA program will only apply to the undergraduate requirements. Students are encouraged to work closely with the Undergraduate and MA Program Directors to ensure that required courses are timed appropriately. Students meet with the MA Director as soon as they consider participating in the program.

Eligibility

To be eligible for the Accelerated MA program, students must have completed:

| | |
|--|-------------------------------------|
| Three 1000-level courses | 9 |
| HIST 3199 | Introduction to Historical Inquiry4 |
| Two additional 2000-3000 level courses | 6 |
| Total Hours | 19 |

Students with more than 105 credit hours cannot be considered for the Accelerated MA.

Admission Requirements

Admission to the Accelerated MA comes in two steps: provisional admission and graduate admission.

Provisional Admission

Applicants are considered for provisional admission if they meet the following four criteria.

- Earned 60 hours as an undergraduate.
- Completed the core curriculum requirements for History BA.
- Have a minimum GPA of 3.2 with a B or better in HIST 3199.
- Have discussed applying with both the Undergraduate and Graduate Directors.
- OPTIONAL: those undergraduates interested in being considered for BA/Latin Honors/Degree with Distinction must complete HIST 4999 Senior Seminar with a B+ or above.

The MA Program Director, in consultation with the Undergraduate Director, will determine whether the student can apply for provisional status. Graduate courses completed by undergraduate students who have been provisionally admitted to Accelerated Master's program will be charged at the undergraduate tuition rate; these courses will still offer the student "graduate status" and will later count toward the MA degree. These courses must be approved before the semester starts. Therefore, it is recommended to apply for provisional status as a junior.

Graduate Admission

Applicants are considered for admission to the Graduate School in their final undergraduate semester. They must

- Be in their final semester in undergraduate status
- Have earned a minimum GPA of 3.2 since being granted provisional status
- Submitted at least one letter of recommendation from an UMSL History professor

- Submitted to the MA Director a 1–2 page statement of purpose briefly explaining why an advanced degree in History is of interest and why the applicant merits serious consideration
- Have met with the MA Program Director in History

The MA Program Director, in consultation with the Undergraduate Director, will determine whether the student can apply for graduate admission. Final decisions concerning formal admission are made by the Graduate School in consultation with the Program Director. Students admitted to the graduate program will have graduate status and must continue taking graduate courses until the completion of the MA degree.

Graduate Program Requirements

- Up to two courses at the 5000-level for 6 credit hours.
- Five courses at the 6000-level for 17 credits beginning with HIST 6000 (students must take at least two 5000-level courses prior to enrolling in HIST 6000), including one 5-credit course.

In addition to this core, each candidate must select one of the two following degree options.

Thesis Option –32 hours total

In addition to fulfilling the requirements listed above, the candidate choosing this option must enroll for 6 hours of thesis credit and submit an acceptable thesis. The thesis is based on original research in primary sources. Thesis candidates whose completion of the thesis requires reading ability in a specific language must demonstrate the capacity to do so prior to beginning research.

Research Paper Option

To complete this option, the candidate must complete two additional 5-credit hour seminars (each consisting of a 6000-level reading seminar plus 2 credit hours of supplementary work on a substantial research paper.)

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

History MA, Museums, Heritage and Public History Emphasis

The MA in Museums, Heritage, and Public History joins theoretical and practical study at an advanced level to prepare students for careers in museums, heritage institutions, historic sites and societies, and related organizations. The program works closely with cultural resources in St Louis, particularly the city's many museums and historic sites. We focus on community engagement, the interdisciplinary and cross-cultural study of material culture, interpreting and debating the past, new media and public education, and research in archival and material collections. Our graduates work in art museums, history museums, science centers,

historic house museums, and other cultural institutions across the United States and internationally.

Career Outlook for M. A. in Museums, Heritage, and Public History

According to the Institute of Museum and Library Services, there are more than 35,000 museums in the United States, employing more than 400,000 individuals. History museums constitute forty-eight percent of the total museums in the country; there are more than 16,800 historical societies and historic preservation organizations alone. While job requirements vary among individual institutions and specific professional roles, the MA degree offered by this program qualifies graduates for a wide range of careers in the museum and heritage field. Faculty and mentors in the Museum Studies Program provide students with placement assistance, counseling, and access to information on career opportunities. Our alumni are employed at institutions around the country, from Santa Fe to Philadelphia, Minneapolis to Dallas.

The MA in History with an emphasis in Museum, Heritage, and Public History may be taken as a terminal degree by students intending to become museum professionals or public historians. Students may focus their studies on subdisciplines such as museum curation, digital public history, collection or archival management, or other areas.

Admission Requirements

Prospective students for the Master of Arts in History with an emphasis in Museums, Heritage, and Public History must apply specifically for this program on the graduate application. Applications for the Master of Arts in History with an emphasis in Museums, Heritage, and Public History will be accepted only for the fall semester.

Prospective students must demonstrate high academic potential. Typically, the History department admits only students with at least a 3.2 grade point average in their undergraduate major; most successful applicants have higher grades. An undergraduate major in History is not required for admission to this program. Applicants must submit three letters of recommendation, preferably from former teachers and/or employers, and a sample of their written work. Applicants must also complete the Museums, Heritage, and Public History Supplemental Application, which includes a statement of career intent.

Admissions decisions are based on the undergraduate transcript, the letters of recommendation, and the sample of written work.

Applications must be received by the university no later than February 1.

Program Requirements

All candidates for the MA in History with an emphasis in Museums, Heritage, and Public History must complete the following core courses (25 hours).

| | | |
|---------------------------|---|---|
| HIST 6000 | The Historian's Craft | 3 |
| HIST 6001 | Introduction to Public History and Cultural Heritage | 3 |
| HIST 6131 | Museum Origins and Evolution | 3 |
| HIST 6133 | Digital Public History | 3 |
| HIST 6127 | Museums and Communities | 3 |
| HIST 6142 or HIST 6143 | Readings in U.S. History Readings in World History | 5 |
| HIST 6126 | Museum Studies Internship | 5 |

| | | |
|--------------------|---------------------------------|-----------|
| or HIST 6138 | Museum Studies Capstone Project | |
| Total Hours | | 25 |

Candidates must also complete 9 credit hours of elective courses. These may include courses listed above, if not already taken for the core, or additional courses which may include the following.

| | | |
|--------------|--|---|
| HIST 6002 | Material Culture in Historical Context | 3 |
| HIST 6129 | Emerging Museum Practices | 3 |
| HIST 6134 | History Curatorship | 3 |
| HIST 6139 | Practicum in Exhibit and Program Development | 3 |
| ART HS 5593 | Museum Management and Curatorial Practice | 3 |
| POL SCI 6300 | Leadership and Management in NonProfit Organizations | 3 |
| P P ADM 6311 | Staff Management Issues in Nonprofit Organizations | 1 |
| P P ADM 6312 | Legal Issues in Managing Nonprofit Organizations | 1 |
| P P ADM 6313 | Financial Issues in Managing Nonprofit Organizations | 1 |

Students may substitute other courses with approval of the Director of the Museums, Heritage, and Public History program. For courses outside the History Department, a maximum of six credits may be at the 3000 level. No 3000 level courses may be taken for graduate credit within the History Department.

Candidates conclude the degree with an internship or exit project represented by the course numbered HIST 6138 (5 credits). This capstone project will be customized to the interests and career aspirations of each student, as approved in advance by the Director.

Total hours for Program: 34

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Conduct original historical research based on disciplinary protocols
- Demonstrate competence in digital technologies utilized in the creation, presentation, and distribution of interpretive content
- Assess contemporary activities in the field of museums, heritage, and public history with reference to best practices
- Develop skills for communicating interpretive content effectively with public and professional audiences
- Demonstrate skills to become a competent professional and ethical contributor to museum, heritage, and public history collaborative settings
- Integrate community perspectives into professional museum, heritage, and public history products and activities

History Minor

Students may minor in history by taking 19 hours of history courses as follows:

1. Three courses numbered 1000 -1999 (9 credits)
2. Three courses numbered 2000-3999, including HIST 3199 (10 credits)

No course in which a grade below a C- is received shall count toward a minor.

Prerequisites

Some courses required by the Minor in History have prerequisites. Some students may satisfy prerequisites by virtue of their prior curriculum. When this is not the case, students are responsible for either satisfying the prerequisites by adding courses to their curriculum or obtaining a waiver from the instructor.

History of Art and Visual Culture Minor

A minor in History of Art and Visual Culture requires the completion of at least 18 hours with a GPA of 2.0 or better. Students must take ART HS 1100 and at least one course in non-Western art. They must also take at least two courses at the 2000-level and two courses at the 3000-level or above in History of Art and Visual Culture. A maximum of 3 hours of internship can be applied toward the minor in art history. At least nine of the 18 hours must be taken in residence at UMSL. All courses in the minor must receive a grade of C- or above.

| | | |
|---|--|-----------|
| ART HS 1100 | Introduction to Western Art (MOTR ARTS 100) | 3 |
| Choose one course from the following: | | 3 |
| ART HS 1120 | Global Art and Visual Culture (MOTR ARTS 101) | |
| ART HS 1140 | | |
| ART HS 1150 | Introduction to the Art and Visual Cultures of Africa | |
| ART HS 1160 | Introduction to the Art and Visual Cultures of Asia | |
| Chose two 2000-level or above and two 3000-level or above from the following courses: | | 12 |
| ART HS 2211 | Art and Archaeology of The Ancient World | |
| ART HS 2212 | Greek Art and Archaeology | |
| ART HS 2225 | Medieval Art | |
| ART HS 2250 | Rococo to Realism | |
| ART HS 2270 | Art of the United States | |
| ART HS 2280 | Modern to Contemporary Art | |
| ART HS 3390 | Special Study | |
| ART HS 3395 | Selected Themes in the History of Art and Visual Culture | |
| ART HS 4490 | Special Study | |
| Total Hours | | 18 |

Honors College Undergraduate Certificate, 2-year Program

Two year Program (22 credit hours total):

Students in this program will take a combination of Honors College seminars and honors independent study credit (usually for work done in their major fields). The 22 credit hours must include 6 credits of independent study, as for the four-year program.

Third Year

During the first year of the two-year program, students take three honors seminars, including HONORS 3100 (Writing the City), HONORS 3120 (Honors Business Writing), or HONORS 3160 (Honors Writing in the Sciences); one course from the Inquiries series (2000 level); one course from either the Advanced Seminar (3000 level). In addition, 3 credit hours of independent study may be taken during this year, normally in or closely related to their major.

Fourth Year

The final year of the two-year program involves three courses chosen from the 3000 and 4000 level options, including HONORS 4100, the honors writing portfolio, and at least one course chosen from the 3000 level. In addition, students will complete their independent study requirements with 3 or 6 hours of project, internship, or research work.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Through coursework comparing and contrasting diverse cultural viewpoints, academic disciplinary approaches and information, Honors students will demonstrate the ability to synthesize knowledge from various perspectives.
- Honors students will exhibit the ability to communicate effectively in speech and writing:
 - by speaking in groups to present, reflect on and evaluate information and perspectives.
 - by completing the written assignments required in all Honors courses that focus on various perspectives, audiences and disciplinary approaches(demonstrating effective writing that employs correct diction, syntax, usage, grammar and mechanics.
- Honors students will demonstrate skills in higher-order thinking, valuing and managing information:
 - by exhibiting the ability to distinguish among opinions, facts and inferences; by identifying underlying or implicit ins assumptions; by making informed judgments; and by solving problems through applying evaluative standards.
 - by locating, accessing, synthesizing and annotating information from print, electronic, and other sources; by distinguishing between scholarly and non-scholarly sources in preparation for higher-order thinking.
 - by analyzing and synthesizing information from a variety of sources, applying the results to resolving complex situations and problems, and defending conclusions using relevant evidence and reasoned argument.
 - by utilizing cultural, behavioral, and historical knowledge to clarify and articulate a personal value system while recognizing the ramifications of personal value decisions on the self and others.
 - by identifying conflicts within and between multiple perspectives and value systems; by recognizing and analyzing ethical issues in a variety of contexts; and by employing standards of logic to formulate a reasonable position among multiple perspectives.
- Honors students will select and participate in Honors courses in various disciplines and will demonstrate essential skills and approaches relevant to those disciplines: Students participating in Honors courses in disciplines such as the social sciences, life and physical sciences that rely upon the understanding of fundamental mathematical concepts and their applications will display a level of

quantitative literacy that would enable them to understand and analyze quantitative data, draw conclusions, and solve problems.

- Students participating in Honors courses in the social and behavioral sciences will exhibit understanding of themselves and the world around them through the study of the content and methodologies used by historians and social and behavioral scientists to discover, describe, explain, and predict human behavior and social systems; they will demonstrate understanding of the diversities and complexities of the cultural and social world, past and present, and come to an informed sense of self and others.
- Students participating in Honors courses in the humanities and fine arts will exhibit understanding and critical analysis of the ways in which people have addressed their condition through literature and art; they will demonstrate their understanding of these cultural works and their historical circumstances; they will formulate aesthetic judgments of these works.
- Students participating in Honors courses focusing on life and physical sciences will demonstrate knowledge of scientific principles, research procedures and empirical methods of scientific enquiry; they will display their understanding of how scientific discoveries affect and are affected by theoretical views of the world and human history.
- Honors students will complete specific Honors requirements designed to develop their awareness of career and advanced study opportunities:
 - by participating in internships, independent study and undergraduate research to develop and demonstrate advanced knowledge in a discipline, professional skills, and greater understanding of career and educational goals.
 - by creating an Honors Writing Portfolio that demonstrates the ability to assess their writing skills and development; by devising and revising documents for employment searches or graduate school applications to enhance their ability to formulate and pursue specific career goals.

Honors College Undergraduate Certificate, 4-year Program

Four Year Program (40 credit hours total):

Approximately one-third of the 120 hours honors students earn toward graduation are taken in the Honors College. Most of these credits are associated with a sequence of honors courses designed specifically for the college, the majority of which are taken during the first two years. During this period, these students fulfill virtually all of the university's general education requirements (p. 30), usually in innovative ways. In their junior and senior years, honors students also may earn honors credit for work done within their major fields, work which includes the possibility of internships, independent study projects, and advanced undergraduate research.

First Year

Students take HONORS 1100, HONORS 1200 and HONORS 1201 or HONORS 1202 and HONORS 1203, and one course each from the Western Traditions and Non-Western Traditions seminar series. Students may take a seminar from the American Traditions series as an elective or in place of the Western Traditions seminar.

| | | |
|-------------|--------------------------------|---|
| HONORS 1100 | Honors First-Year Writing | 3 |
| HONORS 1110 | Western Traditions: Humanities | 3 |

| | | |
|-------------|--|---|
| HONORS 1130 | Western Traditions: Social and Behavioral Sciences | 3 |
| HONORS 1150 | Western Traditions: The Sciences | 3 |
| HONORS 1200 | Freshman Symposium: Cultural Traditions I - Humanities | 3 |
| HONORS 1201 | Freshman Symposium: Cultural Traditions II - Humanities | 3 |
| HONORS 1202 | Freshman Symposium: Cultural Traditions I - Social Science | 3 |
| HONORS 1203 | Freshman Symposium: Cultural Traditions II - Social Science | 3 |
| HONORS 1230 | American Traditions: Social and Behavioral Sciences ¹ | 3 |
| HONORS 1310 | Non-Western Traditions Series Humanities | 3 |
| HONORS 1330 | Non-Western Traditions Series-Social Sciences | 3 |

¹ Elective as an alternate to Western Traditions.

Second Year

Students take two of the following Honors classes:

| | | |
|-------------|---|---|
| HONORS 2001 | Topics in Communication Proficiency | 3 |
| HONORS 2002 | Topics in Information Literacy | 3 |
| HONORS 2003 | Topics in American History and Government | 3 |
| HONORS 2010 | Inquiries in The Humanities | 3 |
| HONORS 2020 | Inquiries in the Fine and Performing Arts | 3 |
| HONORS 2030 | Inquiries in the Social and Behavioral Sciences | 3 |
| HONORS 2040 | Inquiries In Mathematics And Computing | 3 |
| HONORS 2050 | Inquiries in the Natural Sciences | 3 |
| HONORS 2060 | Inquiries In Business | 3 |
| HONORS 2080 | Inquiries in Nursing | 3 |
| HONORS 2310 | Cultural Diversity in the Humanities | 3 |
| HONORS 2330 | Cultural Diversity in the Social Sciences | 3 |

During the first two years, honors students will take additional course work in other areas, such as mathematics, natural science, foreign language, and major prerequisite classes to satisfy various university, Honors College, and specific degree requirements.

Third and Fourth Years

Honors students in the four-year program take at least four seminars (12 credit hours) from the Advanced Seminar (3000 level series). They may take more where this is compatible with their major and/or minor requirements. Honors students in the four-year program who take HONORS 3100 ("Writing the City"), HONORS 3120 ("Business Writing") or HONORS 3160 ("Writing in the Sciences") may present it for their honors certificate as one of their 3000-level seminars. They may also, depending on their major, present it to meet their graduation requirement for Junior-level composition.

| | | |
|-------------|---|---|
| HONORS 3001 | Topics in Global Awareness | 3 |
| HONORS 3010 | Advanced Honors Seminar in the Humanities | 3 |
| HONORS 3020 | Advanced Honors Seminar in the Fine and Performing Arts | 3 |
| HONORS 3030 | Advanced Honors Seminar in the Social and Behavioral Sciences | 3 |
| HONORS 3100 | Honors Advanced Composition: Writing The City | 3 |
| HONORS 3120 | Honors Business Writing | 3 |
| HONORS 3160 | Honors Writing in the Sciences | 3 |

In addition, honors students do 6 credit hours in independent study projects, normally in or closely related to their major field. These independent study projects normally carry credit in the major, but can be done as Honors College independent study or research projects (HONORS 4900, HONORS 4910). During the final year, students also take HONORS 4100, a one-hour capstone for the Honors College writing program; HONORS 4100 may be taken for two hours.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Through coursework comparing and contrasting diverse cultural viewpoints, academic disciplinary approaches and information, Honors students will demonstrate the ability to synthesize knowledge from various perspectives.
- Honors students will exhibit the ability to communicate effectively in speech and writing:
 - by speaking in groups to present, reflect on and evaluate information and perspectives.
 - by completing the written assignments required in all Honors courses that focus on various perspectives, audiences and disciplinary approaches(demonstrating effective writing that employs correct diction, syntax, usage, grammar and mechanics.
- Honors students will demonstrate skills in higher-order thinking, valuing and managing information:
 - by exhibiting the ability to distinguish among opinions, facts and inferences; by identifying underlying or implicit ins assumptions; by making informed judgments; and by solving problems through applying evaluative standards.
 - by locating, accessing, synthesizing and annotating information from print, electronic, and other sources; by distinguishing between scholarly and non-scholarly sources in preparation for higher-order thinking.
 - by analyzing and synthesizing information from a variety of sources, applying the results to resolving complex situations and problems, and defending conclusions using relevant evidence and reasoned argument.
 - by utilizing cultural, behavioral, and historical knowledge to clarify and articulate a personal value system while recognizing the ramifications of personal value decisions on the self and others.
 - by identifying conflicts within and between multiple perspectives and value systems; by recognizing and analyzing ethical issues in a variety of contexts; and by employing standards of logic to formulate a reasonable position among multiple perspectives.
- Honors students will select and participate in Honors courses in various disciplines and will demonstrate essential skills and approaches relevant to those disciplines: Students participating in

Honors courses in disciplines such as the social sciences, life and physical sciences that rely upon the understanding of fundamental mathematical concepts and their applications will display a level of quantitative literacy that would enable them to understand and analyze quantitative data, draw conclusions, and solve problems.

- Students participating in Honors courses in the social and behavioral sciences will exhibit understanding of themselves and the world around them through the study of the content and methodologies used by historians and social and behavioral scientists to discover, describe, explain, and predict human behavior and social systems; they will demonstrate understanding of the diversities and complexities of the cultural and social world, past and present, and come to an informed sense of self and others.
- Students participating in Honors courses in the humanities and fine arts will exhibit understanding and critical analysis of the ways in which people have addressed their condition through literature and art; they will demonstrate their understanding of these cultural works and their historical circumstances; they will formulate aesthetic judgments of these works.
- Students participating in Honors courses focusing on life and physical sciences will demonstrate knowledge of scientific principles, research procedures and empirical methods of scientific enquiry; they will display their understanding of how scientific discoveries affect and are affected by theoretical views of the world and human history.
- Honors students will complete specific Honors requirements designed to develop their awareness of career and advanced study opportunities:
 - by participating in internships, independent study and undergraduate research to develop and demonstrate advanced knowledge in a discipline, professional skills, and greater understanding of career and educational goals.
 - by creating an Honors Writing Portfolio that demonstrates the ability to assess their writing skills and development; by devising and revising documents for employment searches or graduate school applications to enhance their ability to formulate and pursue specific career goals.

Information Security Management and Auditing Graduate Certificate

The Graduate Certificate in Information Security Management and Auditing provides students an opportunity to pursue a focused study of core information security management principles and practices and auditing of information security programs and operations. Students first obtain basic technical background to understand core information security issues and principles. They then learn about designing, managing, assessing, and auditing security within organizational contexts. The program is suitable for candidates with undergraduate education and/or work experience in business related fields and who do not prior technical background. It's also suitable for candidates with Information Technology and/or technical cybersecurity backgrounds who wish to broaden their skill-sets in the business and management aspects of information security.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs. This 12 credit hour certificate program also counts toward the 30 credit hour Master of Science in Information Systems and Technology degree program requirements. Students may choose to combine this certificate with other courses and/or certificates to obtain the Master of Science in Information Systems and Technology degree.

| | | |
|--------------------|--|-----------|
| INFSYS 6820 | Systems and IT Infrastructure | 3 |
| INFSYS 6828 | Principles of Information Security | 3 |
| INFSYS 6878 | Management of Information Security | 3 |
| INFSYS 6886 | Information Systems and Cybersecurity Auditing | 3 |
| or ACCTNG 5436 | Systems Auditing | |
| Total Hours | | 12 |

Information Systems and Technology BS

The Information Systems (IS) area endeavors to prepare high-potential students of diverse backgrounds for successful careers in the IS profession. Careers in IS may include programming, systems analysis and design, database administration, end-user support, network administration, and management consulting. The goal is to provide students with the skills to deal with the challenges confronting IS through teaching, research, and service to the profession.

General Education Requirements

All Business majors must meet the university general education requirements. As part of meeting the university's general education requirements, all Business majors must complete the prerequisite courses below :

| | | |
|----------------|--|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| MATH 1100 | Basic Calculus | 3 |
| or BUS AD 1107 | Quantitative Methods for Business | |
| MATH 1105 | Basic Probability and Statistics | 3 |

Degree Requirements

All Business majors must meet College of Business G.P.A., good standing and credit requirements (p. 209) as outlined in the Bulletin.

Lower Division Business Core Requirements

| | | |
|--------------------|---|-----------|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| BUS AD 2900 | Legal Environment of Business | 3 |
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| Total Hours | | 12 |

Upper Division Requirements

| | | |
|-----------|------------------|---|
| ENGL 3120 | Business Writing | 3 |
|-----------|------------------|---|

Upper Division Non-Business or Business Requirement

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; also available on our web site.

Upper Division Business Requirements

| | | |
|--|---|-----------|
| ENT 3100 | Applications of Entrepreneurship ¹ | 3 |
| FINANCE 3500 | Financial Management | 3 |
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 4219 | Strategic Management | 3 |
| MKTG 3700 | Principles of Marketing | 3 |
| A minimum of 15 additional hours of upper division approved business electives | | 15 |
| Total Hours | | 36 |

¹ Course is required for BS Accounting and all BS Business Administration majors.

Assessment Requirement

| | | |
|-----------|-----------------------------|---|
| MGMT 4220 | Business Assessment Testing | 0 |
|-----------|-----------------------------|---|

Specific Requirements for the Major

Required Courses

| | | |
|--------------------|--|-----------|
| INFSYS 3806 | Managerial Applications of Object-Oriented Programming I | 3 |
| INFSYS 3810 | Information Systems Analysis | 3 |
| INFSYS 3816 | Managerial Application of Object-Oriented Programming II | 3 |
| INFSYS 3820 | Introduction to Systems Administration | 3 |
| INFSYS 3830 | Data Programming | 3 |
| INFSYS 3848 | Introduction to Information Security | 3 |
| INFSYS 3842 | Data Networks and Security | 3 |
| INFSYS 3845 | Database Management Systems | 3 |
| INFSYS 4850 | Information Systems Design | 3 |
| INFSYS 4847 | IT Project Management | 3 |
| Total Hours | | 30 |

¹ Seminars and Independent Studies are restricted to those offered by and approved by the Area faculty and approved by the Area Coordinator.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Evaluate and implement effective IS leadership principles and strategy.
- Prioritize and propose managerial practices to develop and deploy technological innovations that produce business advantage.
- Explain best practices in systems analysis and design.
- Support and improve current best practices in application development, business intelligence, cybersecurity, and legacy systems.
- Exhibit specialized leadership and technical expertise.

Sample Four Year Plan

| First Year | | | |
|----------------------------------|-------|------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| MATH 1030 | | 3 BUS AD 1107 or MATH 1100 | 3 |
| ENGL 1100 | | 3 ECON 1001 | 3 |
| BUS AD 1000 or ENT 1100 | | 3 INFSYS 2800 | 3 |
| INFSYS 1800 | | 3 EXPLORE – Humanities & Fine Arts | 3 |
| EXPLORE – Humanities & Fine Arts | | 3 EXPLORE – Math & Sciences | 3 |
| INTDSC 1003 | | 1 | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 1105 | | 3 ACCTNG 2410 | 3 |
| ACCTNG 2400 | | 3 BUS AD 2900 | 3 |
| INFSYS 3806 | | 3 INFSYS 3816 | 3 |
| ECON 1002 | | 3 SCMA 3301 | 3 |
| CORE – Communication Proficiency | | 3 CORE – US History & Government | 3 |
| | 15 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| MGMT 3600 | | 3 FINANCE 3500 | 3 |
| ENGL 3120 | | 3 MKTG 3700 | 3 |
| INFSYS 3845 | | 3 INFSYS 3810 | 3 |
| SCMA 3300 | | 3 INFSYS 3820 | 3 |
| EXPLORE – Humanities & Fine Arts | | 3 Cultural Diversity Requirement | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| INFSYS 4850 | | 3 MGMT 4219 & MGMT 4220 | 3 |
| INFSYS 4847 | | 3 INFSYS 3842 | 3 |
| INFSYS 3848 | | 3 INFSYS 3830 | 3 |
| Electives | | 6 Electives | 5 |
| | 15 | | 14 |
| Total Hours: 120 | | | |

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Academic Tracks within the Information Systems and Technology Major

Information Systems and Technology majors may choose to focus their elective hours in a particular sub-discipline of information systems and technology, or academic track. These tracks are groups of departmental courses that fit within sub-disciplines of information systems and technology and are recommendations for students wanting to pursue

careers in specific sub-disciplines. Academic tracks are NOT majors and are only intended to serve as guides for courses within a particular area of information systems and technology and are represented by current faculty expertise. Selecting an academic track does not prevent a student from taking courses in another track. Students should not expect to take all recommended courses for each academic track. Students may choose not to select an academic track.

Application Development Track (pick 2)

| | | |
|-------------|--|---|
| INFSYS 3830 | Data Programming | 3 |
| INFSYS 3844 | Developing Business Applications in .NET | 3 |
| INFSYS 3818 | Management of Software Testing | 3 |
| INFSYS 3868 | Secure Software Development | 3 |

Business Intelligence Track (pick 2)

| | | |
|-------------|--|---|
| INFSYS 3830 | Data Programming | 3 |
| INFSYS 3843 | Decision Support Systems for Business Intelligence | 3 |
| INFSYS 3862 | Artificial Intelligence Applications for Business | 3 |

Cybersecurity Track (pick 2)

| | | |
|-------------|--|---|
| INFSYS 3820 | Introduction to Systems Administration | 3 |
| INFSYS 3842 | Data Networks and Security | 3 |
| INFSYS 3858 | Advanced Security and Information Systems | 3 |
| INFSYS 3864 | Applied Cryptography for Business | 3 |
| INFSYS 3868 | Secure Software Development | 3 |
| INFSYS 3878 | Information Security Risk Management and Business Continuity | 3 |

Legacy Systems (COBOL) Track

| | | |
|-------------|-------------------------|---|
| INFSYS 3807 | Legacy Systems | 3 |
| INFSYS 3817 | Advanced Legacy Systems | 3 |

Self-Directed Learning Track

| | | |
|-------------|--|-----|
| INFSYS 3890 | Internship in Information Systems | 1-3 |
| INFSYS 3899 | Independent Study in Information Systems | 1-3 |

Web Design Track

| | | |
|-------------|--|---|
| INFSYS 3847 | Web Design | 3 |
| INFSYS 3815 | Object-Oriented Applications in Business | 3 |

Information Systems and Technology Graduate Certificate

Program Description

The Graduate Certificate in Information Systems and Technology provides students with core technical skills in programming, database management, systems analysis, and systems design. These skills are a foundation for specialized domains of study in business intelligence, cybersecurity, and enterprise systems development.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs.

This 12 credit hour certificate program also counts toward the 30 credit hour Master of Science in Information Systems and Technology degree program requirements. Students may choose to combine this certificate with other courses and/or certificates to obtain the Master of Science in Information Systems and Technology degree.

| | | |
|--------------------|---|-----------|
| INFSYS 6805 | Applications of Programming for Business Solutions | 3 |
| or INFSYS 6806 | Managerial Applications of Object-Oriented Technologies | |
| INFSYS 6840 | Information Systems Analysis | 3 |
| INFSYS 6845 | Database Management Systems | 3 |
| INFSYS 6850 | Information Systems Design | 3 |
| Total Hours | | 12 |

The required courses may be substituted with other courses with the approval of the Chair of the Information Systems and Technology Department.

Information Systems and Technology Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

Available to all students except those pursuing the Bachelor of Science in Information Systems and Technology degree. A minimum of 15 credit hours are required for the minor. Students must complete INFSYS 2800 and four elective courses. At least three of the elective courses must be 3000-level or higher Information Systems and Technology (INFSYS) courses. The fourth course can be any related course from Accounting (ACCTNG), Entrepreneurship (ENT) Finance (FINANCE), International Business (INTL BUS) Management (MGMT), Marketing (MKTG), Supply Chain and Analytics (SCMA), Computer Science (CMP SCI), or a related discipline subject to approval from the department chair.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Analyze challenges confronting the management of information systems.
- Apply ethical, legal, privacy, and compliance perspectives to the design, development, maintenance, and use of information systems.
- Explain the analysis and design of information systems.
- Synthesize data for managerial decisions.
- Demonstrate specialized technical expertise.

Information Systems and Technology MS

The Master of Science in Information Systems and Technology (MSIST) is designed to provide the technical and managerial knowledge to work successfully in design, development, and leadership roles related to information technology (IT). Students have opportunities to gain skills in application development, business intelligence, cybersecurity, cloud computing, fintech, and other emerging areas that impact organizational IT strategies.

The program is designed for students and professionals with diverse undergraduate backgrounds including business, information systems and technology, computer science, engineering, and other disciplines. MSIST students interact extensively with their peers as well as with industry executives in a carefully curated academic environment to gain a well-rounded perspective on the role of IT in contemporary organizations. Flexible class schedules (day and evening, weekends, 8 or 16 week sessions) and course delivery formats (face-to-face, blended, and online) enable students to balance school, work, and life.

The MSIST program provides students with flexible pathways to complete the degree by combining two graduate certificates and taking two additional courses toward the MSIST degree.

The Master of Science in IS program is designed to provide the technical and managerial knowledge to operate successfully in careers associated with the design, development and management of computer-based information, telecommunications, and Internet applications. The program accommodates students with undergraduate degrees specializing in IS, business, and computer science, as well as students with undergraduate degrees outside business.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL Bulletin, and the College of Business Administration. Students are considered for admission to the graduate program in Information Systems and Technology only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

In addition to Graduate School admission requirements, the following requirements apply for the MSIST program.

Applicants must have an undergraduate degree with a minimum cumulative GPA of 3.0. Students whose GPAs are between 2.75 and 2.9 may be admitted under a restricted status within the terms specified by the Graduate School.

Applicants must have foundational knowledge of data analysis and computer programming. This requirement can be fulfilled by providing evidence of prior coursework, training, or professional experience.

Applicants may also join the program without this background and complete the following coursework.

- Students without a background in data analysis could take SCMA 5300 as a graduate student to fulfill this requirement.
- Students without a background in computer programming can take INFSYS 6805 as a graduate student to fulfill this requirement.
- Non-native speakers of English must provide evidence of English language competency by submitting an official TOEFL or IELTS score. The minimum TOEFL score for graduate admission is 79 iBT. The minimum IELTS score is 6.0.

Degree Requirements

Candidates for the Master of Science in Information Systems and Technology must meet all Graduate School requirements including, but not limited to, requirements on admissions, enrollment, course policies, and academic standing as listed in the University Bulletin.

The program requires a total of 30 hours for students with either business or non-business undergraduate degrees.

All students will complete:

- INFSYS 5800 (3 hours)
- The requirements for two of the certificates listed (24 hours):
 - Graduate Certificate in Enterprise Systems Development
 - Graduate Certificate in Information Security Management and Auditing
 - Graduate Certificate in Information Systems and Technology
 - Graduate Certificate in Business Intelligence
 - Graduate Certificate in Cybersecurity
- One elective course from the list below or from the certificates above (3 hours). Courses may also be substituted with other courses upon approval from the Department Chair:

Cybersecurity Courses

| | | |
|-------------|--|---|
| INFSYS 6836 | Management of Data Networks and Security | 3 |
| INFSYS 6858 | Advanced Cybersecurity Concepts | 3 |
| INFSYS 6864 | Applied Cryptography for Business Applications | 3 |
| INFSYS 6888 | Capstone in Information Security | 3 |

Information Systems and Technology Management

| | | |
|-------------|--|---|
| INFSYS 6838 | Business Processes: Design, Management and Integration | 3 |
| INFSYS 6847 | Project Management | 3 |

Experiential Learning, Research, and Emerging Topics

| | | |
|-------------|--|---|
| INFSYS 5890 | Graduate Internship in Information Systems | 1 |
| INFSYS 5899 | Individual Research in Information Systems | 1 |
| INFSYS 6891 | Seminar in Information Systems | 3 |

Learning Outcomes

Upon completion of the program, graduates should be able to:

- Evaluate and implement effective IS leadership principles and strategy.
- Prioritize and propose managerial practices to develop and deploy technological innovations that produce business advantage.
- Explain best practices in systems analysis and design.
- Support and improve current best practices in application development, business intelligence, cybersecurity, and legacy systems.
- Exhibit specialized leadership and technical expertise.

Information Systems and Technology MS Accelerated Master's Degree

The Accelerated BS-MS in Information Systems and Technology program provides an opportunity for students to earn their BS and MS degrees in Information Systems and Technology (IST) in as few as 10 semesters.

The accelerated program reduces time to completion by requiring a minimum of 138 credit hours instead of the typical 150 credit hours if the degrees were pursued separately (120 for BS and 30 for MS). The program allows undergraduate students, in their Junior and Senior years, to take up to 12 credit hours of graduate courses and count those graduate courses to also fulfill some of their undergraduate degree requirements. Students then proceed to take the remaining 18 graduate credit hours to fulfill their graduate degree requirements.

Students are required to work closely with both BS and MS Program Advisors to ensure that the correct levels of required courses are completed in a timely manner and in the appropriate sequence.

Eligibility

Undergraduate students can apply to the Chair of the Information Systems and Technology Department for admission to the Accelerated MS degree program during the semester they will complete 60 undergraduate credit hours. A cumulative grade point average of 3.0 or higher is required.

Admission Requirements

Admission to the Accelerated MS-IST program and Graduate School proceeds in two phases: 1) Provisional Admission and 2) Graduate Admission.

Provisional Admission

Undergraduate BS-IST students are considered for provisional admission to Graduate School if they meet the following criteria.

- Have earned 60 credit hours as an undergraduate
- Have a minimum GPA of 3.0
- Have met with both the BS and MS Academic Advisors in Information Systems and Technology

The IST Department Chair, in consultation with the Undergraduate Advisor and Graduate Program Director, will determine whether the student can apply for provisional status. Provisionally admitted students are still classified as undergraduates but may begin obtaining the 12 graduate credits that will apply toward both their MS and BS degrees.

Graduate courses completed by undergraduate students, who have been provisionally admitted to the Accelerated MS-IST program, will be charged at the undergraduate tuition rate. However, these courses will count toward the MS-IST degree while also fulfilling the requirements of BS-IST.

These courses must be approved before the semester starts. Therefore, it is recommended to apply for provisional status as a junior, preferably in the first semester of the junior year.

Graduate Admission

Applicants are considered for admission to the Graduate School if they meet the following criteria.

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Have met with the MS Academic Advisor in Information Systems and Technology

The MS Academic Advisor, in consultation with the BS Academic Advisor, will determine whether the student can apply for graduate admission. Final decisions concerning graduate admission are made by the Graduate School in consultation with the IST Department Chair and Graduate Program Director. Students admitted at this stage are conferred graduate status and must continue taking graduate courses until the completion of the MS degree.

Program Requirements

Eligible undergraduate BS in Information Systems and Technology pursuing the Accelerated MS in Information Systems and Technology degree option will be required to take the following four graduate courses (12 credits), which will count toward both their undergraduate and graduate degree requirements.

| | | |
|--------------------|--|-----------|
| INFSYS 6828 | Principles of Information Security | 3 |
| INFSYS 6830 | Data Programming for Business Intelligence | 3 |
| INFSYS 6840 | Information Systems Analysis | 3 |
| INFSYS 6845 | Database Management Systems | 3 |
| Total Hours | | 12 |

Additionally, students must complete six other INFSYS courses listed under one or more of the following graduate certificates: Business Intelligence, Cybersecurity, Enterprise Systems Development, Information Systems and Technology, or Information Security Management and Auditing and meet all Graduate School requirements.

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Information Systems and Technology MS Accelerated Master's Degree with Cybersecurity BS

The Accelerated BS in Cybersecurity (IST Emphasis)-MS in Information Systems and Technology (MSIST) program provides an opportunity for students to earn their BS in Cybersecurity with IST Emphasis and MS in Information Systems and Technology in as few as 10 semesters.

The accelerated program reduces time to completion by requiring a minimum of 138 credit hours instead of the typical 150 credit hours if the degrees were pursued separately (120 for BS and 30 for MS). The program allows undergraduate students, in their Junior and Senior years, to take up to 12 credit hours of graduate courses and double count those graduate courses to also fulfill some of their undergraduate degree requirements. Students then proceed to take the remaining 18 graduate credit hours to fulfill their graduate degree requirements.

Students are required to work closely with both BS and MS Program Advisors to ensure that the correct levels of required courses are completed in a timely manner and in the appropriate sequence.

Eligibility

Undergraduate students can apply to the Chair of the Information Systems and Technology Department for admission to the Accelerated MSIST degree program during the semester they will complete 60 undergraduate credit hours. A cumulative grade point average of 3.0 or higher is required.

Admission Requirements

Admission to the Accelerated MSIST program and Graduate School proceeds in two phases: 1) Provisional Admission and 2) Graduate Admission.

Provisional Admission

Undergraduate BS in Cybersecurity with Information Systems and Technology Emphasis students are considered for provisional admission to Graduate School if they meet the following criteria.

- Have earned 60 credit hours as an undergraduate
- Have a minimum GPA of 3.0
- Have met with both the BS and MS Academic Advisors in Information Systems and Technology

The IST Department Chair, in consultation with the Undergraduate Advisor and Graduate Program Director, will determine whether the student can apply for provisional status. Provisionally admitted students are still classified as undergraduates but may begin obtaining the 12 graduate credits that will apply toward both their MS and BS degrees. Graduate courses completed by undergraduate students, who have been provisionally admitted to the Accelerated MS in Information Systems and Technology program, will be charged at the undergraduate tuition rate. However, these courses will count toward the MS in Information Systems and Technology degree while also fulfilling the requirements of BS in Cybersecurity with Information Systems and Technology Emphasis. These courses must be approved in advance to count toward both degrees. Therefore, it is recommended to apply for provisional status as a junior, preferably in the first semester of the junior year.

Graduate Admission

Applicants are considered for admission to the Graduate School if they meet the following criteria.

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Have met with the MS Academic Advisor in Information Systems and Technology

The MS Academic Advisor, in consultation with the BS Academic Advisor, will determine whether the student can apply for graduate admission. Final decisions concerning graduate admission are made by the Graduate School in consultation with the IST Department Chair and Graduate Program Director. Students admitted to the graduate program must take graduate courses until completing the MS Information Systems and Technology degree.

Program Requirements

Eligible undergraduate BS in Cybersecurity with Information Systems and Technology Emphasis students pursuing the Accelerated MS in Information Systems and Technology degree option will be required to take the following four graduate courses (12 credits), which will count toward both their undergraduate and graduate degree requirements.

| | | |
|--------------------|--|-----------|
| INFSYS 6828 | Principles of Information Security | 3 |
| INFSYS 6836 | Management of Data Networks and Security | 3 |
| INFSYS 6858 | Advanced Cybersecurity Concepts | 3 |
| INFSYS 6864 | Applied Cryptography for Business Applications | 3 |
| Total Hours | | 12 |

Additionally, students must complete all the remaining requirements of the MS in Information Systems and Technology degree and meet all Graduate School requirements.

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Inorganic Chemistry Graduate Certificate

The graduate Certificate in Inorganic Chemistry is a 12-credit-hour program. It provides skills and training necessary to advance in the area of inorganic chemistry, which deals with the properties and behavior of inorganic compounds, which include metals, semiconductors, minerals, and organometallic compounds. Inorganic compounds are used as catalysts, pigments, coatings, surfactants, medicines, battery components, fuels, and more. The certificate requires three inorganic chemistry lecture

courses (each three credits) and one elective course (three credits) or three credits of research. All students must take these three required courses and one elective course (or research credit), subject to the graduate school regulations.

A minimum of three courses must be taken at UMSL. If research credit will be applied toward the certificate, it must be taken at UMSL. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the Department of Chemistry and Biochemistry.

Certificate applicants must meet the general University of Missouri-St. Louis Graduate School admissions requirements to be admitted to the Certificate program. Students admitted to the Chemistry M.S. program are automatically eligible to pursue the Certificate; however, they must apply separately to the Certificate program. Students must maintain a minimum GPA of 3.0 to remain in the Certificate program. The certificate is awarded after completion of the 12 credit hours of courses listed below. Students must apply to be awarded the Certificate. Courses taken while enrolled as an undergraduate may not be repeated nor will they count towards the Certificate.

This 12-credit-hour certificate program also counts toward the 30-credit-hour Master of Science in Chemistry degree program requirements. Students may choose to combine this Certificate with other courses and/or Certificates to obtain the Master of Science in Chemistry degree.

Required Courses

| | | |
|-----------|---|---|
| CHEM 5412 | Advanced Graduate Inorganic Chemistry | 3 |
| CHEM 5422 | | |
| CHEM 5462 | Organometallic Chemistry of the Transition Elements | 3 |

Elective Courses 3

Choose one of the following:

| | |
|-----------|---|
| CHEM 5494 | Special Topics in Inorganic Chemistry |
| CHEM 6905 | Graduate Research in Chemistry ¹ |

¹ If CHEM 6905 is chosen, the research project must be in inorganic chemistry.

Learning outcomes: Upon completion of the Certificate, students will have an in-depth knowledge of inorganic elements, how these materials can be modified, separated, and used and how they can be spectroscopically analyzed.

Interdisciplinary Studies BIS

Bachelor of Interdisciplinary Studies (BIS)

The Bachelor of Interdisciplinary Studies degree (B.I.S.) provides a flexible, individualized program of study for the self-directed learner. It is developed by each student with advisement by UMSL professional advisers and faculty, and it is intended for students who have unique educational goals that cannot be met by any other UMSL degree program.

Oversight of the B.I.S. degree is the responsibility of the Interdisciplinary Studies Committee, composed of faculty and professional staff, including representatives from Arts and Sciences (Humanities, Social Sciences, and Natural Sciences), Business, Education, Fine Arts and

Communication, Nursing or other divisions. The Interdisciplinary Studies Committee will be convened and supported by the Office of the Provost.

Admission Requirements for the B.I.S. Program

Candidates for the B.I.S. degree must complete an application for admission to the program. The Interdisciplinary Studies Committee approves applications.

Approved programs of study are well-designed, coherent, structured to meet the student's unique educational goals, and not readily available under any other UMSL degree program.

Students must have demonstrated the equivalent of academic proficiency required for any other undergraduate degree at UMSL.

Degree Requirements for the B.I.S. Program

General Education Requirements

Students must complete the university's general education requirements. For details refer to the general education requirements (p. 30) section of this Bulletin.

Area of Study

In consultation with faculty and staff advisers, students will carry out an area of study of at least 36 advanced semester hours of graded credit that meets their educational goals. Graded credit consists of degree credit courses in which the student received a letter grade C- or better. The area of study must include at least nine hours at the 3000-level or above; these courses may be in one or more disciplines.

Hour and Grade Requirements

The degree requires completion of 120 semester hours with a 2.0 campus grade point average overall and in the area of study. No more than 15 hours may be taken in one department. At least 45 hours must be earned in courses beyond the introductory level. A minimum of 24 hours of graded credit must be completed in residence at UMSL, of which 15 hours must be in the area of study and completed after admission to the B.I.S. program. Each candidate must be in residence for 24 of the last 30 hours of graded credit (exclusive of courses taken on a satisfactory/unsatisfactory basis).

Supervised Professional or Service Internship and Independent Research

Credit not exceeding 6 hours may be earned for department-approved professional internship, service internship, or independent research. The projects or activities must be formulated by the student and carried out under the supervision of a faculty member with the approval of the adviser. Students must submit a written report approved by the supervisor upon completion of the projects or activities.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Communicate effectively and professionally, in writing, in preparing presentations, and in interactions with others in their field.
- Prepare persuasive reports and documents that are well-organized and carefully edited.

- Work with advanced technologies in settings appropriate to their current and future workplaces.
- Engage in informed dialogue about their chosen fields, and clearly articulate their aspirations for their future success.
- Conduct research for their areas of academic focus and on avenues for career advancement and evolving opportunities in their professions.
- Negotiate details related to planning for future steps toward their professional development, and work productively with advisors, mentors, and colleagues to maximize their strategic impact.
- Network with professionals in their field to prepare for the job market and gain a thoroughly realistic perception of their potential.
- Undertake a variety of projects independently, and develop coherent and innovative plans to launch those projects.
- Design innovative approaches to solving problems, and explore solutions that merge disparate ideas and concepts and encourage collaboration and risk-taking.

International and Comparative Politics Minor

Requirements for Political Science Minors

A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor. Students may count no more than 3 hours in political science taken on a satisfactory/unsatisfactory basis toward the minor. Students taking an internship POL SCI 3940 may count no more than three hours of the internship toward the minor.

| | | |
|-------------------------------|--|----|
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| or POL SCI 1800 | Introduction to International Politics (MOTR POSC 201) | |
| Select four of the following: | | 12 |
| POL SCI 1820 | Global Issues | |
| POL SCI 2500 | Comparing Different Worlds | |
| POL SCI 2510 | The Politics of European Union | |
| POL SCI 2530 | Political Systems of South America | |
| POL SCI 2580 | African Politics | |
| POL SCI 2590 | Globalization: Prospects and Problems | |
| POL SCI 2600 | The Geography of Governance | |
| POL SCI 2800 | International Relations Theories | |
| POL SCI 2810 | Global Issues | |
| POL SCI 2820 | United States Foreign Policy | |
| POL SCI 3810 | The Politics of the Middle East: International and National Dynamics | |
| POL SCI 3830 | International Political Economy | |
| POL SCI 3850 | International Organizations and Global Problem-Solving | |
| POL SCI 3860 | Political Violence | |

| | |
|--------------------|--|
| POL SCI 3880 | Global Diasporas and International Relations in the 21st Century |
| POL SCI 3890 | Workers and Globalization |
| POL SCI 3900 | Special Readings ¹ |
| POL SCI 3940 | Public Affairs Internship ¹ |
| POL SCI 4810 | Human Rights |
| Total Hours | |
| 15 | |

¹ May be taken with approval of the faculty advisor.

Learning Outcomes

- Evaluate critical issues within and between other countries
- Demonstrate cross-cultural competence and a global worldview.
- Compare and contrast the major political, economic, cultural, and geographic features of different regions of the world.
- Assess comparative and international political issues, formulate evidence-based recommendations, and communicate them with clarity and coherence.

International Business Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

Available to all students except those pursuing the Bachelor of Science in Business Administration degree with an emphasis in International Business. Students must complete any 5 courses in International Business.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Discuss the impact of globalization on international businesses operations;
- Examine the impact of cultural factors and develop the sensitivity and appreciation for cultural differences;
- Relate functional knowledge for a specific area of business with global operation.

International Relations BA

Bachelor of Arts in International Relations

General Education Requirements

Majors must satisfy the university and college general education requirements. Political science courses may be used to satisfy the social sciences requirement. The foreign language requirement for the B.A. degree may be satisfied in any language.

Departmental Honors

The department awards honors to students having a minimum grade point average (GPA) of 3.2 in the major, a minimum overall GPA of 3.2 (except in extraordinary circumstances), and successfully completed an honors thesis, project, or report.

Degree Requirements

All majors must complete at least 15 hours in Political Science at the 3000 level or above.

Core Courses

| | | |
|--------------|--|---|
| POL SCI 1800 | Introduction to International Politics (MOTR POSC 201) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 2800 | International Relations Theories | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |

International Relations 12

Select four of the following:

| | |
|--------------|--|
| POL SCI 1820 | Global Issues |
| POL SCI 2600 | The Geography of Governance |
| POL SCI 2820 | United States Foreign Policy |
| POL SCI 2900 | Studies in Political Science ¹ |
| POL SCI 3810 | The Politics of the Middle East: International and National Dynamics |
| POL SCI 3830 | International Political Economy |
| POL SCI 3850 | International Organizations and Global Problem-Solving |
| POL SCI 3860 | Political Violence |
| POL SCI 3890 | Workers and Globalization |
| POL SCI 3900 | Special Readings (with consent of instructor and advisor) |
| POL SCI 4810 | Human Rights |

Comparative Politics 9

Select three of the following:

| | |
|--------------|---|
| POL SCI 2500 | Comparing Different Worlds |
| POL SCI 2510 | The Politics of European Union |
| POL SCI 2530 | Political Systems of South America |
| POL SCI 2580 | African Politics |
| POL SCI 2590 | Globalization: Prospects and Problems |
| POL SCI 2600 | The Geography of Governance |
| POL SCI 2900 | Studies in Political Science ² |

| | |
|--------------|--|
| POL SCI 3810 | The Politics of the Middle East: International and National Dynamics |
| POL SCI 3860 | Political Violence |
| POL SCI 3900 | Special Readings (with consent of instructor and advisor) |
| POL SCI 4810 | Human Rights |

Total Hours 36

¹ Topic must relate to international relations.
² Topic must relate to comparative politics.

It is recommended that majors take POL SCI 1500, POL SCI 1800, POL SCI 1820, and POL SCI 3000 as early as possible since these courses are designed to provide a substantive foundation as well as conceptual and analytical tools for subsequent course work.

Majors are strongly encouraged to broaden their academic experience by including relevant curricular experiences including study abroad, and minors or certificates in areas such as economics and foreign languages.

B.A. degree students may take a maximum of 3 hours of political science on a satisfactory/ unsatisfactory basis; this can include any course except the four required courses in the core curriculum.

Departmental Honors

The department awards honors to students having a grade point average (GPA) of 3.2 in the major, an overall GPA of 3.2 (except in extraordinary circumstances), and successfully completed an honors thesis, project, or report.

Learning Outcomes

Graduates of this program will be able to:

- Identify key trends in international relations that are expected to impact life in the United States and other countries in the foreseeable future.
- Demonstrate cross-cultural competence and a global worldview.
- Apply major international relations theories and concepts to contemporary issues in global affairs.
- Analyze the foreign policy behavior of the United States and other major actors in world politics.
- Compare and contrast the major political, economic, cultural, and geographic features of different regions of the world.
- Assess international relations issues, formulate evidence-based recommendations, and communicate them with clarity and coherence.
- Plan, execute, and defend a major research project.

Sample Four Year Plan

| First Year | | | |
|----------------------------------|-------|--|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 POL SCI 1500 | 3 |
| ENGL 1100 | | 3 CORE-Communication Proficiency | 3 |
| POL SCI 1100 | | 3 EXPLORE-Mathematics and Natural/ Life Sciences | 3 |
| CORE-Mathematics Proficiency | | 3 EXPLORE- Humanities and Fine Arts | 3 |
| EXPLORE-Humanities and Fine Arts | | 3 Elective or minor | 3 |

| | | | |
|--|--------------|---|--------------|
| EXPLORE - Mathematics and Life/Sciences | 3 | | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| POL SCI 1800 | 3 | POL SCI 2800 | 3 |
| Foreign Language 1001 | 5 | Foreign Language 1002 | 5 |
| EXPLORE- Humanities and Fine Arts | 3 | EXPLORE - Mathematics and Life/Natural Sciences | 3 |
| EXPLORE - Math and Sciences | 3 | Elective or minor | 3 |
| | | Elective or minor | 1 |
| | 14 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| POL SCI 3000 | 3 | ENGL 3100 (or Equivalent) | 3 |
| POL SCI XXXX: International Relations Course | 3 | POL SCI XXXX Comparative Politics Course | 3 |
| Foreign Language 2101 | 3 | POL SCI XXXXX International Relations Course | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| POL SCI XXXX International Relations Course | 3 | POL SCI 4950 | 3 |
| POL SCI XXXX Comparative Politics Course | 3 | POL SCI XXXX International Relations Course | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

International Relations Minor

Requirements for Political Science Minors

A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor. Students may count no more than 3 hours in political science taken on a satisfactory/unsatisfactory basis toward the minor. Students taking an internship POL SCI 3940 may count no more than three hours of the internship toward the minor.

Minor in International Relations

Select five of the following: 15

| | |
|--------------|--|
| POL SCI 1800 | Introduction to International Politics (MOTR POSC 201) |
| POL SCI 2820 | United States Foreign Policy |
| POL SCI 3500 | The Politics of the Middle East: International and National Dynamics |
| POL SCI 3830 | International Political Economy |
| POL SCI 3850 | International Organizations and Global Problem-Solving |
| POL SCI 3860 | Political Violence |
| POL SCI 3890 | Workers and Globalization |
| POL SCI 3900 | Special Readings (when appropriate) |
| POL SCI 3940 | Public Affairs Internship (when appropriate) |
| POL SCI 4850 | International Law |

Total Hours 15

International Studies Graduate Certificate

Applicants to the Certificate program must meet the general requirements for admission to Graduate School as explained in the graduate study section of this Bulletin. The Certificate is awarded after completion of 18 hours, including a minimum of 12 hours drawn from a list of core courses and an additional six hours selected from a wide variety of offerings in eight different disciplines. No more than 12 hours may be from any one discipline. Students may simultaneously earn a graduate degree and count credits earned in their degree program toward the Certificate when appropriate.

Requirements

Select four from the following list of core courses: 12

| | |
|-------------------------|---------------------------------------|
| Business Administration | |
| FINANCE 6580 | International Financial Management |
| SCMA 5381 | Global Supply Chain Management |
| Economics | |
| ECON 5300 | |
| ECON 5301 | |
| History | |
| HIST 6115 | |
| Political Science | |
| POL SCI 6450 | |
| POL SCI 6451 | |
| POL SCI 6480 | Proseminar in International Relations |
| POL SCI 6481 | Seminar in International Relations |
| POL SCI 6488 | Studies in International Relations |

Select two of the following: 6

| | |
|-----------|---------------------------------|
| Economics | |
| ECON 4980 | Special Readings |
| English | |
| ENGL 4920 | Major Works Of European Fiction |

| | |
|--------------------------------|---|
| History | |
| HIST 4001 | Special Readings |
| Languages and Cultural Studies | |
| FRENCH 4360 | |
| Music | |
| M H L T 4250 | |
| M H L T 4260 | |
| Political Science | |
| POL SCI 4850 | International Law |
| POL SCI 6485 | Directed Readings and Research in International Relations |
| Total Hours | 18 |

Note: No more than 12 credit hours may be from any one discipline.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Explain the major components of culture and how cultural differences affect conducting business abroad
- Integrate global awareness and cultural knowledge into business analysis
- Describe functional knowledge of global operation for a specific area of business, such as marketing or finance
- Assess the impact of cultural and environmental factors on international business operations

Internet and Web Graduate Certificate

The graduate certificate in Internet and Web is a four#course (12 credit# hour) program. It is designed to provide broad training in web technologies on both the client and server sides, including various stack architectures and frameworks, recent technologies such as REST, and trends such as microservices. All students must take three required courses and one elective, subject to the Graduate School regulations.

A minimum of three courses must be taken from UMSL. A maximum of two courses can be used from the 4000#level. Courses may be substituted with the permission of the certificate coordinator.

Required Core Courses

| | | |
|--------------|--|---|
| CMP SCI 4010 | Web Development with Java | 3 |
| CMP SCI 4011 | Web Development with Advanced JavaScript | 3 |
| CMP SCI 5012 | Enterprise Microservice Development | 3 |

Electives

Choose one of the following:

| | | |
|--------------|--|--|
| CMP SCI 5020 | Android Apps: Android Fundamentals | |
| CMP SCI 5030 | Intelligent Web | |
| CMP SCI 5792 | Mobile Computing, Networking, and Security | |
| CMP SCI 5750 | Cloud Computing | |

Total Hours **12**

Internet and Web Undergraduate Certificate

Certificate Requirements

The undergraduate certificate in Internet and Web is a five-course (15 credit hour) program. It is designed to provide broad training in web technologies at both the client and server sides, including various stack architectures and frameworks, recent technologies such as REST and trends such as microservices. A minimum GPA of 2.5 is required for admission.

Required Courses

| | | |
|--------------|---|---|
| CMP SCI 3010 | Web Full Stack Development | 3 |
| CMP SCI 4010 | Web Development with Java | 3 |
| CMP SCI 4011 | Web Development with Advanced JavaScript | 3 |
| CMP SCI 4012 | Introduction to Enterprise Microservice Development | 3 |

Elective

Choose one of the following courses: 3

| | | |
|--------------|--|--|
| CMP SCI 4020 | Introduction to Android Apps: Android Fundamentals | |
| CMP SCI 4030 | Introduction to Intelligent Web | |
| CMP SCI 4610 | Database Management Systems | |
| CMP SCI 4730 | Computer Networks and Communications | |
| CMP SCI 4750 | Introduction to Cloud Computing | |

Total Hours **15**

A minimum of three courses must be taken from UMSL. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the department chair or email info@arch.umsi.edu.

Learning Outcomes

Upon completion the program, certificate earners will be able to:

- Identify and implement techniques for communicating complex information on the Web
- Use Web languages to integrate media and user interaction
- Design and develop Internet applications
- Use the state-of-the-art languages and frameworks on both server and client sides

Japanese Minor

A minor in French, German, Japanese or Spanish requires the completion of four courses in the language beyond the basic foundation sequence (Language 1001, Language 1002, and Language 2101). Transfer students must complete at least two courses for the minor at UMSL. All courses must be passed with a grade of C- or better.

Specific Requirements for the Japanese Minor

| | | |
|------------|---------------------------|---|
| JAPAN 2102 | Intermediate Japanese II | 5 |
| JAPAN 3201 | Intermediate Japanese III | 4 |

| | | |
|---------------------------------------|--------------------------|---|
| JAPAN 3202 | Intermediate Japanese IV | 4 |
| Select one course in Japanese Studies | | 3 |

Learning Outcomes

Graduates with a minor in Japanese from the University of Missouri-St. Louis can use the language to interact with native speakers on familiar topics related to their daily lives. They have an emerging understanding of Japanese culture fostered through engaging courses and opportunities such as study abroad. They can apply their linguistic and cultural competencies in real-life situations such as travel and work.

Skills and Knowledge Areas

Upon completion of the Japanese minor, students should be able to:

Linguistic Goals

- In listening/speaking:
 - demonstrate comprehension of the main ideas and supporting details of everyday conversations on familiar and concrete topics, both formal and informal;
 - take part in conversations on topics related to work, school, home, leisure activities, culture, and media;
 - narrate short anecdotes using Japanese conversational conventions; and,
 - function in real-world situations in culturally-appropriate ways.
- In reading/writing:
 - interpret basic authentic texts, such as menus and schedules;
 - apply reading strategies to glean key information from more challenging texts;
 - compose simple practical messages, such as personal emails and letters; and,
 - assess language reference resources and use them effectively.

Cultural Goals

- recognize and describe some of the key historical, social, economic, and political forces that shape Japanese society;
- analyze and critique the products of Japanese culture (film, media, literature, art, etc.) in socio-historical context.

The linguistic goals are based on the National Standards For Foreign Language Learning and the ACTFL Proficiency Guidelines. In speaking and listening, minors are expected to reach the Intermediate-Mid level proficiency at a minimum. For detailed descriptions of sublevels, see the ACTFL Proficiency Guidelines.

Jazz Studies Minor

Candidates must complete 22 credit hours from the following:

Music Theory

| | | |
|---------------|------------------------------|---|
| THRY COM 1300 | Introduction to Music Theory | 1 |
| THRY COM 1301 | Theory of Music I | 3 |
| THRY COM 1302 | Aural Training I | 2 |
| THRY COM 1311 | Theory of Music II | 3 |
| THRY COM 1312 | Aural Training II | 2 |

Piano Proficiency

| | | |
|------------------|----------------------|---|
| PRACTM 1140/1150 | Piano Proficiency I | 1 |
| PRACTM 1150 | Piano Proficiency II | 1 |

Applied Area

2 credit hours minimum, to be selected from this group:

| | | |
|-------------|--|--|
| PRACTM 2190 | | |
| PRACTM 2191 | | |
| PRACTM 2192 | | |
| PRACTM 2193 | | |

Pedagogy

| | | |
|-------------|---------------|---|
| PDGOGY 2220 | Jazz Pedagogy | 3 |
|-------------|---------------|---|

Ensemble

2 credit hours of each minimum

| | | |
|-------------|----------------|---|
| EN PER 1542 | Jazz Combo | 2 |
| EN PER 1550 | Jazz Orchestra | 2 |

| | | |
|--------------------|--|-----------|
| Total Hours | | 22 |
|--------------------|--|-----------|

K-12 Teacher Leader Graduate Certificate

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements and have active teacher certification. Preferred candidates have teaching experience.

Students may submit application materials at anytime, however applications will be reviewed twice annually: October 1 and March 1.

Certificate Requirements

Students are required to take 15 credit hours in three areas:

- Foundations
- Knowledge/Concepts
- Skills

All courses must be taken at the University of Missouri - St. Louis.

Foundation Course

| | |
|--|---|
| ED ADM 6717: Instructional Coaching for K-12 Teacher Leaders | 3 |
|--|---|

Knowledge/Concepts

Choose three of the following:

| | |
|-------------|---|
| ED ADM 6701 | Leadership for Equity |
| ED ADM 6702 | Supervision in Education Organizations |
| ED ADM 6704 | Data-Driven Instruction and Team Leadership I |
| ED ADM 6705 | School Culture I |

Skills

Choose one of the following:

| | |
|-------------|--|
| Curriculum | |
| TCH ED 6411 | Curriculum Leadership in Education STEM |
| ELE ED 6431 | STEM Instruction in Elementary Education |

| | |
|-------------|---|
| ELE ED 6387 | Literacy Acquisition and Learning for Diverse Students |
| ELE ED 6342 | Addressing the Mathematical Needs of Students |
| ELE ED 6448 | Diagnosis and Remediation of Disabilities in Learning Mathematics |
| SEC ED 6431 | STEM Instruction in Secondary Education |
| Literacy | |
| ELE ED 6684 | Instructional Strategies for Teaching Reading |
| TCH ED 6880 | Leadership in the Teaching of Writing |

Total Hours 15

Labor Studies Undergraduate Certificate

Labor Studies Certificate

The Labor Studies Certificate is designed for students who are interested in a focused specialty in labor studies. The 18-credit hour curriculum consists of six courses offered over a three-semester period.

| | | |
|--------------|--|---|
| HIST 2219 | Work and Working Peoples' History | 3 |
| POL SCI 2450 | Labor, Work, Society, and Politics | 3 |
| POL SCI 3220 | Labor and Employment Law | 3 |
| POL SCI 3430 | Labor and Community Leadership | 3 |
| POL SCI 3470 | Negotiation, Collective Bargaining, and Dispute Resolution | 3 |
| POL SCI 3890 | Workers and Globalization | 3 |

Total Hours 18

Learning Outcomes

Upon completion of the program, a certificate earner will be able to:

- Identify and apply techniques to research and analyze power relations, organizational structures, and effective action in workplace settings.
- Demonstrate knowledge about the economy, including wage, tax, and trade policy; historical disparities; and the role of corporations, unions, and other organizations.
- Assess, analyze and apply the skills of building cooperation and collaboration needed in negotiations and in alternative dispute resolution.
- Locate and clearly explain the laws and regulations affecting workers, workplaces, labor and community organizations.

LatinX Studies Minor

Latinx Studies at the University of Missouri-St. Louis is an interdisciplinary program dedicated to the study of the historical, social, political, language, and cultural experiences of U.S. Latina/Latinos/Latinx, their families and communities. Students in this program will examine how transnational understandings of race, ethnicity, politics, culture, and language are mapped onto and struggled over within the United States, the Midwest, and St. Louis.

In addition to two required courses—Introduction to Latinx Studies and an internship/service learning Capstone Experience—students will select three electives to round out the minor, each from a different discipline, on topics such as immigration, bilingualism, cultural worldview, comparative politics, and history (more classes will be added as created). Students will combine courses across the disciplinary spectrum into an individualized program to gain a deeper understanding of Latina/Latino cultures, histories, and social conditions; while they engage in collaborative projects, civic programs, and service learning; and enhance writing and analytical skills.

Introductory Course

| | | |
|-----------|--------------------------------|---|
| HIST 2002 | Introduction to Latinx Studies | 3 |
|-----------|--------------------------------|---|

Electives 9

Choose 3 from following list; at most one course from each discipline will count toward the minor

| | |
|---|--|
| FGN LANG 2100 | Languages and World View |
| HIST 2030 | U.S. Immigration: 1790 to the 21st Century |
| HIST 2302 | The LatinX Sixties |
| SPANISH 2101 or above (SPANISH 1199 can substitute) | |

Capstone

| | |
|---|---|
| A service learning/internship capstone experience course in the Latina/Latino community approved by the program director. | 3 |
|---|---|

Total Hours 15

Other UMSL courses and courses from other UM campuses, through ICCS or other formats, may be included as electives with prior approval of the program coordinator.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Read, interpret evidence, and draw conclusions about the role and contributions of Latinxs to the history, culture, economy, language, politics, and social experiences of the United States;
- Communicate ideas about Latinxs, Latinx communities, and race, gender, class, and ethnicity in evidence-based presentations, writings, and new media;
- Apply a foundational understanding of Latinxs, Latinx communities, and complexities of race, gender, class, and ethnicity to new situations, questions, and concerns.

Law and Philosophy Minor

The undergraduate minor in Law and Philosophy requires five philosophy courses (15 credit hours). At least 6 hours must be at the 3000 level or above. A GPA of 2.0 or better is required in courses presented for the minor. Prospective minors are encouraged to consult with members of the department for advice in planning an appropriate sequence of courses.

| | | |
|--|-----------------------------------|-----------|
| PHIL 2252 | Crime and Punishment | 3 |
| PHIL 4487 | Philosophy of Law | 3 |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |
| or PHIL 3360 | Formal Logic | |
| Two courses in Philosophy ¹ | | 6 |
| Total Hours | | 15 |

¹ PHIL 3000-level or higher courses must be taken in residence in the UMSL Department of Philosophy. In special cases, one of the 3000-level or higher courses may be taken outside of the UMSL Department of Philosophy; the course must (1) have a strong law and philosophy component and (2) have been pre-approved by the Pre-Law advisor.

Learning Outcomes

An ideal graduate with a Minor in Law and Philosophy will:

- Demonstrate an ability to apply the distinctive methods of philosophy by reconstructing philosophical arguments and deliberating rationally over their merits
- Understand central theories about the nature of law and its role in society
- Be able to critically evaluate on moral and empirical grounds a range of common justifications for the use of punishment by the state
- Demonstrate competence with formal reasoning tools such as syllogistic logic, propositional logic and/or quantificational logic and show an ability to apply those to tools in philosophical and everyday contexts
- Will have detailed knowledge of, and an ability to critically evaluate, the dominant positions in the history of legal philosophy on the nature and role of law
- Will be able to apply legal theory to contemporary ethical and social issues
- Will be able to think critically and ethically about issues in legal theory and express their thoughts in a clear and persuasive writing style

Liberal Studies BLS

Bachelor of Liberal Studies (BLS)

The Bachelor of Liberal Studies is a degree program that enables students to combine structured areas of academic emphasis in ways more relevant to their interests than the standard academic major.

Students who participate in this program must declare their areas of study (two minors or a minor and undergraduate certificate) at the time they declare that BLS is their intended degree. The plan of study must be approved at the beginning of the program.

The BLS program is administered through the Department of Philosophy.

To obtain a Bachelor of Liberal Studies (BLS), a student must complete:

- UMSL General Education Requirements (consult General Education (p. 30) section of course listings)
- In addition, students must complete the State Requirement (3) and Cultural Diversity Requirement (3) if not met in General Education course selection
- The university requirement of proficiency in English Composition
 - ENGL 1100 - First Year Writing (to be completed in the first 24 credit hours at the university)
 - Junior Level Writing
- The university requirement of proficiency in Mathematics (to be completed in the first 24 credit hours at the university)
- Two emphasis areas that are satisfied by completing the requirements for:

- two designated BLS Minors in participating departments or other units OR
- a designated minor and any undergraduate certificate. No course may be used more than once.
- A capstone course¹ (minimum of 3 hours) selected from one of the concentration areas that make up the identified BLS core.

Also Required

- Minimum of 45 credit hours in upper level course work (2000 or higher)
 - Electives 28-42
- A minimum of 120 credit hours
- Overall GPA of 2.0 or better
- GPA of 2.0 or better in BLS combination areas (unless otherwise specified)
- Minimum grade of C in all courses used in BLS combination areas unless otherwise specified by the department
- Residency requirement, in addition to campus residency, unless otherwise specified, 9 graded hours in each minor and certificate at 2000 level or above and one capstone course

¹ Note: Not all minors have a designated BLS capstone course so students must be careful to pair minors and certificates so that they have a capstone course.

The Colleges of Arts and Sciences (CAS), Business Administration (COBA), College of Education (COE), the Pierre Laclede Honors College (PLHC), and the School of Social Work (SW) have joined together to make available Liberal Studies combinations involving the following units:

- Department of Art and Design (CAS)
- Department of Biology (CAS)
- College of Business Administration (COBA)
- College of Education (COE)
- Department of Chemistry and Biochemistry (CAS)
- Department of Communication and Media (CAS)
- Department of Computer Science (CAS)
- Department of Criminology and Criminal Justice (CAS)
- Department of Economics (CAS)
- Department of English (CAS)
- Department of History (CAS)
- Pierre Laclede Honors College (PLHC)¹
- Department of Language and Cultural Studies (CAS)
- Department of Mathematics, Physics, Astronomy and Statistics (CAS)
- Department of Music (CAS)
- Department of Philosophy (CAS)
- Department of Political Science (CAS)
- Department of Psychological Sciences (CAS)
- Department of Sociology (CAS)
- School of Social Work (SW)
- Undergraduate certificates

¹ Must be admitted to Honors program.

Bachelor of Liberal Studies: Capstone and Other Restrictions

- Students who are planning to earn a Bachelor of Liberal Studies degree should declare the BLS as their major within the first 90 hours of the program. Declaration past this time may prevent timely graduation as all capstone courses are not available every semester.
- The College of Nursing and the Joint Engineering Program are not participants in the BLS program.
- The following Colleges/Departments participate in the BLS program but do not offer a capstone course and must be paired with a minor from one of the areas listed below: Business, Studio Art, Statistics, Undergraduate Certificates, and Interdisciplinary minors.
- Students admitted to the Pierre Laclede Honors College who wish to present the Honors Certificate as a minor for the BLS must complete the Honors Capstone, (one or two credit hours) and also direct three to six hours of their Honors independent study requirement to work demonstrably relevant to their BLS program. Students should consult the BLS faculty advisor in the Honors College about this requirement.
- The capstone is required in addition to the courses presented for the minor. A minimum grade of C must be earned in the capstone course. The capstone course is not counted toward the minor residency requirement.
- The following have identified a Capstone, so at least one of these minors must be included in the BLS program:

Anthropology

One additional 4000 level course in Anthropology not used in the minor. 3

Art & Design

One additional 4000 level topics course in Art History not used in the minor. 3

Biology

BIOL 3302 Evolution 3

Chemistry/Biochemistry

3 total hours from the options listed: 3

CHEM 3022 Introduction to Chemical Literature

CHEM 3905 Chemical Research

CHEM 4897 Seminar in Chemistry

Communication

One additional 3000/4000 level Communication course not used in the minor. 3

Criminology & Criminal Justice

One additional 4000 level course in Criminology and Criminal Justice, not used as part of the minor. 3

Economics

One additional 4000 level Economics course (except ECON 4105, ECON 4160, and ECON 4550) not used in the minor. 3

Education

A 3 hour capstone course must be selected from the following:

ECH ED 4989 Practicum I: Early Childhood Education/Early Childhood Special Education Site Based Experience 3

EDUC 4989 Internship I 1

ELE ED 4989 Practicum I: Elementary/Special Education Site-Based Experience 3

ELE ED 4992 Practicum I: Elementary/Special Education/TESOL Site-Based Experience 3

ELE ED 4994 Practicum I: Elementary/TESOL Site-Based Experience 3

MID ED 4989 Practicum I: Middle Level Education Site-Based Experience 3

SEC ED 4989 Practicum I: Site-Based Experience 3

English

One additional 4000 level English Literature course not used in the minor. 3

Gerontology

One additional 4000 level course in Gerontology not used in the minor and to be coordinated with the program director for Gerontology before starting the course. 3

History

HIST 4999 Senior Seminar 5

Honors College ¹

3 total hours taken from the options listed:

HONORS 4100 Independent Portfolio Writing

HONORS 4900 Independent Study in Honors

or HONORS 4910 Independent Study: Internships

Languages and Cultures

FRENCH 3211 Contemporary French Culture 3

JAPAN 3280 Readings in Japanese 3

SPANISH 3210

or SPANISH 3211

Mathematics/Computer Science

Computer Science: One additional 4000 Level Course in Computer Science not used in the minor. 3

Mathematics: One additional 4000 Level Course in Mathematics not in the minor. 3

Media Studies

One additional 4000 level course not used in the minor. 3

Music

Select one of the following: 3

M H L T 4000 Directed Studies

THRY COM 4000 Directed Studies: Variable Topic

PDGOGY 4000 Directed Study: Variable Topic

PRACTM 4000 Directed Studies: Variable Topic

Philosophy

One additional 4000 level course not used in the minor. 3

Physics

PHYSICS 4381 Directed Readings in Physics 3

Political Science

POL SCI 4950 Senior Seminar in Political Science 3

Psychology

One additional 4000 level Psychology course not used in the minor. 3

Sociology

One additional 4000 level course in Sociology not used in the minor, excluding: 3

| | |
|-------------------------|--|
| SOC 4350 or SOC 4385 | Special Study Internship in Sociology |
|-------------------------|--|

¹ Must be admitted to Honors program.

Local Government Management Graduate Certificate

The Graduate Certificate in Local Government Management is designed for current professional staff, elected or non-elected local government officials, and those who are interested in pursuing a career in the local government sector. The certificate can be taken by itself or in conjunction with the Master of Public Policy Administration degree or other graduate degree. A separate application for the certificate program may be required when students in a degree program wish to incorporate the certificate program.

Requirements

The Graduate Certificate in Local Government Management requires the completion of 18 credit hours. Twelve of these are the following core courses:

| | | |
|---------------------------------|--|-----------|
| P P ADM 6180 | Governmental Budgeting and Financial Control | 3 |
| P P ADM 6340 or P P ADM 6350 | Seminar in City Administration Issues in Urban Management | 3 |
| P P ADM 6490 | Human Resources in the Public Sector | 3 |
| POL SCI 6470 or POL SCI 6471 | Proseminar in Urban Politics Seminar in Urban Politics | 3 |
| Total Hours | | 12 |

Three hours of electives are to be taken from selected courses in business administration, criminal justice, economics, political science, and public policy administration. A student may choose among these courses or other courses approved by the program director. Electives will be chosen from the following course list:

| | | |
|---|--|----------|
| Select one of the following: ¹ | | 3 |
| CRIMIN 6442 | Communities and Crime | |
| ECON 4160 | Geospatial Analysis in the Social Sciences | |
| POL SCI 6470 | Proseminar in Urban Politics | |
| POL SCI 6471 | Seminar in Urban Politics | |
| P P ADM/SOC WK 6300 | Leadership and Management in Nonprofit Organizations | |
| P P ADM 6340 | Seminar in City Administration | |
| P P ADM 6350 | Issues in Urban Management | |
| P P ADM 6400 | Public Administration: Theory & Practice | |
| P P ADM 6510 | Urban and Regional Planning and Public Policy | |
| P P ADM 6600 | Managing and Leading in Organizations | |
| Total Hours | | 3 |

Three hours of internship are also required but may be waived if the student has sufficient professional experience in the field. Any request for an exemption from the internship requirement must be submitted in writing and approved by the local government program director after a review of the student's professional or managerial field experience. Students who receive an exemption must take another three hours of electives from courses listed above.

¹ Other courses may be added as advisors deem appropriate for content.

Requirements for admission to the graduate certificate program include an undergraduate degree and a GPA of 3.0 or better. Applicants must submit two letters of recommendation. At least one of the letters should be from a current or former college-level instructor. Applicants must submit a two-page personal statement explaining how the certificate program fits in with the applicant's educational and professional goals. The letters and the personal statement should be sent directly to the Public Policy Administration Program.

Logistics and Supply Chain Management Graduate Certificate

The Graduate Certificate in Logistics and Supply Chain Management provides a focused and intensive study of important topics in supply chain management, including procurement, production, operations, logistics, and transportation. Students first get introduced to the foundation and basic concepts of supply chain management. They then take in-depth studies into domain topics of global supply chain management, strategic sourcing, and supply chain integration, in conjunction with analytical methodologies for various data-driven decision-making functions in supply chains, including facility location and layout, production planning, inventory control, scheduling, and vehicle routing. The program is suitable for candidates with undergraduate or graduate education other than supply chain management. It is also suitable for professionals whose primary responsibility is in other business functions (e.g., finance, marketing, information systems, accounting) but who wish to broaden their scope of knowledge and training in supply chains.

Admission Requirements

Applicants must meet the general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs.

Required Course

| | | |
|---------------------------------------|-----------------------------------|----------|
| SCMA 5310 | Supply Chain Strategies | 3 |
| Supply Chain Management Course | | 3 |
| Choose one of the following courses: | | |
| SCMA 5381 | Global Supply Chain Management | |
| SCMA 6321 | Strategic Sourcing | |
| SCMA 6347 | LOM Project Management | |
| SCMA 6360 | Supply Chain Integration | |
| SCMA 5389 | Supply Chain Management Practicum | |

| | | |
|---|--|-----------|
| SCMA 5399 | Individual Research in Logistics and Operations Management | |
| Supply Chain Analytics Course | | 3 |
| Choose one of the following courses: | | |
| SCMA 5300 | Business Analytics | |
| SCMA 5320 | Supply Chain and Operations Management | |
| SCMA 6330 | Business Logistics Systems | |
| SCMA 6331 | Supply Chain Modeling | |
| SCMA 6345 | Business Analytics and Data Mining | |
| SCMA 6350 | Management Science Methods | |
| Elective | | |
| An additional course chosen from the remaining Supply Chain Management and Supply Chain Analytics courses | | 3 |
| Total Hours | | 12 |

The required and elective courses may be substituted with other courses with the approval of the Chair of Supply Chain & Analytics Department.

This certificate program may also count toward an MBA degree program with the Management, and Operations Management Emphasis.

Learning Outcomes

Upon completion of the program, certificate earners should be able to:

- Interpret foundational concepts in supply chain management including procurement/sourcing, production, operations and logistics, across domain contexts such as global supply chain management, strategic sourcing and supply chain integration
- Apply analytical methods for data-driven decision making in supply chain management

Management Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

Available to all students except those pursuing the Bachelor of Science in Business Administration degree. Students must complete:

| | | |
|-----------|---|---|
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MGMT 3611 | Advanced Management and Organizational Behavior | 3 |

Select any three upper division management and organizational behavior electives. 9

Total Hours 15

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate competence in applying management concepts and theories related to motivation, leadership, group process, decision making, job design, and organizational development.
- Demonstrate the ability to utilize a diversity-oriented mindset in business decision-making.
- Demonstrate the ability to apply human resource concepts regarding attracting, selecting, developing, motivating, evaluating and retaining employees.

Marketing Management Graduate Certificate

Effective Fall 2020, The Marketing Management Graduate Certificate will no longer be accepting applications

Requirements

Students must complete the following six courses or appropriate substitutes if course waivers are appropriate:

| | | |
|------------------------------|----------------------------------|-----------|
| MKTG 5700 | Integrated Marketing Strategies | 3 |
| MKTG 5710 | Consumer Motivation and Behavior | 3 |
| MKTG 5740 | Marketing and Business Analytics | 3 |
| Marketing Management: | | |
| MKTG 5701 | Marketing Planning and Strategy | 3 |
| MKTG 5720 | | 3 |
| MKTG 5730 | | 3 |
| Total Hours | | 18 |

All course prerequisites and all course waivers are applicable. The Marketing department chairperson and the director of Graduate Studies in Business must approve substitute courses. In all cases, 18 hours (including at least 12 hours in Marketing) are needed to complete the certificate.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Assess the role and practice of marketing within an organization, including theoretical and applied aspects of the marketing discipline (MKTG 5700)
- Demonstrate proficiency in marketing analytics and research skills (MKTG 5740)
- Describe how marketers design and adapt their campaigns and strategies based on the psychology of their buyers and the processes these buyers employ to learn about, select, use, and dispose of products (MKTG 5710)
- Develop, analyze, and evaluate strategic and tactical marketing plans and programs and to assess marketing performance (MKTG 5701)

Marketing Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

Available to all students except those pursuing the Bachelor of Science in Business Administration degree. Students must complete:

| | | |
|--|-------------------------|----|
| MKTG 3700 | Principles of Marketing | 3 |
| Select any four additional upper division marketing electives. | | 12 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Students will be able to develop knowledge about the definition of marketing, consumer, and environment.
- Students will be able to identify drivers of consumer behavior and market opportunities and threats.
- Students will be able to interpret marketing research results.
- Students will be able to explain product, price, place, and promotion strategies.

Mathematical and Computational Science PhD, Computer Science Emphasis

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL Bulletin. Students are considered for admission to the graduate program in Computer Science only after they have formally applied for admission through Graduate School. Applications are completed on-line. Additional requirements are listed below. An applicant for admission to the Ph.D. in Mathematical and Computational Science - Computer Science option should have completed a Master's in Computer Science or a related area, with a GPA of at least 3.0/4.0.

An applicant without a related master's but with an exceptional record will also be considered for admission into the Ph.D. program. Such a case will require justification in the form of strong academic standing, experience, participation in research/publications, and/or strong GRE. It should be presented through the statement of purpose and recommendation letters. Other applicants without a master's degree are advised to apply to the

master's program in Computer Science or Cybersecurity and then reapply to the Ph.D. before or after completing the Master's.

The statement of purpose should show evidence of the ability to convey ideas in a succinct and focused manner. The applicant should describe their reasons for applying to the UMSL Ph.D. program in Computer Science, their objectives, including research and career, and should outline a path to successful completion.

The application also requires at least two recommendation letters from academic or professional sources who can comment on academic competence, research potential, or professional experience. At least one of the letters must be from an academic source.

Applicants are advised to submit scores from the GRE general test, which are not more than 5 years old.

A student admitted to the Ph.D. can transfer prior related graduate coursework, subject to Graduate School regulations. Credits from an awarded master's degree can be credited towards the doctoral degree requirements. A student admitted without a master's degree can transfer up to 20 graduate credit hours of related courses, with the approval of the advisor and the Graduate Director. However, at least 31 credits used to satisfy requirements for the doctoral degree must be completed in residence at UMSL. An applicant will be evaluated based on competency (related academic or professional experience) in core areas of computer science, specifically including

1. Programming skills and languages
2. Operating systems
3. Data structures and analysis of algorithms
4. Computer organization and architecture

Applicants missing some of the listed competency areas may be admitted and will be required to take related courses as a part of their studies. Applicants with too many core deficiencies may be advised to apply to the M.S. in Computer Science (p. 488) or M.S. in Cybersecurity - Computer Science Emphasis (p. 506), and reapply to the doctoral program after completing necessary courses, which can be transferred into the Ph.D. program subject to the stated limitations. International applicants are required to show proficiency in English as directed by the UMSL Global office. The requirement is waived for students whose native language is English, or who have completed a previous degree from a US university.

It may also be waived for students who are permanent residents of the US and who have lived in the US for a substantial period of time. Visit this page for information on our research areas, this page for information about the current sponsored projects, and this page for information on financial support.

Application Process

The department admits students for the Fall and Spring semesters on a rolling basis. For international students, the deadlines are determined by the visa processing times and usually are May 31 for the Fall semester and October 31 for the Spring semester.

Follow the directions on the Graduate School web site.

Degree Requirements

The requirements for the Ph.D. degree include the following:

1. Course work
2. Comprehensive examination leading to Ph.D. Candidacy
3. Ph.D. Candidacy and Doctoral Dissertation

A student must advance to Ph.D. candidacy before working on a dissertation, then defend the dissertation to be awarded the doctoral degree.

Course Work

A minimum of 60 credit hours of courses numbered 4000 or above are required, of which at least 45 credit hours must be from courses numbered 5000 or above. The 60 credit hours must include a minimum of 9 and a maximum of 15 Dissertation Research credit hours. All courses numbered below 5000 must be completed with a grade of at least B. Courses outside the Department of Computer Science will require the approval of the Graduate Director. The same applies to courses taken at other institutions, and these credits would be subject to residency requirements. All courses to be counted as part of the degree requirement, including transfers but excluding a prior M.S. degree, are subject to an eight-year limitation.

Students are expected to maintain a GPA of 3.0 on a 4-point scale. At least half of the counted courses must be UMSL courses according to the residency requirements.

Comprehensive Examination leading to Ph.D. Candidacy

A student advances to Ph.D. candidacy after satisfying the following requirements:

I. Passing comprehensive examinations in two steps:

1. Passing a qualifier examination covering fundamental topics in Computer Science. This examination should take place no later than in the semester immediately after completing 12 credit hours in the program at UMSL. If necessary, this examination can be repeated once in the first semester, but no later than the second semester following the first attempt. This examination covers the following two courses/topics

| | | |
|--------------------|---|----------|
| CMP SCI 4760 | Operating Systems | 3 |
| CMP SCI 5130 | Advanced Data Structures and Algorithms | 3 |
| Total Hours | | 6 |

and two additional courses, selected by the Graduate Director taking each student's interests into account.

2. After passing the qualifier examination, the student finds a research advisor, constitutes a research committee, and then must do one of the following:
 - Pass a written examination in the area of the student's interests written under the direction of the research advisor covering some specialized advanced coursework or area.
 - Write a survey paper in the area of the student's interests under the direction of the research advisor and successfully present it orally.

II. Completing the required credit hours other than Dissertation Research (minimum 45 credits, including transfers and prior M.S. credited toward the Ph.D.)

Doctoral Dissertation

A Ph.D. candidate obtains the Ph.D. in these steps:

1. The Ph.D. candidate must propose a dissertation committee.
2. The Ph.D. candidate must prepare a written dissertation proposal and defend it in front of the dissertation committee. The dissertation proposal is a substantial document describing the problem area, the specific problem to be worked on, and the methods to be used, as well as demonstrating the student's proficiency in written communication. A candidate making substantial changes in the research direction may have to repeat this step.
3. The Ph.D. candidate must then write a dissertation as outlined in the dissertation proposal while enrolling for Dissertation Research credits. This work must be an original contribution to the field, and it must meet the standards and requirements set by the Graduate School including a public defense of the dissertation.
4. The Ph.D. candidate must successfully present and defend the dissertation in front of the dissertation committee.

Mathematical and Computational Science PhD, Mathematics Emphasis

Effective Fall 2021, the Mathematics and Computational Sciences with an emphasis in Mathematics program will no longer be accepting applications.

Admission Requirements

Applicants must have at least a bachelor's degree in mathematics or in a field with significant mathematical content. Examples of such fields include computer science, data science, economics, engineering and physics. An applicant's record should demonstrate superior achievement in undergraduate mathematics.

Individuals may apply for direct admission to either the M.A. or Ph.D. program. Candidates for the M.A. degree may choose an emphasis in mathematics or data science. Students in the M.A. program who want to transfer to the Ph.D. program upon successful completion of 15 credit hours must fill out a new application through Graduate Admissions.

Students intending to enter the Ph.D. program must have a working ability in modern programming technologies. A student with a deficiency in this area may be required to take courses at the undergraduate level in computer science.

Applicants for the Ph.D. program must, in addition, submit three letters of recommendation and scores from the Graduate Record Examination (GRE) general aptitude test.

Preliminary Advisement

Incoming students are assigned advisers with whom they should consult before each registration period to determine an appropriate course of

study. If necessary, students may be required to complete undergraduate course work without receiving graduate credit.

Students interested in the Ph.D. program in mathematical and computational sciences with the computer science option must follow the requirements for that program and that option.

Doctor of Philosophy in Mathematical and Computational Sciences

The program has three options:

- 1. Mathematics Option
- 2. Computer Science Option
- 3. Statistics Option

The requirements for the Ph.D. degree include the following:

- 1. Course work
- 2. Ph.D. candidacy
- 3. Doctoral dissertation

The requirements are described in detail below.

- 1. Course Work
A minimum of 60 hours of courses numbered 4000 or above.

In the Mathematics Option, at least 33 hours must be in courses numbered 5000 or above.

In the Computer Science Option, at least 45 hours must be in courses numbered 5000 or above.

In the Statistics Option, at least 33 hours must be in courses numbered 5000 or above.

At most 9 hours of a student's enrollment in Dissertation Research may be counted. Students are expected to maintain a 3.0 average on a 4.0 scale. All courses numbered below 5000 must be completed with a grade of at least B. Courses outside the Department of Mathematics and Computer Science will require approval of the graduate director.

When students who have earned a Master's degree are admitted to the doctoral program, appropriate credits of course work may be applied toward meeting the requirements for the doctoral degree, subject to Graduate School regulations and the approval of the graduate director. The same applied to those with some appropriate graduate credits but without a completed Master's degree.

- 2. Ph.D. Candidacy
Advancement to Ph.D. candidacy is a three-step process consisting of:
 - a. Completing 18 hours of 5000 level courses other than Ph.D. Dissertation Research as appropriate for the selected option.
 - b. Passing the comprehensive examination.
 - c. Selecting a Ph.D. committee and preparing a dissertation proposal and defense of the proposal.

Qualifying Examination

A student must fulfill the following requirements.

Basic Requirement

Pass one written examination covering fundamental topics. This examination would normally take place within the first 12 credit hours of study after admission to the Ph.D. program.

Mathematics Option

Topics from real analysis, complex analysis, and linear algebra:

| | | |
|-------------|--------------------|---|
| MATH 4100 | Real Analysis I | 3 |
| MATH 4160 | Complex Analysis I | 3 |
| MATH 4450 | Linear Algebra | 3 |
| Total Hours | | 9 |

Computer Science Option

Topics from the theory of programming languages, operating systems, analysis of algorithms, and computer systems:

| | | |
|--------------|---|----|
| CMP SCI 4250 | Programming Languages | 3 |
| CMP SCI 4760 | Operating Systems | 3 |
| CMP SCI 5130 | Advanced Data Structures and Algorithms | 3 |
| CMP SCI 5700 | Computer Systems | 3 |
| Total Hours | | 12 |

Statistics Option

Topics from real analysis, linear algebra, and mathematical statistics:

| | | |
|-------------|----------------------------|----|
| MATH 4100 | Real Analysis I | 3 |
| MATH 4450 | Linear Algebra | 3 |
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |
| Total Hours | | 12 |

Additional Requirement

After fulfilling the basic requirement above, the student must meet one of the following:

- 1. Pass a written examination in an area of the student's interests. This area will be approved by the graduate committee and will be based on a set of two or more graduate courses taken by the student. This examination would normally take place within the first 24 credit hours of study after admission to the Ph.D. program.
- 2. Write a survey paper in a specialized area under the direction of a member of the graduate faculty. The student should propose to take this option when he/she has already finished at least 2 graduate level courses and has the approval of the graduate committee. The paper should be submitted within four semesters, at which time an oral examination given by a committee of at least three members of the graduate faculty must be passed.

In both parts 1) and 2), the graduate committee will determine if the topics are consistent with the option that the student is pursuing.

Dissertation Committee and Dissertation Proposal

After completing the comprehensive examinations, each student chooses a dissertation advisor and prepares a Dissertation Proposal. Usually students choose an advisor from contacts made through their course work. The dissertation committee will be formed, and the student will meet with this committee for an oral defense of his/her dissertation proposal. The dissertation proposal is a substantial document describing the problem to be worked on and the methods to be used, as well as demonstrating the student's proficiency in written communication.

Doctoral Dissertation

Each Ph.D. candidate must write a dissertation that is an original contribution to the field on a topic approved by the candidate's Ph.D. Committee and the department, and which meets the standards and requirements set by the Graduate School including the public defense of the dissertation. Students working on a dissertation may enroll in Ph.D. Dissertation Research, as appropriate for the selected option. A maximum of 9 hours Dissertation Research can be used toward the required hours of work in courses numbered 5000 or above.

Financial Assistance

Any student who intends to apply for financial assistance, in the form of a teaching assistantship or a research assistantship, is required to have three letters of recommendation submitted with the application to the graduate program in Mathematics or Computer Science. The application must include scores on the GRE general aptitude test. Applicants are also encouraged to submit scores in the GRE subject area test in Mathematics or Computer Science. Applications for financial assistance should be submitted before February 15 prior to the academic year in which the student expects to begin graduate study. Notifications of awards are generally made March 15, and students awarded financial assistance are expected to return letters of acceptance by April 15.

Mathematical and Computational Science PhD, Statistics Emphasis

Effective Fall 2021, the Mathematics and Computational Sciences with an emphasis in Statistics program will no longer be accepting applications.

Admission Requirements

Applicants must have at least a bachelor's degree in mathematics or in a field with significant mathematical content. Examples of such fields include computer science, data science, economics, engineering and physics. An applicant's record should demonstrate superior achievement in undergraduate mathematics.

Individuals may apply for direct admission to either the M.A. or Ph.D. program. Candidates for the M.A. degree may choose an emphasis in mathematics or data science. Students in the M.A. program who want to transfer to the Ph.D. program upon successful completion of 15 credit hours must fill out a new application through Graduate Admissions.

Students intending to enter the Ph.D. program must have a working ability in modern programming technologies. A student with a deficiency in this area may be required to take courses at the undergraduate level in computer science.

Applicants for the Ph.D. program must, in addition, submit three letters of recommendation and scores from the Graduate Record Examination (GRE) general aptitude test.

Doctor of Philosophy in Mathematical and Computational Sciences

The program has three options:

1. Mathematics Option
2. Computer Science Option
3. Statistics Option

The requirements for the Ph.D. degree include the following:

1. Course work
2. Ph.D. candidacy
3. Doctoral dissertation

The requirements are described in detail below.

1. Course Work
A minimum of 60 hours of courses numbered 4000 or above.

In the Mathematics Option, at least 33 hours must be in courses numbered 5000 or above.

In the Computer Science Option, at least 45 hours must be in courses numbered 5000 or above.

In the Statistics Option, at least 33 hours must be in courses numbered 5000 or above.

At most 9 hours of a student's enrollment in Dissertation Research may be counted. Students are expected to maintain a 3.0 average on a 4.0 scale. All courses numbered below 5000 must be completed with a grade of at least B. Courses outside the Department of Mathematics and Computer Science will require approval of the graduate director.

When students who have earned a Master's degree are admitted to the doctoral program, appropriate credits of course work may be applied toward meeting the requirements for the doctoral degree, subject to Graduate School regulations and the approval of the graduate director. The same applied to those with some appropriate graduate credits but without a completed Master's degree.

2. Ph.D. Candidacy
Advancement to Ph.D. candidacy is a three-step process consisting of:
 - a. Completing 18 hours of 5000 level courses other than Ph.D. Dissertation Research as appropriate for the selected option.
 - b. Passing the comprehensive examination.
 - c. Selecting a Ph.D. committee and preparing a dissertation proposal and defense of the proposal.

Qualifying Examination

A student must fulfill the following requirements.

Basic Requirement

Pass one written examination covering fundamental topics. This examination would normally take place within the first 12 credit hours of study after admission to the Ph.D. program.

Mathematics Option

Topics from real analysis, complex analysis, and linear algebra:

| | | |
|--------------------|--------------------|----------|
| MATH 4100 | Real Analysis I | 3 |
| MATH 4160 | Complex Analysis I | 3 |
| MATH 4450 | Linear Algebra | 3 |
| Total Hours | | 9 |

Computer Science Option

Topics from the theory of programming languages, operating systems, analysis of algorithms, and computer systems:

| | | |
|--------------------|---|-----------|
| CMP SCI 4250 | Programming Languages | 3 |
| CMP SCI 4760 | Operating Systems | 3 |
| CMP SCI 5130 | Advanced Data Structures and Algorithms | 3 |
| CMP SCI 5700 | Computer Systems | 3 |
| Total Hours | | 12 |

Statistics Option

Topics from real analysis, linear algebra, and mathematical statistics:

| | | |
|--------------------|----------------------------|-----------|
| MATH 4100 | Real Analysis I | 3 |
| MATH 4450 | Linear Algebra | 3 |
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |
| Total Hours | | 12 |

Additional Requirement

After fulfilling the basic requirement above, the student must meet one of the following:

1. Pass a written examination in an area of the student's interests. This area will be approved by the graduate committee and will be based on a set of two or more graduate courses taken by the student. This examination would normally take place within the first 24 credit hours of study after admission to the Ph.D. program.
2. Write a survey paper in a specialized area under the direction of a member of the graduate faculty. The student should propose to take this option when he/she has already finished at least 2 graduate level courses and has the approval of the graduate committee. The paper should be submitted within four semesters, at which time an oral examination given by a committee of at least three members of the graduate faculty must be passed.

In both parts 1) and 2), the graduate committee will determine if the topics are consistent with the option that the student is pursuing.

Dissertation Committee and Dissertation Proposal

After completing the comprehensive examinations, each student chooses a dissertation advisor and prepares a Dissertation Proposal. Usually

students choose an advisor from contacts made through their course work. The dissertation committee will be formed, and the student will meet with this committee for an oral defense of his/her dissertation proposal. The dissertation proposal is a substantial document describing the problem to be worked on and the methods to be used, as well as demonstrating the student's proficiency in written communication.

Doctoral Dissertation

Each Ph.D. candidate must write a dissertation that is an original contribution to the field on a topic approved by the candidate's Ph.D. Committee and the department, and which meets the standards and requirements set by the Graduate School including the public defense of the dissertation. Students working on a dissertation may enroll in Ph.D. Dissertation Research, as appropriate for the selected option. A maximum of 9 hours Dissertation Research can be used toward the required hours of work in courses numbered 5000 or above.

Mathematics BA

General Education Requirements

All department majors must satisfy the university and appropriate school or college general education requirements (p. 30). All mathematics courses may be used to meet the university's general education breadth of study requirement in natural sciences and mathematics.

Satisfactory/Unsatisfactory Restrictions

All department majors may not take mathematical sciences or related area courses on a satisfactory/unsatisfactory basis. Students considering graduate study should consult with their advisers about taking work on a satisfactory/unsatisfactory basis.

Degree Requirements

All courses of the department presented to meet the degree requirements must be completed with a grade of C- or better. At least four courses numbered 3000 or above must be taken in residence. Students must have a 2.0 grade point average in the mathematical sciences courses completed.

Students enrolling in introductory mathematics courses should check the prerequisites to determine if a satisfactory score on the Mathematics Placement Test is necessary. Placement into introductory courses assumes a mastery of two years of high school algebra.

A minimum grade of C- is required to meet the prerequisite requirement for any course except with permission of the department.

Note: Courses that are prerequisites for higher-level courses may not be taken for credit or quality points if the higher-level course has been satisfactorily completed.

Many students are qualified, as a result of having studied calculus in high school, to begin their major with MATH 1900, Analytic Geometry and Calculus II, or MATH 2000, Analytic Geometry and Calculus III. These students are urged to consult with the department before planning their programs. Credit for MATH 1800, Analytic Geometry and Calculus I, will be granted to those students who complete MATH 1900 with a grade of C- or better.

Degree Requirements in Mathematics

All mathematics majors in all undergraduate programs must complete the mathematics core requirements.

Core Requirements

The following courses are required:

| | | |
|--------------------|--|-----------|
| CMP SCI 1250 | Introduction to Computing ¹ | 3 |
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 2020 | Introduction to Differential Equations | 3 |
| MATH 2450 | Elementary Linear Algebra | 3 |
| MATH 3250 | Foundations of Mathematics ³ | 3 |
| MATH 4100 | Real Analysis I ² | 3 |
| Total Hours | | 33 |

¹ Students in the Fiscal Mathematics emphasis area will take MATH 4200 instead.

² Students in the Fiscal Mathematics emphasis area will take MATH 4210 instead.

³ Students in the Data Science emphasis area may substitute course with CMP SCI 3130.

Related Area Requirements for majors in Mathematics

Candidates for the B.A. in Mathematics must satisfy the requirements in one of the groups below with a grade of C-or better. Candidates for the B.S.Ed. in Mathematics and B.S. in Mathematics must satisfy the requirements in two of the groups below with a grade of C-or better.

If candidates choose group 2, then they cannot apply either of the two courses listed in that group towards the additional 4000 level mathematics courses (beyond the core requirements) that must be completed for each of these degrees.

Students seeking a double degree, either within this department or with another department do not have to fulfill the related area requirements.

Related Area Courses

1) Computer Science

Select two of the following: 6

| | | |
|--------------|--|--|
| CMP SCI 2250 | Programming and Data Structures | |
| CMP SCI 2700 | Computer Organization and Architecture | |
| CMP SCI 3130 | Design and Analysis of Algorithms | |
| CMP SCI 4410 | Introduction to Computer Graphics | |
| CMP SCI 4420 | Introduction to Digital Image Processing and Computer Vision | |

2) Statistics

| | | |
|-----------|----------------------------|---|
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |

3) Biology

| | | |
|-----------|---------|---|
| BIOL 2102 | Ecology | 3 |
|-----------|---------|---|

| | | |
|-----------|--------------------|---|
| BIOL 2103 | Ecology Laboratory | 2 |
|-----------|--------------------|---|

4) Biology

| | | |
|-----------|--------------------|---|
| BIOL 2012 | Genetics | 3 |
| BIOL 4182 | Population Biology | 3 |

5) Chemistry

| | | |
|-----------|---|---|
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |

6) Chemistry

| | | |
|---|---|---|
| CHEM 3312 | Physical Chemistry I: Thermodynamics and Kinetics | 3 |
| And another 3000-level, or above, chemistry course. | | 3 |

7) Economics

| | | |
|-----------|--|---|
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| ECON 4100 | Introduction to Econometrics | 4 |

8) Philosophy

| | | |
|-----------|-----------------------|---|
| PHIL 3360 | Formal Logic | 3 |
| PHIL 3380 | Philosophy of Science | 3 |

9) Physics

| | | |
|--------------|---|---|
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |

10) Physics

| | | |
|---|-----------|---|
| PHYSICS 3221 | Mechanics | 3 |
| And another 3000 level, or above, physics course. | | 3 |

11) Business Administration

| | | |
|-----------|---|---|
| SCMA 3320 | Advanced Supply Chain and Operations Management | 3 |
| SCMA 4350 | Prescriptive Analytics and Optimization | 3 |

12) Engineering

| | | |
|-----------|----------|---|
| ENGR 2310 | Statics | 3 |
| ENGR 2320 | Dynamics | 3 |

In addition to the core requirements and the College of Arts and Sciences' foreign language requirement, three mathematics courses at the 4000 level or higher must be completed. Of these, one must be MATH 4400, Introduction to Abstract Algebra

Learning Outcomes

A successful undergraduate should, upon completion, be able to:

- Write clear, logically consistent proofs.
- Read, understand and assess the veracity of logical arguments or mathematical proofs.
- Reformulate problems or questions in relevant mathematical terms.
- Solve problems which involve analysis, algebra or linear algebra, elementary number theory, elementary probability or statistics.
- Demonstrate basic proficiency in speaking, reading and writing in a language in addition to English.

Sample Four Year Plan

| First Year | | | |
|-------------------------------------|-------|---------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 MATH 1320 | 3 |
| ENGL 1100 | | 3 MATH 1900 | 5 |
| MATH 1800 | | 5 CMP SCI 1250 | 3 |
| EXPLORE - Humanities & Fine Arts | | 3 EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | | 3 CORE - US History and Government | 3 |
| | 15 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 2000 | | 5 MATH 2020 | 3 |
| MATH 3250 | | 3 MATH 2450 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Social Sciences | 3 |
| Foreign Language 1001 | | 5 Foreign Language 1002 | 5 |
| | 16 | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ENGL 3100 | | 3 MATH 4100 | 3 |
| MATH 4400 | | 3 Cultural Diversity Requirement | 3 |
| Foreign Language 2101 | | 3 2000-level Related Area Requirement | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 Elective or minor | 3 |
| CORE - Communication Proficiency | | 3 Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 4000+ level course | | 3 MATH 4000-level course | 3 |
| 2000-level Related Area Requirement | | 3 2000-level Elective | 3 |
| Elective or minor | | 3 Elective or minor | 7 |
| 2000-level Elective | | 3 | |
| 2000-level Elective | | 3 | |
| | 15 | | 13 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in Mathematics

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Mathematics with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Mathematics BA or BS/MA Dual Degree Program

This is an integrated BA/BS and MA ("2+3") dual degree program in Mathematics: it is designed to provide an opportunity for mathematics majors at the University of Missouri-St Louis (UMSL) with a strong academic record to start earning graduate work credit before actually completing their undergraduate degree and to shorten, or accelerate, the time required as graduate students to earn their master's degree. A student in this program can apply up to 12 credit hours of 4000-and-above level courses towards both programs.

Admission Requirements

- Undergraduate math majors can apply for provisional admission to this program if:
 - They have completed at least 60 credit hours of coursework and
 - Their GPA is 3.0 or higher.

Students submit their applications to the department. Once a student is admitted in this provisional status, the student continues to work toward his/her undergraduate degree until the student completes 90-102 undergraduate credit hours. Meanwhile the student will be advised to complete the required courses for graduate admission.

- A provisionally admitted student is reviewed for formal admission after completing 90 undergraduate credit hours. Minimal requirements for admission include:
 - GPA of 3.0 or higher at the time of the review
 - MATH 1320, MATH 2020, MATH 2450, MATH 3250 - all completed with a grade of B- or higher.

A student's application meeting the minimal requirements does not mean the student is automatically admitted in this program. The math graduate committee will review the application and make a decision. In case the application is approved, the student needs to complete a formal application for admission into the graduate program and is recommended for admission by the graduate committee.

Program Requirements

- The current separate requirements for BA/BS and MA in math remain unchanged.

- Once the student is admitted in this program, the student is allowed to take graduate courses (paid with graduate fees).
- The student in this program can apply up to 12 credit hours of 4000-and-above level courses towards both the bachelor and master's degrees. The student may get the BA/BS and MA degrees at the same time.
- In case a student cannot complete the master's degree for some reason, up to 12 credit hours of graduate level courses can be applied towards the BA/BS degree.
- Students will pay graduate fees for all courses after being admitted and starting the program.

Mathematics BS

General Education Requirements

All department majors must satisfy the university and appropriate school or college general education requirements (p. 30). All mathematics courses may be used to meet the university's general education breadth of study requirement in natural sciences and mathematics.

Satisfactory/Unsatisfactory Restrictions

All department majors may not take mathematical sciences or related area courses on a satisfactory/unsatisfactory basis. Students considering graduate study should consult with their advisers about taking work on a satisfactory/unsatisfactory basis.

Degree Requirements

All courses of the department presented to meet the degree requirements must be completed with a grade of C- or better. At least four courses numbered 3000 or above must be taken in residence. Students must have a 2.0 grade point average in the mathematical sciences courses completed.

Students enrolling in introductory mathematics courses should check the prerequisites to determine if a satisfactory score on the Mathematics Placement Test is necessary. Placement into introductory courses assumes a mastery of two years of high school algebra.

A minimum grade of C- is required to meet the prerequisite requirement for any course except with permission of the department.

Note: Courses that are prerequisites for higher-level courses may not be taken for credit or quality points if the higher-level course has been satisfactorily completed.

Many students are qualified, as a result of having studied calculus in high school, to begin their major with MATH 1900, Analytic Geometry and Calculus II, or MATH 2000, Analytic Geometry and Calculus III. These students are urged to consult with the department before planning their programs. Credit for MATH 1800, Analytic Geometry and Calculus I, will be granted to those students who complete MATH 1900 with a grade of C- or better.

Degree Requirements in Mathematics

All mathematics majors in all undergraduate programs must complete the mathematics core requirements.

Core Requirements

The following courses are required:

| | | |
|--------------------|--|-----------|
| CMP SCI 1250 | Introduction to Computing ¹ | 3 |
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 2020 | Introduction to Differential Equations | 3 |
| MATH 2450 | Elementary Linear Algebra | 3 |
| MATH 3250 | Foundations of Mathematics ³ | 3 |
| MATH 4100 | Real Analysis I ² | 3 |
| Total Hours | | 33 |

¹ Students in the Fiscal Mathematics emphasis area will take MATH 4200 instead.

² Students in the Fiscal Mathematics emphasis area will take MATH 4210 instead.

³ Students in the Data Science emphasis area may substitute course with CMP SCI 3130.

Related Area Requirements for majors in Mathematics

Candidates for the B.A. in Mathematics must satisfy the requirements in one of the groups below with a grade of C- or better. Candidates for the B.S.Ed. in Mathematics and B.S. in Mathematics must satisfy the requirements in two of the groups below with a grade of C- or better.

If candidates choose group 2, then they cannot apply either of the two courses listed in that group towards the additional 4000 level mathematics courses (beyond the core requirements) that must be completed for each of these degrees.

Students seeking a double degree, either within this department or with another department do not have to fulfill the related area requirements.

Related Area Courses

1) Computer Science

| | | |
|------------------------------|--|---|
| Select two of the following: | | 6 |
| CMP SCI 2250 | Programming and Data Structures | |
| CMP SCI 2700 | Computer Organization and Architecture | |
| CMP SCI 3130 | Design and Analysis of Algorithms | |
| CMP SCI 4410 | Introduction to Computer Graphics | |
| CMP SCI 4420 | Introduction to Digital Image Processing and Computer Vision | |

2) Statistics

| | | |
|-----------|----------------------------|---|
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |

3) Biology

| | | |
|-----------|--------------------|---|
| BIOL 2102 | Ecology | 3 |
| BIOL 2103 | Ecology Laboratory | 2 |

4) Biology

| | | |
|-----------|--------------------|---|
| BIOL 2012 | Genetics | 3 |
| BIOL 4182 | Population Biology | 3 |

5) Chemistry

| | | |
|---|---|---|
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| CHEM 1121 | Introductory Chemistry II | 5 |
| 6) Chemistry | | |
| CHEM 3312 | Physical Chemistry I: Thermodynamics and Kinetics | 3 |
| And another 3000-level, or above, chemistry course. | | |
| 7) Economics | | |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| ECON 4100 | Introduction to Econometrics | 4 |
| 8) Philosophy | | |
| PHIL 3360 | Formal Logic | 3 |
| PHIL 3380 | Philosophy of Science | 3 |
| 9) Physics | | |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |
| 10) Physics | | |
| PHYSICS 3221 | Mechanics | 3 |
| And another 3000 level, or above, physics course. | | |
| 11) Business Administration | | |
| SCMA 3320 | Advanced Supply Chain and Operations Management | 3 |
| SCMA 4350 | Prescriptive Analytics and Optimization | 3 |
| 12) Engineering | | |
| ENGR 2310 | Statics | 3 |
| ENGR 2320 | Dynamics | 3 |

In addition to the core requirements, the B.S. in Mathematics degree requires:

| | | |
|-------------------------------------|------------------------------------|----------|
| 1. Completing all of the following: | | |
| MATH 4160 | Complex Analysis I | 3 |
| MATH 4400 | Introduction to Abstract Algebra I | 3 |
| MATH 4450 | Linear Algebra | 3 |
| Total Hours | | 9 |

2. Completing an additional three courses numbered above 4000 in mathematics, statistics or computer science, at least one of which must be in mathematics/statistics.

Learning Outcomes

A successful undergraduate should, upon completion, be able to:

- Write clear, logically consistent proofs.
- Read, understand and assess the veracity of logical arguments or mathematical proofs.
- Reformulate problems or questions in relevant mathematical terms.
- Solve problems which involve analysis, algebra or linear algebra, elementary number theory, elementary probability or statistics.

- Demonstrate basic proficiency in speaking, reading and writing in a language in addition to English.

Sample Four Year Plan

| | | | |
|------------------------------------|--------------|--------------------------------------|--------------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 MATH 1320 | 3 |
| ENGL 1100 | | 3 MATH 1900 | 5 |
| MATH 1800 | | 5 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | | 3 CORE - US History and Government | 3 |
| | 15 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 2000 | | 5 MATH 2020 | 3 |
| MATH 2450 | | 3 MATH 3250 | 3 |
| CMP SCI 1250 | | 3 EXPLORE - Social Sciences | 3 |
| CORE – Communication Proficiency | | 3 Cultural Diversity Requirement | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 Elective or minor | 3 |
| | 17 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 4160 | | 3 MATH 4100 | 3 |
| MATH 4400 | | 3 MATH 4450 | 3 |
| ENGL 3100 | | 3 Related Area Requirement | 3 |
| Related Area Requirement | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| MATH/CMP SCI 4000-level course | | 3 MATH/CMP SCI 4000-level course | 3 |
| MATH 4000-level course | | 3 Elective or minor | 3 |
| Related Area Requirement | | 3 Elective or minor | 3 |
| Related Area Requirement | | 3 Elective or minor | 3 |
| Elective or minor | | 2 | |
| | 14 | | 12 |

Total Hours: 120

- ¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in Mathematics

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification,*

DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.

B.A. or B.S. in Mathematics with Master’s Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.

Mathematics BS, Data Science Emphasis

General Education Requirements

All department majors must satisfy the university and appropriate school or college general education requirements (p. 30). All mathematics courses may be used to meet the university's general education breadth of study requirement in natural sciences and mathematics.

Satisfactory/Unsatisfactory Restrictions

All department majors may not take mathematical sciences or related area courses on a satisfactory/unsatisfactory basis. Students considering graduate study should consult with their advisers about taking work on a satisfactory/unsatisfactory basis.

Degree Requirements

All courses of the department presented to meet the degree requirements must be completed with a grade of C- or better. At least four courses numbered 3000 or above must be taken in residence. Students must have a 2.0 grade point average in the mathematical sciences courses completed.

Students enrolling in introductory mathematics courses should check the prerequisites to determine if a satisfactory score on the Mathematics Placement Test is necessary. Placement into introductory courses assumes a mastery of two years of high school algebra.

A minimum grade of C- is required to meet the prerequisite requirement for any course except with permission of the department.

Note: Courses that are prerequisites for higher-level courses may not be taken for credit or quality points if the higher-level course has been satisfactorily completed.

Many students are qualified, as a result of having studied calculus in high school, to begin their major with MATH 1900, Analytic Geometry and Calculus II, or MATH 2000, Analytic Geometry and Calculus III. These students are urged to consult with the department before planning their programs. Credit for MATH 1800, Analytic Geometry and Calculus I, will

be granted to those students who complete MATH 1900 with a grade of C- or better.

Degree Requirements in Mathematics

All mathematics majors in all undergraduate programs must complete the mathematics core requirements.

Core Requirements

The following courses are required:

| | | |
|--------------|--|----|
| CMP SCI 1250 | Introduction to Computing ¹ | 3 |
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 2020 | Introduction to Differential Equations | 3 |
| MATH 2450 | Elementary Linear Algebra | 3 |
| MATH 3250 | Foundations of Mathematics ³ | 3 |
| MATH 4100 | Real Analysis I ² | 3 |
| Total Hours | | 33 |

- ¹ Students in the Fiscal Mathematics emphasis area will take MATH 4200 instead.
- ² Students in the Fiscal Mathematics emphasis area will take MATH 4210 instead.
- ³ Students in the Data Science emphasis area may substitute course with CMP SCI 3130.

Emphasis Area Requirements

| | | |
|--------------|--|---|
| CMP SCI 2250 | Programming and Data Structures | 3 |
| MATH 4005 | Exploratory Data Analysis with R | 3 |
| MATH 4070 | Introduction to Nonlinear Optimization | 3 |
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |
| MATH 4250 | Introduction to Statistical Methods in Learning and Modeling | 3 |

Elective Requirements 12

Choose two courses from the following list and two additional courses in mathematics, statistics or computer science numbered above 4000:

| | |
|-----------|---|
| MATH 3320 | Applied Statistics |
| MATH 4080 | Introduction to Scientific Computation |
| MATH 4090 | Introduction to High-dimensional Data Analysis |
| MATH 4220 | Bayesian Statistical Methods |
| MATH 4225 | Introduction to Statistical Computing |
| MATH 4260 | Introduction to Stochastic Processes |
| MATH 4450 | Linear Algebra |
| MATH 4750 | Introduction to Mathematics of Artificial Neural Networks |

Total Hours 30

There are no related area requirements.

Computer Science majors who would like to pursue the B.S. in Mathematics (Emphasis in Data Science) are not required to take MATH 2020 and must:

- complete all courses in the core requirements, except for MATH 4100 and may substitute MATH 3000 for MATH 3250
- complete all courses in the specialized requirements and one from elective requirements.

Learning Outcomes

A successful undergraduate should, upon completion, be able to:

- Write clear, logically consistent proofs.
- Read, understand and assess the veracity of logical arguments or mathematical proofs.
- Reformulate problems or questions in relevant mathematical terms.
- Solve problems which involve analysis, algebra or linear algebra, elementary number theory.
- Interpret, formulate and solve problems and assess data related questions from an advanced probabilistic and statistical viewpoint.

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 CMP SCI 1250 | 3 |
| ENGL 1100 | 3 | MATH 1900 | 5 |
| MATH 1800 | 5 | MATH 1320 | 3 |
| CORE - U.S. History and Government | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| CORE - Communication Proficiency | 3 | EXPLORE - Social Sciences | 3 |
| | 15 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| CMP SCI 2250 | | 3 MATH 2020 | 3 |
| MATH 2000 | 5 | MATH 3250 | 3 |
| MATH 2450 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| Cultural Diversity Requirement | 3 | EXPLORE - Social Sciences | 3 |
| | | EXPLORE - Social Sciences | 3 |
| | 14 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 4005 | | 3 MATH 4100 | 3 |
| MATH 4070 | | 3 MATH 4200 | 3 |
| MATH 3000+ level Course | | 3 MATH 4250 | 3 |
| EXPLORE - Social Sciences | | 3 Elective or minor | 6 |
| ENGL 3100 | 3 | | |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 3000+ level Course | | 3 MATH/CMP SCI elective | 6 |
| MATH 4210 | | 3 Elective or minor | 8 |
| EXPLORE - Humanities and Fine Arts | 3 | | |
| Elective or minor | 6 | | |
| | 15 | | 14 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in Mathematics

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Mathematics with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Mathematics BS, Fiscal Mathematics Emphasis

General Education Requirements

All department majors must satisfy the university and appropriate school or college general education requirements (p. 30). All mathematics courses may be used to meet the university's general education breadth of study requirement in natural sciences and mathematics.

Satisfactory/Unsatisfactory Restrictions

All department majors may not take mathematical sciences or related area courses on a satisfactory/unsatisfactory basis. Students considering graduate study should consult with their advisers about taking work on a satisfactory/unsatisfactory basis.

Degree Requirements

All courses of the department presented to meet the degree requirements must be completed with a grade of C- or better. At least four courses

numbered 3000 or above must be taken in residence. Students must have a 2.0 grade point average in the mathematical sciences courses completed.

Students enrolling in introductory mathematics courses should check the prerequisites to determine if a satisfactory score on the Mathematics Placement Test is necessary. Placement into introductory courses assumes a mastery of two years of high school algebra.

A minimum grade of C- is required to meet the prerequisite requirement for any course except with permission of the department.

Note: Courses that are prerequisites for higher-level courses may not be taken for credit or quality points if the higher-level course has been satisfactorily completed.

Many students are qualified, as a result of having studied calculus in high school, to begin their major with MATH 1900, Analytic Geometry and Calculus II, or MATH 2000, Analytic Geometry and Calculus III. These students are urged to consult with the department before planning their programs. Credit for MATH 1800, Analytic Geometry and Calculus I, will be granted to those students who complete MATH 1900 with a grade of C- or better.

Degree Requirements in Mathematics

All mathematics majors in all undergraduate programs must complete the mathematics core requirements.

Core Requirements

The following courses are required:

| | | |
|--------------------|--|-----------|
| CMP SCI 1250 | Introduction to Computing ¹ | 3 |
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 2020 | Introduction to Differential Equations | 3 |
| MATH 2450 | Elementary Linear Algebra | 3 |
| MATH 3250 | Foundations of Mathematics ³ | 3 |
| MATH 4100 | Real Analysis I ² | 3 |
| Total Hours | | 33 |

¹ Students in the Fiscal Mathematics emphasis area will take MATH 4200 instead.

² Students in the Fiscal Mathematics emphasis area will take MATH 4210 instead.

³ Students in the Data Science emphasis area may substitute course with CMP SCI 3130.

Emphasis Area Requirements

| | | |
|-----------|----------------------------|---|
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |

Specialized Requirements

| | | |
|--------------|----------------------------------|---|
| MATH 4010 | Financial Mathematics I | 3 |
| MATH 4020 | Financial Mathematics II | 3 |
| FINANCE 3500 | Financial Management | 3 |
| MATH 4005 | Exploratory Data Analysis with R | 3 |

In addition, two further courses in mathematics, statistics or computer science numbered above 4000. 6

Related Requirements

| | | |
|--|--|---|
| ECON 4100 | Introduction to Econometrics | 4 |
| ECON 4110 | Applied Econometrics | 4 |
| or ECON 4130 | Business and Economic Forecasting | |
| Complete two of the following courses: | | 6 |
| FINANCE 3503 | Computer Applications in Finance | |
| FINANCE 3520 | Investments | |
| FINANCE 3521 | Financial Engineering: Applying Derivatives | |
| FINANCE 3523 | Fixed Income Analysis | |
| FINANCE 3540 | Introduction to Financial Institutions and Financial Markets | |
| FINANCE 3561 | Principles of Insurance | |

Total Hours **38**

Learning Outcomes

A successful undergraduate should, upon completion, be able to:

- Write clear, logically consistent proofs.
- Read, understand and assess the veracity of logical arguments or mathematical proofs.
- Reformulate problems or questions in relevant mathematical terms.
- Solve problems which involve analysis, algebra or linear algebra, elementary number theory.
- Interpret, formulate and solve applied problems in probability and statistics.
- Interpret, formulate and solve applied problems in mathematics relating to annuities, bonds and derivative investments.

Sample Four Year Plan

| First Year | | | |
|----------------------------------|-----------|--------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 MATH 1900 | 5 |
| ENGL 1100 | | 3 MATH 1320 | 3 |
| MATH 1800 | | 5 ECON 1001 | 3 |
| INFSYS 1800 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| CORE - Communication Proficiency | | 3 INFSYS 2800 | 3 |
| | 15 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 2000 | | 5 MATH 2020 | 3 |
| MATH 2450 | | 3 MATH 3250 | 3 |
| CMP SCI 1250 | | 3 CORE - U.S. History and Government | 3 |
| ECON 1002 | | 3 Cultural Diversity Requirement | 3 |
| ACCTNG 2400 | | 3 Elective or minor | 2 |
| | 17 | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 4010 | | 3 MATH 4200 | 3 |
| ECON 4100 | | 4 MATH 4020 | 3 |
| MATH 4005 | | 3 FINANCE 3500 | 3 |
| ENGL 3100 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 16 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|----------------------------------|-------|
| MATH 4210 | | 3 MATH/CMP SCI 4000-level course | 3 |
| ECON 4130 | | 4 ECON 4110 | 4 |
| FINANCE 35XX Course | | 3 FINANCE 35XX Course | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Social Sciences | 3 |
| | 13 | | 13 |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in Mathematics

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Mathematics with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Mathematics MA

Admission Requirements

Applicants must have at least a bachelor's degree in mathematics or in a field with significant mathematical content. Examples of such fields include computer science, data science, economics, engineering and physics. An applicant's record should demonstrate superior achievement in undergraduate mathematics.

Individuals may apply for direct admission to either the M.A. or Ph.D. program. Candidates for the M.A. degree may choose an emphasis in

mathematics or data science. Students in the M.A. program who want to transfer to the Ph.D. program upon successful completion of 15 credit hours must fill out a new application through Graduate Admissions.

Students intending to enter the Ph.D. program must have a working ability in modern programming technologies. A student with a deficiency in this area may be required to take courses at the undergraduate level in computer science.

Applicants for the Ph.D. program must, in addition, submit three letters of recommendation and scores from the Graduate Record Examination (GRE) general aptitude test.

Candidates for the M.A. degree must complete 30 hours of course work with at least 15 hours of courses numbered 5000 or above. All courses numbered below 5000 must be completed with grades of at least B. The selections of the courses numbered 5000 or above need the prior approval of the graduate advisor. The courses taken must include those listed below in the mathematics core and other seven mathematics courses numbered 4000 or higher with at least five courses numbered 5000 or above.

Students who have already completed courses equivalent to those in the core may substitute other courses numbered above 4000. All substitutions of courses for those listed in the core require the prior approval of the graduate director.

Thesis Option

Either for the mathematics option or for the data science option, the non-core course work may consist of an M.A. thesis written under the direction of a faculty member in the Department of Mathematics and Computer Science. A thesis is not, however, required for this degree. A student who wishes to write a thesis should enroll in 6 hours of MATH 6900, M.A. Thesis. Students writing an M.A. thesis must defend their thesis in an oral exam administered by a committee of three department members which includes the thesis director.

Core Courses

| | | |
|------------------------|--------------------|-----------|
| MATH 4100 | Real Analysis I | 3 |
| MATH 4160 | Complex Analysis I | 3 |
| MATH 4450 | Linear Algebra | 3 |
| Electives ¹ | | 21 |
| Total Hours | | 30 |

¹ Electives must be seven mathematics courses numbered 4000 or higher with at least five courses numbered 5000 or above.

Preliminary Advisement

Incoming students are assigned advisers with whom they should consult before each registration period to determine an appropriate course of study. If necessary, students may be required to complete undergraduate course work without receiving graduate credit.

Students interested in the Ph.D. program in mathematical and computational sciences with the computer science option must follow the requirements for that program and that option.

Financial Assistance

Any student who intends to apply for financial assistance, in the form of a teaching assistantship or a research assistantship, is required to have

three letters of recommendation submitted with the application to the graduate program in Mathematics or Computer Science. The application must include scores on the GRE general aptitude test. Applicants are also encouraged to submit scores in the GRE subject area test in Mathematics or Computer Science. Applications for financial assistance should be submitted before February 15 prior to the academic year in which the student expects to begin graduate study. Notifications of awards are generally made March 15, and students awarded financial assistance are expected to return letters of acceptance by April 15.

Mathematics MA Accelerated Master's Degree

This is an Accelerated MA degree program in Mathematics. It is designed to provide an opportunity for mathematics majors at the University of Missouri-St Louis (UMSL) with strong academic record to start earning graduate credit before completing their undergraduate degree and to accelerate the time required as graduate students to earn their master's degree. A student in this program can use up to 12 credit hours for both their undergraduate degree and their master's degree.

Admission Requirements

Students pursuing the BA or BS in Mathematics, the BS in Actuarial Science, the BSEd in Secondary Education with Mathematics Emphasis, or the BS in Data Science with Mathematics Emphasis can apply for provisional admission to this program if:

1. They have completed at least 60 credit hours of coursework and
2. Their GPA is 3.0 or higher.

Students submit their applications to the department. Once a student is admitted in this provisional status, the student continues to work towards their undergraduate degree until the student completes 90-102 undergraduate credit hours. Meanwhile the student will be advised to complete the required courses for graduate admission.

A provisionally admitted student is reviewed for formal admission after completing 90 undergraduate credit hours. Minimal requirements for admission include

1. GPA of 3.0 or higher at the time of the review
2. MATH 1320, MATH 2020, MATH 2450, MATH 3250 - all completed with a grade of B- or higher.

A student's application meeting the minimal requirements does not mean the student is automatically admitted in this program. The math graduate committee will review the application and make a decision.

Program Requirements

1. The requirements for the BA, BS and BSEd degrees and MA in math remain unchanged.
2. Once the student is admitted to this program, the student is allowed to take courses toward their master's degree.
3. A student in this program can apply up to 12 credit hours of 4000-level and above courses towards both the bachelor's and master's degrees. Students may receive their bachelor's degree before they complete the master's degree when they have completed the requirements and have applied to graduate.
4. In case a student cannot complete the master's degree for some reason, up to 12 credit hours of graduate-level courses taken as an

undergraduate can be applied toward the BA/BS degree but not to a subsequent master's degree.

5. Students will pay graduate fees after being converted to graduate status.

Mathematics MA, Data Science Emphasis

Admission Requirements

Applicants must have at least a bachelor's degree in mathematics or in a field with significant mathematical content. Examples of such fields include computer science, data science, economics, engineering and physics. An applicant's record should demonstrate superior achievement in undergraduate mathematics.

Individuals may apply for direct admission to either the M.A. or Ph.D. program. Candidates for the M.A. degree may choose an emphasis in mathematics or data science. Students in the M.A. program who want to transfer to the Ph.D. program upon successful completion of 15 credit hours must fill out a new application through Graduate Admissions.

Students intending to enter the Ph.D. program must have a working ability in modern programming technologies. A student with a deficiency in this area may be required to take courses at the undergraduate level in computer science.

Applicants for the Ph.D. program must, in addition, submit three letters of recommendation and scores from the Graduate Record Examination (GRE) general aptitude test.

Preliminary Advisement

Incoming students are assigned advisers with whom they should consult before each registration period to determine an appropriate course of study. If necessary, students may be required to complete undergraduate course work without receiving graduate credit.

Students interested in the Ph.D. program in mathematical and computational sciences with the computer science option must follow the requirements for that program and that option.

Admission Requirements

Applicants must have at least a bachelor's degree in mathematics or in a field with significant mathematical content. Examples of such fields include computer science, data science, economics, engineering and physics. An applicant's record should demonstrate superior achievement in undergraduate mathematics.

Individuals may apply for direct admission to either the M.A. or Ph.D. program. Candidates for the M.A. degree may choose an emphasis in mathematics or data science. Students in the M.A. program who want to transfer to the Ph.D. program upon successful completion of 15 credit hours must fill out a new application through Graduate Admissions.

Degree Requirements

Candidates for the M.A. degree must complete 30 hours of course work with at least 15 hours of courses numbered 5000 or above. Up to 6 credit hours can be completed outside the Department of Mathematics and Statistics in a related field, with graduate program director's prior approval. Up to 9 graduate credit hours could be transferred into the the program, pending the approval of the Graduate School. All courses numbered below

5000 must be completed with grades of at least B. The selections of the courses numbered 5000 or above need the prior approval of the graduate advisor.

For the M.A. degree with data science emphasis, the courses taken must include the data-science core courses and five elective courses chosen from the data-science electives listed below. Up to 2 courses in the data-science electives can be substituted with other courses upon student's request and graduate program director's approval.

Students who have already completed courses equivalent to those in the core may substitute other courses numbered above 4000. All substitutions of courses for those listed in the core require the prior approval of the graduate director.

Thesis Option

The non-core course work may consist of an M.A. thesis written under the direction of a faculty member in the Department of Mathematics and Statistics. A thesis is not, however, required for this degree. A student who wishes to write a thesis should enroll in 6 hours of MATH 6900, M.A. Thesis. Students writing an M.A. thesis must defend their thesis in an oral exam administered by a committee of three department members which includes the thesis director.

Core Courses

| | | |
|-----------|--|---|
| MATH 4005 | Exploratory Data Analysis with R | 3 |
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |
| MATH 5070 | Nonlinear Optimization | 3 |
| MATH 5250 | Statistical Methods in Learning and Modeling | 3 |

Elective Courses 15

Choose five of the following courses:

| | |
|--------------|---|
| MATH 4220 | Bayesian Statistical Methods |
| MATH 4260 | Introduction to Stochastic Processes |
| MATH 5080 | Scientific Computation |
| MATH 5090 | High-dimensional Data Analysis |
| MATH 5225 | Statistical Computing |
| MATH 5320 | Topics in Statistics and its Applications |
| MATH 5600 | Topics in Computation |
| MATH 5770 | Advanced Topics in Nonlinear Optimization |
| CMP SCI 5340 | Machine Learning |
| CMP SCI 5342 | Data Mining |

Total Hours 30

Financial Assistance

Any student who intends to apply for financial assistance, in the form of a teaching assistantship or a research assistantship, is required to have three letters of recommendation submitted with the application to the graduate program in Mathematics or Computer Science. The application must include scores on the GRE general aptitude test. Applicants are also encouraged to submit scores in the GRE subject area test in Mathematics or Computer Science. Applications for financial assistance should be submitted before February 15 prior to the academic year in which the student expects to begin graduate study. Notifications of awards are

generally made March 15, and students awarded financial assistance are expected to return letters of acceptance by April 15.

Mathematics Minor

Minor Requirements

The department offers minors mathematics, and statistics. All courses presented for any of these minors must be completed with a grade of C- or better.

The requirements for the minor are:

| | | |
|---|------------------------------------|-----------|
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| Select at least two additional three-hour mathematics courses numbered above 2000. ¹ | | 6 |
| Total Hours | | 21 |

¹ MATH 2510, MATH 3000 and MATH 3520 may not count toward the minor.

A minimum of two mathematics courses numbered 2000 or above must be taken in residence in the Department of Mathematics and Statistics at UMSL.

Learning Outcomes

A successful undergraduate should, upon completion, be able to:

- Reformulate problems or questions in relevant mathematical terms.
- Solve problems which involve algebra or calculus (of one or several variables).

Mechanical Engineering BSME

Admission

Students are admitted to the upper-division program after they have completed an acceptable pre-engineering program. The pre-engineering program can be taken at University of Missouri-St. Louis or at community colleges in the area. Normally, admission is granted to persons who have completed the pre-engineering program with a minimum grade point average of 2.5 over all their mathematics, chemistry, physics, and introductory (statics and dynamics) engineering courses. Students with less than a 2.5 grade point average, but at least a C, in all their science, engineering and mathematics courses may be admitted on a conditional basis.

For more information, please contact the program advisor at (314) 516-7018.

Degree Requirements

A program of 132 semester hours is required for the Bachelor of Science in Mechanical Engineering.

- Majors must complete the University General Education (p. 30) and Graduation (p. 16) requirements, the Pre-Engineering Requirements, the Core Engineering Requirements, and Major Requirements.

- Majors must first complete J E MATH 3170, Engineering Mathematics, with a minimum grade of C-.
- Majors must also complete J E ENGR 2300, Introduction to Electrical Networks, with a minimum grade of C-.
- A minimum grade of C- is necessary to meet the prerequisite requirement for any course.

General Education and Graduation Requirements

The following courses fulfill general education and graduation requirements and are required of Mechanical Engineering majors:

| | | |
|--|---|-----------|
| PHIL 2259 | Engineering Ethics | 3 |
| PHIL 3380 | Philosophy of Science | 3 |
| HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | 3 |
| or HIST 1002 | American Civilization 1865 to Present (MOTR HIST 102) | |
| Three additional Social Science courses ¹ | | 9 |
| Total Hours | | 18 |

¹ One Social Science course must meet the Cultural Diversity requirement. Humanities and social sciences electives must meet both the University of Missouri-St. Louis General Education Requirements and the Humanities and Social Sciences Requirements of the Joint Undergraduate Engineering Program. Check with your advisor for details.

Pre-Engineering Requirements

Students seeking to major in engineering are first designated as 'Undeclared with an interest in Engineering majors' until they have completed Math 1800 Analytical Geometry & Calculus I. Upon successful completion of Math 1800 with a grade of C or better, students will be allowed to declare pre-engineering as their major. Math 1800 must be completed successfully within two attempts.

| | | |
|--------------------|---|-----------|
| MATH 1800 | Analytic Geometry and Calculus I | 5 |
| MATH 1900 | Analytic Geometry and Calculus II | 5 |
| MATH 2000 | Analytic Geometry and Calculus III | 5 |
| MATH 2020 | Introduction to Differential Equations | 3 |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | 5 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2111L | Mechanics and Heat Laboratory | 1 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory | 1 |
| ENGR 2310 | Statics | 3 |
| ENGR 2320 | Dynamics | 3 |
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| Total Hours | | 42 |

Engineering Core Requirements

| | | |
|--------------------|---------------------------|-----------|
| CMP SCI 1250 | Introduction to Computing | 3 |
| J E COMM 2000 | Engineering Studio I | 1 |
| J E MATH 3170 | Engineering Mathematics | 4 |
| ENGL 3130 | Technical Writing | 3 |
| Total Hours | | 11 |

Mechanical Engineering Major Requirements

| | | |
|----------------------------------|--|-----------|
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| J C ENGR 4950 | Fundamentals of Civil Engineering Review | 1 |
| J CMP SC 1002 | Introduction to Computing Tools: Matlab Skills | 1 |
| J E ENGR 2300 | Introduction to Electrical Networks | 3 |
| J E ENGR 2340 | Electrical Laboratory for Mechanical Engineers | 1 |
| J M ENGR 1413 | Introduction to Engineering Design: CAD | 2 |
| J M ENGR 1414 | Introduction to Engineering Design: Project | 2 |
| J M ENGR 2110 | Machine Shop, Fabrication, and Prototyping | 2 |
| J M ENGR 2410 | Mechanics of Deformable Bodies | 3 |
| J M ENGR 3110 | Mechanical Design and Machine Elements | 3 |
| J M ENGR 3200 | Thermodynamics | 3 |
| J M ENGR 3250 | Material Science for J M ENGR | 4 |
| J M ENGR 3700 | Fluid Mechanics | 3 |
| J M ENGR 3710 | Principles of Heat Transfer | 3 |
| J M ENGR 3721 | Fluid Mechanics Laboratory | 1 |
| J M ENGR 3722 | Heat Transfer Laboratory | 1 |
| J M ENGR 4120 | Design of Thermal Systems | 3 |
| J M ENGR 4170 | Dynamic Response of Physical Systems | 2 |
| J M ENGR 4180 | Dynamic Response Laboratory | 1 |
| J M ENGR 4110 | Mechanical Engineering Design Project | 3 |
| J M ENGR 4310/ J E ENGR 4410 | Control Systems I | 3 |
| J M ENGR 4990 | Mechanical Engineering Senior Seminar | 1 |
| Mechanical Engineering Electives | | 12 |
| Total Hours | | 61 |

Graduation Requirements

In addition to the requirements of the University of Missouri-St. Louis that apply to all candidates for undergraduate degrees, the student must earn a minimum campus grade point average of 2.0 and a minimum grade point average of 2.0 for all engineering courses attempted at the University of Missouri-St. Louis.

Upon completion of the program, graduates will have an ability to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- Communicate effectively with a range of audiences
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- Acquire and apply new knowledge as needed, using appropriate learning strategies

Sample Graduation Plan

First Year

| Fall | Hours | Spring | Hours |
|------------------------|-------|--|-------|
| MATH 1800 | | 5 MATH 1900 | 5 |
| CHEM 1111 | | 5 HIST 1001 or 1002 | 3 |
| ENGR 1010 ¹ | | 1 EXPLORE – Social Sciences | 3 |
| ENGL 1100 | | 3 EXPLORE - Social Sciences ² | 3 |
| 14 | | 14 | |

Second Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|---------------------------|-------|---------------|-------|-----------|-------|
| MATH 2000 | | 5 MATH 2020 | 3 | ENGR 2320 | 3 |
| PHYSICS 2111 | 4 | PHYSICS 2112 | 4 | | |
| PHYSICS 2111L | 1 | PHYSICS 2112L | 1 | | |
| PHIL 2259 | 3 | ENGR 2310 | 3 | | |
| EXPLORE – Social Sciences | 3 | PHIL 3380 | 3 | | |
| 16 | | 14 | | 3 | |

Third Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|---------------|-------|-----------------|-------|---------------|-------|
| J CMP SC 1002 | | 1 J M ENGR 1414 | 2 | J M ENGR 3250 | 4 |
| J E MATH 3170 | | 4 J M ENGR 2110 | 2 | | |
| J E ENGR 2300 | | 3 J M ENGR 2410 | 3 | | |
| J E COMM 2000 | | 1 ENGL 3130 | 3 | | |
| CMP SCI 1250 | 3 | | | | |
| 12 | | 10 | | 4 | |

Fourth Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|----------------------------|-------|------------------------------|-------|---------------|-------|
| J M ENGR 1413 | | 2 J M ENGR 3200 | 3 | J M ENGR 4170 | 2 |
| J E ENGR 2340 | | 1 J M ENGR 3700 | 3 | J M ENGR 4180 | 1 |
| MATH 1320 | | 3 J M ENGR 3010 ³ | 3 | | |
| J M ENGR 4730 ³ | | 3 J M ENGR 4900 ³ | 3 | | |
| 9 | | 12 | | 3 | |

Fifth Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|---------------|-------|------------------------------|-------|---------------|-------|
| J M ENGR 3110 | | 3 J M ENGR 3722 | 1 | J M ENGR 4110 | 3 |
| J M ENGR 3710 | | 3 J M ENGR 4120 | 3 | | |
| J M ENGR 3721 | | 1 J C ENGR 4950 | 1 | | |
| J M ENGR 4310 | | 3 J M ENGR 4700 ³ | 3 | | |

| | | | |
|-------------------------|----|---|---|
| J M ENGR 4990 | 1 | | |
| | 11 | 8 | 3 |
| Total Hours: 133 | | | |

¹ Course does not count toward 132 credit hours for the degree.

² Course should also satisfy the Cultural Diversity Requirement.

³ Course is an example J M ENGR elective. Four are required for a total of 12 hours.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Mechanical Engineering Minor

Admission to the Joint Engineering program is required. A minimum of 19 credit hours in Joint Mechanical Engineering and Engineering courses are required.

Required Courses

| | | |
|--|--------------------------------|----|
| ENGR 2310 | Statics | 3 |
| ENGR 2320 | Dynamics | 3 |
| J M ENGR 2410 | Mechanics of Deformable Bodies | 3 |
| Choose at least one of the following four options for an additional 10 credit hours: | | 10 |

Option 1

| | |
|---|-------------------------------|
| J M ENGR 3250 | Material Science for J M ENGR |
| Any other two J M ENGR courses for 6 credit hours | |

Option 2

| | |
|------------------|-----------------------------|
| J M ENGR 3200 | Thermodynamics |
| J M ENGR 3700 | Fluid Mechanics |
| J M ENGR 3710 | Principles of Heat Transfer |
| J M ENGR 3721 | Fluid Mechanics Laboratory |
| or J M ENGR 3722 | Heat Transfer Laboratory |

Option 3

| | |
|------------------|-----------------------------|
| J M ENGR 3200 | Thermodynamics |
| J M ENGR 3700 | Fluid Mechanics |
| J M ENGR 3710 | Principles of Heat Transfer |
| J M ENGR 3721 | Fluid Mechanics Laboratory |
| or J M ENGR 3722 | Heat Transfer Laboratory |

Option 4

| | |
|--|--------------------------------------|
| J M ENGR 4170 | Dynamic Response of Physical Systems |
| J M ENGR 4180 | Dynamic Response Laboratory |
| Any other J M ENGR course for 7 credit hours | |

| | |
|--------------------|-----------|
| Total Hours | 19 |
|--------------------|-----------|

Media Production Undergraduate Certificate

The Certificate in Media Production provides a sequence of courses designed to develop multi-channel and multi-media skill sets that can be used by students to record, edit, and produce media for artistic,

personal, or commercial applications. Students will develop a portfolio of work that will reflect both independent and client-centered content. Students who complete the Certificate in Media Production will develop the knowledge and skills needed in a rapidly changing media environment.

The Certificate in Media Production is composed of 18 hours of coursework. Students must complete at least 12 hours at UMSL and earn at least a B in any course applied to the certificate.

Required Coursework

| | | |
|-----------------------------------|---------------------------------------|-----------|
| MEDIA ST 2113 | Media Production I | 3 |
| MEDIA ST 2210 | Video Production I | 3 |
| MEDIA ST 3310 | Video Production II | 3 |
| MEDIA ST 3313 | Advanced Video Editing | 3 |
| MEDIA ST 3318 | Advanced Independent Video Production | 3 |
| MEDIA ST 2225 or MEDIA ST 3113 | Media Production II | 3 |
| Total Hours | | 18 |

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Demonstrate an understanding of available media technology and its applications.
- Develop a substantial foundation in all aspects of media production.
- Establish and nurture a working application in evolving production techniques.
- Learn to utilize external information design in order to extend experiences in production techniques and standards.
- Become prepared to perform as a production specialist in all areas of media.
- Develop a skill set in Media Production that will certify competence in all levels of pre-production, production, and post-production.

Mobile Apps and Computing Graduate Certificate

The graduate certificate in Mobile Apps and Computing is a four-course (12 credit hours) program. It provides training in technologies and frameworks for mobile apps and computing. All students must take three required courses and one elective.

A minimum of three courses must be taken from UMSL. A maximum of two courses can be used from the 4000-level. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the department chair or email info@arch.umsi.edu.

Core

| | | |
|--------------|--|---|
| CMP SCI 4220 | Introduction to iOS Programming and Apps | 3 |
| CMP SCI 5020 | Android Apps: Android Fundamentals | 3 |
| CMP SCI 5792 | Mobile Computing, Networking, and Security | 3 |

Electives

| | |
|------------------------------|---|
| Choose one of the following: | 3 |
|------------------------------|---|

| | |
|--------------|-----------------------------|
| CMP SCI 4610 | Database Management Systems |
| CMP SCI 5750 | Cloud Computing |
| CMP SCI 5794 | Internet of Things |

Total Hours

12

Mobile Apps and Computing Undergraduate Certificate

The undergraduate certificate in Mobile Apps and Computing is a five-course (15 credit hour) program. It is designed to provide training in technologies and framework for mobile apps and computing. A minimum GPA of 2.5 is required for admission.

Required Courses

| | | |
|--------------|--|---|
| CMP SCI 4020 | Introduction to Android Apps: Android Fundamentals | 3 |
| CMP SCI 4220 | Introduction to iOS Programming and Apps | 3 |
| CMP SCI 4792 | Introduction to Mobile Computing, Networking, and Security | 3 |

Electives

| | |
|--------------------------------------|---|
| Choose two of the following courses: | 6 |
| CMP SCI 4010 | Web Development with Java |
| CMP SCI 4222 | iOS Apps |
| CMP SCI 4610 | Database Management Systems |
| CMP SCI 4750 | Introduction to Cloud Computing |
| CMP SCI 4794 | Introduction to Security of IoT Systems |

Total Hours

15

A minimum of three courses must be taken from UMSL. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the department chair or email info@arch.umsi.edu.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Identify and implement techniques for communicating complex information in the Internet, particularly for mobile and wireless platforms
- Use appropriate programming languages and tools to integrate media and user interaction
- Design and develop applications in mobile and wireless computing, using representative mobile devices and platforms
- Assess and implement security principles in mobile applications
- Evaluate the quality and performance of mobile applications

Modern European Studies Undergraduate Certificate

Four semesters of college work or the equivalent in a modern European foreign language.

20

| | | |
|-----------|--|---|
| HIST 1032 | Topics in European Civilization: 1715 to the Present (MOTR WCIV 102) | 3 |
|-----------|--|---|

Select one course each from at least four of the following areas: ¹ 12

Anthropology

| | |
|-------------|---|
| ANTHRO 2192 | Anthropological Perspectives on Western Culture |
|-------------|---|

Art and Art History

| | |
|-------------|----------------------------|
| ART HS 2250 | Rococo to Realism |
| ART HS 2280 | Modern to Contemporary Art |
| ART HS 4455 | Topics in Modern Art |

English

| | |
|-----------|--------------------------------------|
| ENGL 3530 | Contemporary World Literature |
| ENGL 4450 | The Eighteenth-Century English Novel |
| ENGL 4540 | |
| ENGL 4580 | |
| ENGL 4750 | Modern British Fiction |
| ENGL 4920 | Major Works Of European Fiction |

History

| | |
|-----------|--|
| HIST 3092 | War and Upheaval in Europe, 1900-1950 |
| HIST 3093 | Europe in Peace and Prosperity, 1950-Present |

Languages and Cultural Studies

| | |
|-------------|----------------------------------|
| French | |
| FRENCH 3211 | Contemporary French Culture |
| FRENCH 4360 | |
| German | |
| GERMAN 2180 | Intermediate Readings in German |
| GERMAN 3210 | |
| GERMAN 3211 | Topics in German Culture |
| GERMAN 4311 | Special Topics in German Culture |

Spanish

| | |
|--------------|------------------------------------|
| SPANISH 4311 | Special Topics in Hispanic Culture |
| SPANISH 4325 | |

Music

| | |
|--------------|--|
| M H L T 4240 | |
| M H L T 4250 | |

Philosophy

| | |
|-----------|---|
| PHIL 1111 | Western Philosophy II: Descartes to the Present |
| PHIL 3303 | Early Modern Philosophy |
| PHIL 3304 | 19th and 20th Century Philosophy |

Political Science

| | |
|--------------|--------------------------------|
| POL SCI 2510 | The Politics of European Union |
| POL SCI 3595 | * |
| POL SCI 3890 | Workers and Globalization * |

Independent Study Course

Students seeking the certificate must complete an independent study course in which a research paper will be written focusing upon aspect of Modern European Studies. The topics should be approved in advance by International Studies and Programs.

3

Total Hours

38

¹ Students should consult International Studies and Programs advisers to determine how these courses can best be arranged to meet their interests.

Modern Language BA, Dual Language Emphasis Professional

To meet the increasing demand for multilingual professionals, the Department offers students the option of the Dual Language Professional Track as part of the B.A. in Modern Languages. Students interested in pursuing intermediate studies in more than one language may combine the study of any two of the following languages: French, Japanese, or Spanish. Coursework focuses on developing language proficiency, intercultural competency, and professional skills. Students in the dual-language concentration also benefit from numerous study abroad opportunities to further refine their linguistic and cultural competencies.

General Education Requirements

Each language major must satisfy the general education requirements of the university and the general education requirements of the College of Arts and Sciences.

Specific Requirements or Restrictions

Students entering with no high school language units must enroll in Language 1001 or may enroll in Language 2115. Language 2115 (a, b, and c) is the intensive study of a language and will satisfy the foreign language requirement. 2115a, 2115b, and 2115c are co-requisites and must be taken concurrently. To satisfy the foreign language requirement all three sections must be completed with a grade of C- or better.

A grade of D in a Language 1001 course is a passing grade but not an entrance grade for a Language 1002 course. A grade of D in a Language 1002 course is a passing grade but not an entrance grade for a Language 2101 course or its equivalent. A grade of D in a Language 2101 course fulfills the language requirement but is not an entrance grade for a higher-level course.

Demonstration of a high level of proficiency may affect the number of hours required for the major. Native or heritage speakers of a language should consult with the department concerning appropriate placement and advising. Students with previous language coursework should contact the department for language placement testing and advising. Students may not take for credit an elementary course if they have already completed a higher-level course for which the elementary course, or its equivalent, is a prerequisite.

Degree Requirements

All courses for the major must be passed with a grade of C- or better. No course required for the major may be taken on a satisfactory/unsatisfactory (s/u) basis with the exception of those taken abroad as part of a university program that has received departmental approval.

Bachelor of Arts

All students seeking a B.A. in a Modern Language must successfully complete FGN LANG 2100 Languages and World View and FGN LANG 2294, Foreign Language Careers for the Global Market, and must meet the departmental requirement of a minimum of 33 hours in French or 37-39 hours in Japanese or 35 hours in Spanish or 30-33

hours in the Dual Language Professional Emphasis (excluding Language 1001 and 1002). The maximum number of hours that may be taken in the major is 45 (including Language 1001 and 1002). In addition, students seeking the B.A. in a Modern Language who desire a teaching certificate must also take FGN LANG 4589 (same as SEC ED 4589), Curriculum and Methods of Teaching Foreign Languages, FGN LANG 4590 (same as SEC ED 4590), and fulfill the professional secondary education requirements of the College of Education.

Transfer Students

Transfer students majoring in one of the modern languages must complete at UMSL a minimum of 12 graded hours in language courses at the 3000 level or above with a grade point average of 2.0 or better in those courses.

Native Speakers

Native speakers must complete at least two courses at the 3000 level and four courses at the 4000 level to obtain a major in their native language.

Emphasis Area Requirements

| | | |
|---|--------------------------|-------|
| FGN LANG 2100 | Languages and World View | 3 |
| Choose two of the following language options. | | 30-33 |
| At least one course (minimum 3 credit hours) must include an internship, service learning, or study abroad component. | | |

French

| | |
|---|--|
| FRENCH 2170 | Intermediate French Language and Culture |
| FRENCH 2180 | Readings in French |
| Three courses at the 3000-level or higher, at least one of which must be business/professions-focused | |

German

| | |
|---|--|
| GERMAN 2170 | Intermediate Practice in Speaking and Writing German |
| GERMAN 2180 | Intermediate Readings in German |
| Three courses at the 3000-level or higher | |

Japanese

| | |
|--------------------------------------|------------------------------|
| JAPAN 2102 | Intermediate Japanese II |
| Choose two of the following courses: | |
| JAPAN 2170 | Kanji: A Radical Approach |
| JAPAN 3202 | Intermediate Japanese IV |
| JAPAN 3210 | Japanese Culture and Society |
| JAPAN 3211 | Topics in Japanese Culture |
| JAPAN 3280 | Readings in Japanese |
| JAPAN 3201 | Intermediate Japanese III |

Spanish

| | |
|---|--|
| Two courses at the 2000-level above 2101 | |
| Three courses at the 3000-level, at least one of which must be business/professions-focused | |

One 4000-Level Capstone 3

Capstone course requirement may be met by 4000-level language course

Total Hours 36-39

B.S. Ed. in Secondary Education with Emphasis in a Foreign Language

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. degree in the language; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in a Foreign Language with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|--------------------------|-------|-------------------------------|-------|
| INTDSC 1003 ¹ | | 1 FRENCH 1002 | 5 |
| FRENCH 1001 | | 5 JAPAN 1002 | 5 |
| JAPAN 1001 | | 5 MATH 1020 | 3 |
| ENGL 1100 | | 3 EXPLORE - Math and Sciences | 3 |
| 14 | | 16 | |

Second Year

| Fall | Hours | Spring | Hours |
|---|-------|-------------------------------|-------|
| FGN LANG 2100 | | 3 FRENCH 2180 | 3 |
| FRENCH 2101 | | 3 JAPAN 2102 | 5 |
| JAPAN 2101 | | 5 CORE - Information Literacy | 3 |
| EXPLORE - Mathematics & Life/ Natural Sciences | | 3 EXPLORE - Social Sciences | 3 |
| 14 | | 14 | |

Third Year

| Fall | Hours | Spring | Hours |
|---|-------|------------------------------------|-------|
| FRENCH 2170 | | 3 FRENCH 3000-level Course | 3 |
| ENGL 3100 | | 3 JAPAN 3202 | 4 |
| JAPAN 3201 | | 4 CORE - US History and Government | 3 |
| EXPLORE - Mathematics & Life/ Natural Sciences | | 3 EXPLORE - Social Sciences | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| 16 | | 16 | |

Fourth Year

| Fall | Hours | Spring | Hours |
|---|-------|-----------------------------|-------|
| FRENCH 3000-level course | | 3 FRENCH 3000-level course | 3 |
| JAPAN 4301 | | 3 EXPLORE - Social Sciences | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 Elective or minor | 9 |

| | | |
|-------------------------|----|----|
| Elective or minor | 3 | |
| Elective or minor | 3 | |
| | 15 | 15 |
| Total Hours: 120 | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Modern Language BA, French Emphasis

The French Program at UMSL develops learners who are both linguistically and culturally competent and ready to be global citizens. UMSL offers a broad range of coursework in French: foundational courses in language and culture, courses focused on the many facets of literature and culture, and pre-professional courses, all aimed at developing skills for the 21st century. Our dedicated faculty engage learners in and out of the classroom. You can expect a challenging, collaborative, and interactive environment in every course. Our students are a part of a larger learning community connected through our conversation group, numerous activities, and study abroad experiences.

General Education Requirements

Each language major must satisfy the general education requirements of the university and the general education requirements of the College of Arts and Sciences.

Specific Requirements or Restrictions

Students entering with no high school language units must enroll in Language 1001 or may enroll in Language 2115. Language 2115 (a, b, and c) is the intensive study of a language and will satisfy the foreign language requirement. 2115a, 2115b, and 2115c are co-requisites and must be taken concurrently. To satisfy the foreign language requirement all three sections must be completed with a grade of C- or better.

A grade of D in a Language 1001 course is a passing grade but not an entrance grade for a Language 1002 course. A grade of D in a Language 1002 course is a passing grade but not an entrance grade for a Language 2101 course or its equivalent. A grade of D in a Language 2101 course fulfills the language requirement but is not an entrance grade for a higher-level course.

Demonstration of a high level of proficiency may affect the number of hours required for the major. Native or heritage speakers of a language should consult with the department concerning appropriate placement and advising. Students with previous language coursework should contact the department for language placement testing and advising. Students may not take for credit an elementary course if they have already completed a higher-level course for which the elementary course, or its equivalent, is a prerequisite.

Degree Requirements

All courses for the major must be passed with a grade of C- or better. No course required for the major may be taken on a satisfactory/unsatisfactory (s/u) basis with the exception of those taken abroad as part of a university program that has received departmental approval.

Bachelor of Arts

All students seeking a B.A. in a Modern Language must successfully complete FGN LANG 2100 Languages and World View and FGN LANG 2294, Foreign Language Careers for the Global Market, and must meet the departmental requirement of a minimum of 33 hours in French or 37-39 hours in Japanese or 35 hours in Spanish or 30-33 hours in the Dual Language Professional Emphasis (excluding Language 1001 and 1002). The maximum number of hours that may be taken in the major is 45 (including Language 1001 and 1002). In addition, students seeking the B.A. in a Modern Language who desire a teaching certificate must also take FGN LANG 4589 (same as SEC ED 4589), Curriculum and Methods of Teaching Foreign Languages, FGN LANG 4590 (same as SEC ED 4590), and fulfill the professional secondary education requirements of the College of Education.

Transfer Students

Transfer students majoring in one of the modern languages must complete at UMSL a minimum of 12 graded hours in language courses at the 3000 level or above with a grade point average of 2.0 or better in those courses.

Native Speakers

Native speakers must complete at least two courses at the 3000 level and four courses at the 4000 level to obtain a major in their native language.

Specific Requirements for Concentration in French

Each major with a French concentration must complete the following courses:

| | | |
|--|---|-----------|
| FRENCH 2101 | French Language and Culture III (or the equivalent) | 3 |
| FRENCH 2170 | Intermediate French Language and Culture | 3 |
| FRENCH 2180 | Readings in French | 3 |
| FRENCH 3200 | French Grammar in Review | 3 |
| Select four additional courses at the 3000-level | | 12 |
| Select three courses at the 4000-level | | 9 |
| Total Hours | | 33 |

Career Outlook

Career options for graduates with a major or minor in modern languages include the following fields: teaching, social work, nursing, engineering, business, communications, government, journalism, travel industry, translation, and research. Our graduates have been especially successful when they combine advanced study in a modern language with another major. They are then able to add proficiency in a foreign language and culture to their knowledge and skills in another specialty. Experience with world cultures makes our graduates more adaptable and better prepared to meet the challenges of a global and increasingly diverse job market.

Learning Outcomes

Graduates of the BA in Modern Languages from the University of Missouri-St. Louis possess the necessary linguistic and cultural competencies to interact with native speakers in culturally appropriate ways. They are able to use the target language in a variety of academic, social, and professional situations and have a rich understanding of the target culture(s) fostered through engaging topic-based courses and opportunities such as study abroad, service learning, and internships. Recognizing the interconnection between languages and world views, they can critically explore their own assumptions, value alternative perspectives, and act with cultural sensitivity. They are empowered with the tools to meet the challenges of a globalized world and continue developing their skills as lifelong learners.

Skills and Knowledge Areas

Upon completion of the major, students should be able to:

Linguistic and Critical Thinking Goals:

- In listening and speaking,
 - demonstrate comprehension of the main ideas and supporting details of narrative and descriptive texts on familiar and concrete topics, such as those on radio, television, and podcasts;
 - discuss topics related to work, school, home, leisure activities, culture, and a variety of media;
 - use the target language in real-world situations in culturally-appropriate ways;
 - produce narrations and descriptions on familiar topics in present, past, and future time frames and;
 - summarize research in oral presentations.
- In reading and writing,
 - demonstrate comprehension of the main idea, supporting details, argumentative structure, and perspective in authentic texts of various genres;
 - produce narrations and descriptions in present, past, and future time frames employing connected discourse;
 - summarize, analyze, and synthesize content, and begin to express supported opinions;
 - assess language reference resources and use them effectively and;
 - conduct independent research and present findings.

Cultural and Global Awareness Goals:

- demonstrate an awareness of the linguistic, ethnic, racial, religious, cultural, and social diversity of the target cultures;
- recognize and describe some of the key historical, social, economic, and political forces in the target cultures;
- analyze and critique film, media, literature, art, etc.in their socio-historical contexts;
- compare and contrast their own cultural beliefs, behaviors, and norms with those of other cultures;
- describe how language and culture impact one’s world view;

- explain the skills acquired through language study and their benefits to a potential employer.

The linguistic goals are based on the National Standards For Foreign Language Learning and the American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines. In speaking and listening, graduates are expected to reach the Advanced-Low level proficiency, in writing the Advanced-Mid level proficiency, and in reading the Advanced-High level proficiency. For detailed descriptions of sublevels, see the ACTFL Proficiency Guidelines.

Sample Four Year Plan

| First Year | | | |
|-------------------------------------|-------|-------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 FRENCH 1002 | 5 |
| FRENCH 1001 | 5 | CORE - Communication Proficiency | 3 |
| ENGL 1100 | 3 | CORE - US History and Government | 3 |
| MATH 1020 | 3 | EXPLORE - Math and Natural Sciences | 3 |
| EXPLORE - Social Sciences | 3 | | |
| 15 | | 14 | |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| FRENCH 2101 | | 3 FRENCH 2180 | 3 |
| FGN LANG 2100 | 3 | EXPLORE - Social Sciences | 3 |
| CORE - Information Literacy | 3 | EXPLORE - Math and Natural Sciences | 3 |
| EXPLORE - Social Sciences | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| 15 | | 15 | |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| FRENCH 2170 | | 3 FRENCH 3200 | 3 |
| ENGL 3100 | 3 | FRENCH 3000-level course | 3 |
| EXPLORE - Math and Natural Sciences | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 4 |
| 15 | | 16 | |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| FRENCH 3000 - level course | | 3 FRENCH 3000 - level course | 3 |
| FRENCH 3000 - level course | 3 | FRENCH 4000 - level course | 3 |
| FRENCH 4000 - level course | 3 | FRENCH 4000 - level course | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| 15 | | 15 | |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in a Foreign Language

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. degree in the language; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in a Foreign Language with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Modern Language BA, German Emphasis

Beginning Fall 2019, the program is no longer accepting applications.

General Education Requirements

Each language major must satisfy the general education requirements of the university and the general education requirements of the College of Arts and Sciences.

Specific Requirements or Restrictions

Students entering with no high school language units must enroll in Language 1001 or may enroll in Language 2115. Language 2115 (a, b, and c) is the intensive study of a language and will satisfy the foreign language requirement. 2115a, 2115b, and 2115c are co-requisites and must be taken concurrently. To satisfy the foreign language requirement all three sections must be completed with a grade of C- or better.

A grade of D in a Language 1001 course is a passing grade but not an entrance grade for a Language 1002 course. A grade of D in a Language 1002 course is a passing grade but not an entrance grade for a Language 2101 course or its equivalent. A grade of D in a Language 2101 course fulfills the language requirement but is not an entrance grade for a higher-level course.

Demonstration of a high level of proficiency may affect the number of hours required for the major. Native or heritage speakers of a language should consult with the department concerning appropriate placement and advising. Students with previous language coursework should contact the

department for language placement testing and advising. Students may not take for credit an elementary course if they have already completed a higher-level course for which the elementary course, or its equivalent, is a prerequisite.

Degree Requirements

All courses for the major must be passed with a grade of C- or better. No course required for the major may be taken on a satisfactory/unsatisfactory (s/u) basis with the exception of those taken abroad as part of a university program that has received departmental approval.

Bachelor of Arts

All students seeking a B.A. in a Modern Language must successfully complete FGN LANG 2100 Languages and World View and FGN LANG 2294, Foreign Language Careers for the Global Market, and must meet the departmental requirement of a minimum of 33 hours in French or 37-39 hours in Japanese or 35 hours in Spanish or 30-33 hours in the Dual Language Professional Emphasis (excluding Language 1001 and 1002). The maximum number of hours that may be taken in the major is 45 (including Language 1001 and 1002). In addition, students seeking the B.A. in a Modern Language who desire a teaching certificate must also take FGN LANG 4589 (same as SEC ED 4589), Curriculum and Methods of Teaching Foreign Languages, FGN LANG 4590 (same as SEC ED 4590), and fulfill the professional secondary education requirements of the College of Education.

Transfer Students

Transfer students majoring in one of the modern languages must complete at UMSL a minimum of 12 graded hours in language courses at the 3000 level or above with a grade point average of 2.0 or better in those courses.

Native Speakers

Native speakers must complete at least two courses at the 3000 level and four courses at the 4000 level to obtain a major in their native language.

Specific Requirements for the Concentration in German

Each major with a concentration in German must complete the following courses:

| | | |
|--|--|-----------|
| GERMAN 2101 | Intermediate Language and Culture: German III | 3 |
| GERMAN 2170 | Intermediate Practice in Speaking and Writing German | 3 |
| GERMAN 2180 | Intermediate Readings in German | 3 |
| GERMAN 3201 | | 3 |
| GERMAN 3202 | Introduction to German Film | 3 |
| GERMAN 3208 | | 3 |
| Select one course at the 3000-level | | 3 |
| Select three courses at the 4000-level | | 9 |
| Total Hours | | 30 |

Learning Outcomes

Graduates of the BA in Modern Languages from the University of Missouri-St. Louis possess the necessary linguistic and cultural competencies to interact with native speakers in culturally appropriate ways. They are able to use the target language in a variety of academic, social, and professional situations and have a rich understanding of the

target culture(s) fostered through engaging topic-based courses and opportunities such as study abroad, service learning, and internships. Recognizing the interconnection between languages and world views, they can critically explore their own assumptions, value alternative perspectives, and act with cultural sensitivity. They are empowered with the tools to meet the challenges of a globalized world and continue developing their skills as lifelong learners.

Skills and Knowledge Areas

Upon completion of the major, students should be able to:

Linguistic and Critical Thinking Goals:

- In listening and speaking,
 - demonstrate comprehension of the main ideas and supporting details of narrative and descriptive texts on familiar and concrete topics, such as those on radio, television, and podcasts;
 - discuss topics related to work, school, home, leisure activities, culture, and a variety of media;
 - use the target language in real-world situations in culturally-appropriate ways;
 - produce narrations and descriptions on familiar topics in present, past, and future time frames and;
 - summarize research in oral presentations.
- In reading and writing,
 - demonstrate comprehension of the main idea, supporting details, argumentative structure, and perspective in authentic texts of various genres;
 - produce narrations and descriptions in present, past, and future time frames employing connected discourse;
 - summarize, analyze, and synthesize content, and begin to express supported opinions;
 - assess language reference resources and use them effectively and;
 - conduct independent research and present findings.

Cultural and Global Awareness Goals:

- demonstrate an awareness of the linguistic, ethnic, racial, religious, cultural, and social diversity of the target cultures;
- recognize and describe some of the key historical, social, economic, and political forces in the target cultures;
- analyze and critique film, media, literature, art, etc. in their socio-historical contexts;
- compare and contrast their own cultural beliefs, behaviors, and norms with those of other cultures;
- describe how language and culture impact one's world view;
- explain the skills acquired through language study and their benefits to a potential employer.

The linguistic goals are based on the National Standards For Foreign Language Learning and the American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines. In speaking and listening, graduates are expected to reach the Advanced-Low level proficiency, in writing the Advanced-Mid level proficiency, and in reading the Advanced-

High level proficiency. For detailed descriptions of sublevels, see the ACTFL Proficiency Guidelines.

Modern Language BA, Japanese Emphasis

Knowledge of Japanese will empower you to dive deep into Japan's rich cultural heritage, which spans from "The Tale of Genji" to "Attack on Titan" and beyond. Students who choose to study Japanese at UMSL benefit from faculty who are dedicated to creating a challenging but supportive learning environment. You will engage with the language and culture in the classroom, out of the classroom through on-campus events and Japan-America Student Association involvement, and in a variety of study abroad opportunities.

General Education Requirements

Each language major must satisfy the general education requirements of the university and the general education requirements of the College of Arts and Sciences.

Specific Requirements or Restrictions

Students entering with no high school language units must enroll in Language 1001 or may enroll in Language 2115. Language 2115 (a, b, and c) is the intensive study of a language and will satisfy the foreign language requirement. 2115a, 2115b, and 2115c are co-requisites and must be taken concurrently. To satisfy the foreign language requirement all three sections must be completed with a grade of C- or better.

A grade of D in a Language 1001 course is a passing grade but not an entrance grade for a Language 1002 course. A grade of D in a Language 1002 course is a passing grade but not an entrance grade for a Language 2101 course or its equivalent. A grade of D in a Language 2101 course fulfills the language requirement but is not an entrance grade for a higher-level course.

Demonstration of a high level of proficiency may affect the number of hours required for the major. Native or heritage speakers of a language should consult with the department concerning appropriate placement and advising. Students with previous language coursework should contact the department for language placement testing and advising. Students may not take for credit an elementary course if they have already completed a higher-level course for which the elementary course, or its equivalent, is a prerequisite.

Degree Requirements

All courses for the major must be passed with a grade of C- or better. No course required for the major may be taken on a satisfactory/unsatisfactory (s/u) basis with the exception of those taken abroad as part of a university program that has received departmental approval.

Bachelor of Arts

All students seeking a B.A. in a Modern Language must successfully complete FGN LANG 2100 Languages and World View and FGN LANG 2294, Foreign Language Careers for the Global Market, and must meet the departmental requirement of a minimum of 33 hours in French or 37-39 hours in Japanese or 35 hours in Spanish or 30-33 hours in the Dual Language Professional Emphasis (excluding Language 1001 and 1002). The maximum number of hours that may be taken in the major is 45 (including Language 1001 and 1002). In addition, students seeking the B.A. in a Modern Language who desire a teaching certificate

must also take FGN LANG 4589 (same as SEC ED 4589), Curriculum and Methods of Teaching Foreign Languages, FGN LANG 4590 (same as SEC ED 4590), and fulfill the professional secondary education requirements of the College of Education.

Transfer Students

Transfer students majoring in one of the modern languages must complete at UMSL a minimum of 12 graded hours in language courses at the 3000 level or above with a grade point average of 2.0 or better in those courses.

Native Speakers

Native speakers must complete at least two courses at the 3000 level and four courses at the 4000 level to obtain a major in their native language.

Specific Requirements for the Emphasis in Japanese

Each major with an emphasis in Japanese must complete the following courses:

| | | |
|---|--|-----------|
| JAPAN 2101 | Intermediate Japanese I | 5 |
| JAPAN 2102 | Intermediate Japanese II | 5 |
| JAPAN 2170 | Kanji: A Radical Approach | 3 |
| JAPAN 3201 | Intermediate Japanese III | 4 |
| JAPAN 3202 | Intermediate Japanese IV | 4 |
| JAPAN 3280 | Readings in Japanese | 3 |
| JAPAN 4301 | Advanced Japanese I | 3 |
| JAPAN 4302 | Advanced Japanese II | 3 |
| JAPAN 4380 | Advanced Readings in Japanese | 3 |
| Select 6 hours from the following: ¹ | | 6 |
| ANTHRO/HIST 2420 | Maiko, Maids, and Masako: Women in Japanese Cultural History | |
| ANTHRO/HIST 2430 | Ghosts, Goblins, and Godzillas | |
| ANTHRO/HIST 2425 | Food and Drink in Japan: A Cultural History | |
| ANTHRO/HIST 3218 | Visual and Material Culture of Japan | |
| JAPAN 1005 | Practicum in East Asian Calligraphy | |
| JAPAN 1011 | Anime Nation: Popular Culture in Japan | |
| JAPAN 1199 | Special Topics: Language Immersion: Japanese | |
| JAPAN 2111 | The World of Anime - Advanced Topics in Japanese Animation | |
| JAPAN 2150 | Classical Japanese Literature in Translation | |
| JAPAN 2191 | Special Topics in Japanese Culture | |
| JAPAN 3210 | | |
| JAPAN 3211 | Topics in Japanese Culture | |
| Total Hours | | 39 |

¹ Only three hours may be taken at the 1000 level.

Career Outlook

Career options for graduates with a major or minor in modern languages include the following fields: teaching, social work, nursing, engineering, business, communications, government, journalism, travel industry, translation, and research. Our graduates have been especially successful

when they combine advanced study in a modern language with another major. They are then able to add proficiency in a foreign language and culture to their knowledge and skills in another specialty. Experience with world cultures makes our graduates more adaptable and better prepared to meet the challenges of a global and increasingly diverse job market.

Learning Outcomes

Graduates with a BA in Modern Languages (Japanese) from the University of Missouri-St. Louis possess the necessary linguistic and cultural competencies to interact with native speakers in culturally appropriate ways. They are able to use the target language in a variety of academic, social, and professional situations and have a rich understanding of the culture that has been fostered through engaging courses and opportunities such as study abroad, service learning, and internships. Recognizing the interconnection between languages and world views, they can critically explore their own assumptions, value alternative perspectives, and act with cultural sensitivity. They are empowered with the tools to meet the challenges of a globalized world and continue developing their skills as lifelong learners.

Skills and Knowledge Areas

Upon completion of the Japanese major, students should be able to:

Linguistic and Critical Thinking Goals

- In listening/speaking:
 - demonstrate comprehension of the main ideas and supporting details of everyday conversations on familiar and concrete topics, both formal and informal;
 - discuss topics related to work, school, home, leisure activities, culture, and media;
 - narrate short anecdotes using Japanese conversational conventions;
 - summarize research in oral presentations; and,
 - function in real-world situations in culturally-appropriate ways.
- In reading/writing:
 - identify the main idea, supporting details, argumentative structure, and perspective in authentic texts of various genres;
 - apply reading strategies to glean key information from more challenging texts;
 - summarize and analyze content, and begin to express supported opinions;
 - assess language reference resources and use them effectively; and,
 - conduct independent research and present findings.

Cultural and Global Awareness Goals

- recognize and describe some of the key historical, social, economic, and political forces that shape Japanese society;
- analyze and critique products of Japanese culture (film, media, literature, art, etc.) in their socio-historical contexts;
- compare and contrast their own cultural beliefs, behaviors, and norms with those of other cultures;
- describe how language and culture impact one's world view; and,

- explain the skills acquired through language study and their benefits to a potential employer.

The linguistic program goals are based on the National Standards For Foreign Language Learning and the ACTFL Proficiency Guidelines. Graduates are expected to reach the Intermediate-High level proficiency at a minimum. For detailed descriptions of sublevels, see the ACTFL Proficiency Guidelines.

Sample Four Year Plan

| First Year | | | |
|---|-------|---|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 JAPAN 1002 | 5 |
| JAPAN 1001 | 5 | CORE - Communication Proficiency | 3 |
| ENGL 1100 | 3 | CORE - US History and Government | 3 |
| MATH 1020 | 3 | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE - Social Sciences | 3 | | |
| | 15 | | 14 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| JAPAN 2101 | 5 | JAPAN 2102 | 5 |
| FGN LANG 2100 | 3 | JAPAN 2170 | 3 |
| CORE - Information Literacy | 3 | EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | 3 | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| | 14 | | 14 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| JAPAN 3201 | 4 | JAPAN 3202 | 4 |
| JAPAN XXXX: Japanese Studies Elective | 3 | JAPAN 3280 | 3 |
| ENGL 3100 | 3 | JAPAN XXXX: Japanese Studies Elective | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 16 | | 16 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| JAPAN 4301 | 3 | JAPAN 4302 | 3 |
| Elective or minor | 3 | JAPAN 4390 | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 4 |
| | 15 | | 16 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in a Foreign Language

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. degree in the language; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in a Foreign Language with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Modern Language BA, Spanish Emphasis

The BA in Modern Languages with emphasis in Spanish develops learners who are both linguistically and culturally competent and ready to become global citizens. We offer a broad range of coursework in Spanish, from foundational courses in language and culture to courses focused on literature, linguistics, creative writing, and professions, all aimed at developing competencies for the 21st century. Our introductory-level courses are taught in different delivery modes: in person, hybrid, and online. We encourage study abroad through our short-term faculty-led programs in Costa Rica and Barcelona, as well as through year-long programs in partner institutions.

General Education Requirements

Each language major must satisfy the general education requirements of the university and the general education requirements of the College of Arts and Sciences.

Specific Requirements or Restrictions

Students entering with no high school language units must enroll in Language 1001 or may enroll in Language 2115. Language 2115 (a, b, and c) is the intensive study of a language and will satisfy the foreign language requirement. 2115a, 2115b, and 2115c are co-requisites and must be taken concurrently. To satisfy the foreign language requirement all three sections must be completed with a grade of C- or better.

A grade of D in a Language 1001 course is a passing grade but not an entrance grade for a Language 1002 course. A grade of D in a Language 1002 course is a passing grade but not an entrance grade for a Language

2101 course or its equivalent. A grade of D in a Language 2101 course fulfills the language requirement but is not an entrance grade for a higher-level course.

Demonstration of a high level of proficiency may affect the number of hours required for the major. Native or heritage speakers of a language should consult with the department concerning appropriate placement and advising. Students with previous language coursework should contact the department for language placement testing and advising. Students may not take for credit an elementary course if they have already completed a higher-level course for which the elementary course, or its equivalent, is a prerequisite.

Degree Requirements

All courses for the major must be passed with a grade of C- or better. No course required for the major may be taken on a satisfactory/unsatisfactory (s/u) basis with the exception of those taken abroad as part of a university program that has received departmental approval.

Bachelor of Arts

All students seeking a B.A. in a Modern Language must successfully complete FGN LANG 2100 Languages and World View and FGN LANG 2294, Foreign Language Careers for the Global Market, and must meet the departmental requirement of a minimum of 33 hours in French or 37-39 hours in Japanese or 35 hours in Spanish or 30-33 hours in the Dual Language Professional Emphasis (excluding Language 1001 and 1002). The maximum number of hours that may be taken in the major is 45 (including Language 1001 and 1002). In addition, students seeking the B.A. in a Modern Language who desire a teaching certificate must also take FGN LANG 4589 (same as SEC ED 4589), Curriculum and Methods of Teaching Foreign Languages, FGN LANG 4590 (same as SEC ED 4590), and fulfill the professional secondary education requirements of the College of Education.

Transfer Students

Transfer students majoring in one of the modern languages must complete at UMSL a minimum of 12 graded hours in language courses at the 3000 level or above with a grade point average of 2.0 or better in those courses.

Native Speakers

Native speakers must complete at least two courses at the 3000 level and four courses at the 4000 level to obtain a major in their native language.

Specific Requirements for Concentration in Spanish

Each major with a Spanish concentration must complete the following courses:

| | | |
|--------------|--|---|
| SPANISH 2101 | Spanish Language and Culture III (or the equivalent) | 3 |
| SPANISH 2172 | Spanish Composition | 4 |
| SPANISH 2180 | Readings in Spanish | 4 |
| SPANISH 3326 | Introduction to Hispanic Linguistics | 3 |
| SPANISH 3212 | Hispanic Cultures and Civilizations: Spain, Spanish America, and the United States | 3 |
| SPANISH 3282 | Introduction to Hispanic Literature: A Survey Course | 3 |

| | |
|---|-----------|
| Select one additional course at the 3000-level (see course descriptions for more detail) | 3 |
| Select three courses at the 4000-level | 9 |
| Select an additional course at the 2000-level, 3000-level, or 4000-level. The selected course must be consistent with the student's level of study. | 3 |
| Total Hours | 35 |

Career Outlook

Career options for graduates with a major or minor in modern languages include the following fields: teaching, social work, nursing, engineering, business, communications, government, journalism, travel industry, translation, and research. Our graduates have been especially successful when they combine advanced study in a modern language with another major. They are then able to add proficiency in a foreign language and culture to their knowledge and skills in another specialty. Experience with world cultures makes our graduates more adaptable and better prepared to meet the challenges of a global and increasingly diverse job market.

Learning Outcomes

Graduates of the BA in Modern Languages from the University of Missouri-St. Louis possess the necessary linguistic and cultural competencies to interact with native speakers in culturally appropriate ways. They are able to use the target language in a variety of academic, social, and professional situations and have a rich understanding of the target culture(s) fostered through engaging topic-based courses and opportunities such as study abroad, service learning, and internships. Recognizing the interconnection between languages and world views, they can critically explore their own assumptions, value alternative perspectives, and act with cultural sensitivity. They are empowered with the tools to meet the challenges of a globalized world and continue developing their skills as lifelong learners.

Skills and Knowledge Areas

Upon completion of the major, students should be able to:

Linguistic and Critical Thinking Goals:

- In listening and speaking,
 - demonstrate comprehension of the main ideas and supporting details of narrative and descriptive texts on familiar and concrete topics, such as those on radio, television, and podcasts;
 - discuss topics related to work, school, home, leisure activities, culture, and a variety of media;
 - use the target language in real-world situations in culturally-appropriate ways;
 - produce narrations and descriptions on familiar topics in present, past, and future time frames and;
 - summarize research in oral presentations.
- In reading and writing,
 - demonstrate comprehension of the main idea, supporting details, argumentative structure, and perspective in authentic texts of various genres;
 - produce narrations and descriptions in present, past, and future time frames employing connected discourse;

- summarize, analyze, and synthesize content, and begin to express supported opinions;
- assess language reference resources and use them effectively and;
- conduct independent research and present findings.

Cultural and Global Awareness Goals:

- demonstrate an awareness of the linguistic, ethnic, racial, religious, cultural, and social diversity of the target cultures;
- recognize and describe some of the key historical, social, economic, and political forces in the target cultures;
- analyze and critique film, media, literature, art, etc. in their socio-historical contexts;
- compare and contrast their own cultural beliefs, behaviors, and norms with those of other cultures;
- describe how language and culture impact one's world view;
- explain the skills acquired through language study and their benefits to a potential employer.

The linguistic goals are based on the National Standards For Foreign Language Learning and the American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines. In speaking and listening, graduates are expected to reach the Advanced-Low level proficiency, in writing the Advanced-Mid level proficiency, and in reading the Advanced-High level proficiency. For detailed descriptions of sublevels, see the ACTFL Proficiency Guidelines.

Sample Four Year Plan

| First Year | | | | | |
|------------------------------|-------|---|-------|--------------|-------|
| Fall | Hours | Spring | Hours | Summer | Hours |
| INTDSC 1003 ¹ | 1 | SPANISH 1002 | 5 | SPANISH 2101 | 3 |
| SPANISH 1001 | 5 | CORE - Communication Proficiency | 3 | | |
| ENGL 1100 | 3 | CORE - US History and Government | 3 | | |
| MATH 1020 | 3 | EXPLORE - Mathematics and Life/Natural Sciences | 3 | | |
| EXPLORE - Social Sciences | 3 | | | | |
| | 15 | | 14 | | 3 |
| Second Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| SPANISH 2172 | 4 | SPANISH 2180 ² | 4 | | |
| FGN LANG 2100 | 3 | EXPLORE - Mathematics and Life/Natural Sciences | 3 | | |
| CORE - Information Literacy | 3 | EXPLORE - Social Sciences | 3 | | |
| EXPLORE - Social Sciences | 3 | Elective or minor | 3 | | |
| Elective or minor | 3 | Elective or minor | 2 | | |
| | 16 | | 15 | | |
| Third Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| SPANISH 3212 ³ | 3 | SPANISH 3326 ² | 3 | | |
| SPANISH 3XXX: Spanish Course | 3 | SPANISH 3282 ² | 3 | | |

| ENGL 3100 | 3 | SPANISH 4XXX: Spanish Course | 3 |
|---|-------|------------------------------|-------|
| EXPLORE - Mathematics and Life/Natural Sciences | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| SPANISH 3XXX: Spanish Course | 3 | SPANISH 4XXX: Spanish Course | 3 |
| SPANISH 4XXX: Spanish Course | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | | Elective or minor | 3 |
| | 12 | | 15 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

² Course offered in the Spring Only

³ Course offered in Fall only.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in a Foreign Language

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. degree in the language; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in a Foreign Language with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Modern Languages Minor

A minor in Modern Languages requires the completion of 4 courses beyond the introductory sequence (1001, 1002 and 2101), two in each of two different languages. For students who are seeking a B.A. in a Modern Language, the two languages must be different from the language in which they are majoring.

Multicultural and Social Justice Counseling Graduate Certificate

The Graduate Certificate in Multicultural and Social Justice Counseling (MSJC) certificate may be pursued as a stand-alone credential or in conjunction with another mental health program (such as: Master's Degree in Education in counseling, the Master's in Social Work degree, the Ed.D. or the Ph.D. in Education, or the PhD in Clinical Psychology). With advance planning, all 12 credits may be applied to the Master's of Education in Clinical Mental Health Counseling degree. Completion of the MSJC certificate, however, does not guarantee acceptance into any other degree program (separate application required for admission).

Admission Requirements

Requirements for admission to the MSJC certificate program are: current "good standing" (non-probation) in an UMSL graduate mental health practitioner training program (counseling, social work, or psychology) **OR** all of the following criteria must be met:

1. Undergraduate degree with a GPA of 3.0 or better;
2. Enrollment in a graduate mental health practitioner training program OR earned master's degree in mental health field;
3. Two letters of recommendation with at least one from a current or former college-level instructor (or someone with a graduate degree who can attest to the applicant's capacity to complete graduate-level work);
4. Two-page personal statement explaining the applicant's personal and professional goals.

Certificate Requirements

Core

| | | |
|-------------|--|---|
| CNS ED 6030 | Foundations for Multicultural Counseling | 3 |
|-------------|--|---|

Electives 9

Choose three of the following:

| | | |
|-------------|--|--|
| CNS ED 6220 | Counseling Individuals with Disabilities | |
| CNS ED 6600 | Theories and Techniques of Counseling Children and Adolescents | |
| CNS ED 6810 | Integrating Religion and Spirituality in Counseling | |
| CNS ED 6820 | Counseling Women Toward Empowerment | |
| CNS ED 6830 | Counseling African American Clients | |
| CNS ED 6840 | Sexual Orientation and Gender Diversity in Counseling | |
| CNS ED 6850 | Social Class and Poverty Issues in Counseling | |

| | | |
|--|--|-----------|
| CNS ED 6870 | Counseling and Cultural Competence in a Global Society | |
| Any other CNS ED 6800-level courses as offered | | |
| CNS ED 7010 | Advanced Multicultural Counseling | |
| Total Hours | | 12 |

Museums, Heritage, and Public History Graduate Certificate

The Graduate Certificate in Museums, Heritage, and Public History provides interdisciplinary professional and academic training for museum professionals and others who seek to develop their practical skills and knowledge to work in the heritage sector.

Admission Requirements

All those who wish to be considered for the Graduate Certificate in Museums, Heritage, and Public History should designate this certificate program on their application to the graduate school, submit three letters of recommendation and a writing sample, and complete the Museums, Heritage, and Public History supplemental application with their application for graduate work. Applicants who wish to pursue the certificate normally must have a master's degree and a GPA of 3.2 or higher. Prospective students who wish to pursue the certificate in conjunction with another graduate program should follow the normal application procedures for that program in addition to those for this certificate.

Admissions decisions are based on transcripts, the letters of recommendation, the sample of written work, and the supplemental application.

The program will accept applications twice per year, once for the fall semester and once for the spring.

Program Requirements (15 hours)

All candidates for Graduate Certificate in Museums, Heritage, and Public History must complete the following courses:

| | | |
|--|--|-----------|
| HIST 6001 | Introduction to Public History and Cultural Heritage | 3 |
| HIST 6131 | Museum Origins and Evolution | 3 |
| HIST 6133 | Digital Public History | 3 |
| or HIST 6127 | Museums and Communities | |
| Students must also complete an additional 2 elective courses (6 hours) as approved by the Director of Museums, Heritage, and Public History. | | 6 |
| Total Hours | | 15 |

Music BA

Degree Requirements

Admission to all Music degree programs is by audition to demonstrate musical aptitude and potential, technical proficiency, and seriousness in selecting music as a four-year course of study. In addition to the applied music audition, placement examinations in music theory and music history may be required to confirm students' prior experience in these areas.

Auditions can be scheduled at any time for the upcoming semester, and several pre-scheduled audition dates are also available in fall and early spring (contact the Music Department for more details). Students in

Applied Music (private lessons) must pass a junior-standing examination to confirm their level of performance skills for enrollment in AP MUS 3440 – AP MUS 3459 or AP MUS 4440 – AP MUS 4459. This examination is usually taken at the same time as the applied music jury at the end of the fourth semester of enrollment in AP MUS 1440 - AP MUS 1459.

Evidence of sound musicianship, a close acquaintance with an appropriate portion of musical literature, and the ability to bring it to actual performance are required for graduation in all Music degree programs. Students in the B.M., Performance Emphasis fulfill this requirement with junior and senior recitals. Students in all other degree programs fulfill this requirement with a senior recital. In some cases, upon the recommendation of the student's applied teacher, the senior recital (for non-performance majors only) may be replaced by participating in three regularly scheduled student recitals during the last two semesters of applied music study, or by performing for a special panel of faculty members.

General Education Requirements

UMSL's General Education requirements apply to all majors. Courses required for degree programs may not be taken on a satisfactory/unsatisfactory basis. Students must receive at least a C in each music course and maintain a GPA of 2.5 (3.0 for Music Education majors) in all music courses to meet degree requirements.

Non-Music majors are encouraged to take music courses (EN PER and MHLT) at the 1000- or 2000-level toward UMSL's Humanities and Fine Arts general education requirement. Non-Music majors wishing to perform with ensembles (EN PER 1410, University Singers; EN PER 1500, University Orchestra; EN PER 1530, University Wind Ensemble; EN PER 1550, Jazz Orchestra) should contact the ensemble's director for information about auditions. M H L T 1150, Drumming Cultures of the World; M H L T 1160, Musical Journey through Latin America; M H L T 1170, Musical Journey through the Far East; or M H L T 1180, Musical Journey through Africa will meet the University's Cultural Diversity study requirement.

Other Requirements

Music majors are required to enroll in an approved ensemble [University Wind Ensemble, University Singers, University Orchestra, or Jazz Orchestra (for Jazz Studies majors)] each semester and to study one applied area progressively each semester of the degree program. Music Education majors are exempt from these requirements during the student teaching semester. For all music majors, the applied lesson requirement consists of a weekly, individual lesson with your instructor, as well as a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. The following specific ensemble enrollments, depending upon the applied music area, are required:

- Wind and Percussion students—University Wind Ensemble;
- String students--University Orchestra;
- Voice students--University Singers;
- Keyboard and Guitar students--any approved ensemble, but those in the B.M. Music Education emphasis program must successfully audition for and enroll in an ensemble compatible with the teaching certification they are pursuing;
- Instrumental students may be required to participate in additional ensembles to enhance their musical development;
- Jazz Studies majors (any instrument)--Jazz Orchestra.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. All music majors whose primary applied area is not piano or organ are required to pass an exam in piano proficiency before graduation. Music Education majors must pass this piano proficiency exam prior to student teaching.

The Music Department may require students to pass a placement test to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

Core Curriculum

The following core courses are required for all Music majors:

| Music Theory | | |
|--------------------------------------|--|-----------|
| THRY COM 1300 | Introduction to Music Theory | 1 |
| THRY COM 1301 | Theory of Music I | 3 |
| THRY COM 1302 | Aural Training I | 2 |
| THRY COM 1311 | Theory of Music II | 3 |
| THRY COM 1312 | Aural Training II | 2 |
| THRY COM 2301 | Theory of Music III | 3 |
| THRY COM 2302 | Aural Training III | 2 |
| THRY COM 2311 | Theory of Music IV | 3 |
| THRY COM 2312 | Aural Training IV | 2 |
| Piano Proficiency | | |
| PRACTM 1140 | Piano Proficiency I | 1 |
| PRACTM 1150 | Piano Proficiency II | 1 |
| PRACTM 2160 | Piano Proficiency III | 1 |
| PRACTM 2180 | Piano Proficiency IV | 1 |
| Conducting | | |
| PRACTM 2510 | Conducting I | 2 |
| Music History and Literature | | |
| M H L T 2010 | History of Western Music I (MOTR MUSC 103) | 3 |
| M H L T 2020 | History of Western Music II (MOTR MUSC 104) | 3 |
| Choose one of the following courses: | | 3 |
| M H L T 1150 | Drumming Cultures of the World (MOTR MUSC 102) | |
| M H L T 1160 | Musical Journey through Latin America | |
| M H L T 1170 | Musical Journey through the Far East | |
| M H L T 1180 | Musical Journey Through Africa | |
| Recital | | |
| AP MUS 3510 | Senior Recital | 0 |
| Total Hours | | 36 |

Specific Requirements for the Bachelor of Arts Degree

| | | |
|-------------|---|-----|
| PRACTM 1250 | Singer's Diction: English, Italian And German (voice majors only) | 1 |
| PRACTM 1260 | Singer's Diction: Latin, French, And Spanish (voice majors only) | 1 |
| PRACTM 3920 | Senior Research | 2-4 |

| Applied Music (AP MUS) | | |
|---|------------------------------|-------|
| One hour every semester in progress toward degree with a minimum of 8 credit hours | 8 | |
| Ensemble (EN PER) | | |
| Must be enrolled every semester in progress toward degree with a minimum of 4 credit hours | 4 | |
| Foreign Language | | |
| Candidates for the B.A. degree in Music are required to complete 13 credit hours or the equivalent in proficiency in one foreign language. ¹ | 13 | |
| Music History and Literature | | |
| M H L T 2030 | Special Topics in Musicology | 3 |
| Total Hours | | 32-34 |

¹ Please see the College of Arts and Sciences Baccalaureate Degree Requirements for additional information about the foreign language requirement.

Learning Outcomes

Upon completion of the program, graduates will:

- Have the technical skills requisite for artistic self-expression (Performance)
- Understand the common elements and organizational patters of music and their interaction (Musicianship Skills and Analysis)
- Have a Rudimentary capacity to create original or derivative music (Composition/Improvisation)
- Have a basic knowledge of music history and repertories through the present time (History and Repertory)
- Have the ability to work on musical problems by combining their capabilities in performance, aural, verbal and visual analysis; composition/improvisation; history and repertory (Synthesis)

Sample Four Year Plan

| First Year | | | |
|--------------------------------------|-------|----------------------------------|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 THRY COM 1311 | 3 |
| PRACTM 1140 | | 1 THRY COM 1312 | 2 |
| THRY COM 1300 | | 1 PRACTM 1150 | 1 |
| THRY COM 1301 | | 3 AP MUS 14XX | 1 |
| THRY COM 1302 | | 2 EN PER XXXX | 1 |
| AP MUS 14XX | | 1 FGN LANG 1002 | 5 |
| EN PER XXXX | | 1 ENGL 1100 | 3 |
| FGN LANG 1001 | | 5 | |
| CORE - Mathematics Proficiency | | 3 | |
| | | 18 | 16 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| THRY COM 2301 | | 3 THRY COM 2312 | 2 |
| THRY COM 2302 | | 2 THRY COM 2311 | 3 |
| M H L T 2010 | | 3 M H L T 2020 | 3 |
| PRACTM 2160 | | 1 PRACTM 2180 | 1 |
| AP MUS 14XX | | 1 PRACTM 2510 | 2 |
| EN PER XXXX | | 1 AP MUS 14XX | 1 |
| FGN LANG 2101 | | 3 EN PER XXXX | 1 |
| PRACTM 1250 or 1260 (voice students) | | 1 EXPLORE - Social Sciences | 3 |
| | | Elective (Instrumental Students) | 1 |

| Elective or minor | | | 1 |
|-------------------------------------|-------|---|-------|
| 15 | | | 18 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| PRACTM 1250 & PRACTM 1260 | | 1 M H L T 1150, 1160, 1170, or 1180 | 3 |
| AP MUS 34XX | | 1 AP MUS 34XX | 1 |
| EN PER XXXX | | 1 EN PER XXXX | 1 |
| CORE - US History and Government | | 3 ENGL 3100 | 3 |
| CORE - Communication Proficiency | | 3 CORE – Information Literacy | 3 |
| EXPLORE - Social Sciences | | 3 EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| 12 | | | 14 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| PRACTM 3920 | | 3 AP MUS 34XX | 1 |
| M H L T 42XX+ Music Theory Elective | | AP MUS 3510 | 0 |
| AP MUS 34XX | | 3 EN PER XXXX | 1 |
| EN PER XXXX | | 3 EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE - Math and Sciences | | 3 EXPLORE – Social Sciences | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | Elective or minor | 4 |
| 15 | | | 15 |
| Total Hours: 123 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Music BM, Elective Studies in Business Emphasis

Degree Requirements

Admission to all Music degree programs is by audition to demonstrate musical aptitude and potential, technical proficiency, and seriousness in selecting music as a four-year course of study. In addition to the applied music audition, placement examinations in music theory and music history may be required to confirm students' prior experience in these areas. Auditions can be scheduled at any time for the upcoming semester, and several pre-scheduled audition dates are also available in fall and early spring (contact the Music Department for more details). Students in Applied Music (private lessons) must pass a junior-standing examination to confirm their level of performance skills for enrollment in AP MUS 3440 – AP MUS 3459 or AP MUS 4440 – AP MUS 4459. This examination is usually taken at the same time as the applied music jury at the end of the fourth semester of enrollment in AP MUS 1440 - AP MUS 1459.

Evidence of sound musicianship, a close acquaintance with an appropriate portion of musical literature, and the ability to bring it to actual performance are required for graduation in all Music degree programs. Students in the B.M., Performance Emphasis fulfill this requirement with junior and senior recitals. Students in all other degree programs fulfill this requirement with a senior recital. In some cases, upon the recommendation of the student's

applied teacher, the senior recital (for non-performance majors only) may be replaced by participating in three regularly scheduled student recitals during the last two semesters of applied music study, or by performing for a special panel of faculty members.

General Education Requirements

UMSL's General Education requirements apply to all majors. Courses required for degree programs may not be taken on a satisfactory/unsatisfactory basis. Students must receive at least a C in each music course and maintain a GPA of 2.5 (3.0 for Music Education majors) in all music courses to meet degree requirements.

Non-Music majors are encouraged to take music courses (EN PER and MHLT) at the 1000- or 2000-level toward UMSL's Humanities and Fine Arts general education requirement. Non-Music majors wishing to perform with ensembles (EN PER 1410, University Singers; EN PER 1500, University Orchestra; EN PER 1530, University Wind Ensemble; EN PER 1550, Jazz Orchestra) should contact the ensemble's director for information about auditions. M H L T 1150, Drumming Cultures of the World; M H L T 1160, Musical Journey through Latin America; M H L T 1170, Musical Journey through the Far East; or M H L T 1180, Musical Journey through Africa will meet the University's Cultural Diversity study requirement.

Other Requirements

Music majors are required to enroll in an approved ensemble [University Wind Ensemble, University Singers, University Orchestra, or Jazz Orchestra (for Jazz Studies majors)] each semester and to study one applied area progressively each semester of the degree program. Music Education majors are exempt from these requirements during the student teaching semester. For all music majors, the applied lesson requirement consists of a weekly, individual lesson with your instructor, as well as a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. The following specific ensemble enrollments, depending upon the applied music area, are required:

- Wind and Percussion students—University Wind Ensemble;
- String students--University Orchestra;
- Voice students--University Singers;
- Keyboard and Guitar students--any approved ensemble, but those in the B.M. Music Education emphasis program must successfully audition for and enroll in an ensemble compatible with the teaching certification they are pursuing;
- Instrumental students may be required to participate in additional ensembles to enhance their musical development;
- Jazz Studies majors (any instrument)--Jazz Orchestra.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. All music majors whose primary applied area is not piano or organ are required to pass an exam in piano proficiency before graduation. Music Education majors must pass this piano proficiency exam prior to student teaching.

The Music Department may require students to pass a placement test to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

Core Curriculum

The following core courses are required for all Music majors:

Music Theory

| | | |
|---------------|------------------------------|---|
| THRY COM 1300 | Introduction to Music Theory | 1 |
| THRY COM 1301 | Theory of Music I | 3 |
| THRY COM 1302 | Aural Training I | 2 |
| THRY COM 1311 | Theory of Music II | 3 |
| THRY COM 1312 | Aural Training II | 2 |
| THRY COM 2301 | Theory of Music III | 3 |
| THRY COM 2302 | Aural Training III | 2 |
| THRY COM 2311 | Theory of Music IV | 3 |
| THRY COM 2312 | Aural Training IV | 2 |

Piano Proficiency

| | | |
|-------------|-----------------------|---|
| PRACTM 1140 | Piano Proficiency I | 1 |
| PRACTM 1150 | Piano Proficiency II | 1 |
| PRACTM 2160 | Piano Proficiency III | 1 |
| PRACTM 2180 | Piano Proficiency IV | 1 |

Conducting

| | | |
|-------------|--------------|---|
| PRACTM 2510 | Conducting I | 2 |
|-------------|--------------|---|

Music History and Literature

| | | |
|--------------|---|---|
| M H L T 2010 | History of Western Music I (MOTR MUSC 103) | 3 |
| M H L T 2020 | History of Western Music II (MOTR MUSC 104) | 3 |

Choose one of the following courses: 3

| | | |
|--------------|--|--|
| M H L T 1150 | Drumming Cultures of the World (MOTR MUSC 102) | |
| M H L T 1160 | Musical Journey through Latin America | |
| M H L T 1170 | Musical Journey through the Far East | |
| M H L T 1180 | Musical Journey Through Africa | |

Recital

| | | |
|-------------|----------------|---|
| AP MUS 3510 | Senior Recital | 0 |
|-------------|----------------|---|

Total Hours 36

Emphasis Area Requirements

Additional General Education Requirements ¹

| | | |
|-------------|--|---|
| PSYCH 1003 | General Psychology (MOTR PSYC 100) | 3 |
| or SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |

Applied Area

1 hour every semester in progress toward degree with a minimum of 8 credit hours. 8

Music History and Literature 3

Select two courses from MHLT 4000–4459 6

Ensemble

Must be enrolled every semester in progress toward degree with a minimum of 4 credit hours 4

Internship

| | | |
|-------------|------------|-----|
| PRACTM 4920 | Internship | 1-3 |
|-------------|------------|-----|

English

Select one of the following: 3

| | | |
|-----------|----------------------|--|
| ENGL 3100 | Junior-Level Writing | |
| ENGL 3120 | Business Writing | |
| ENGL 3130 | Technical Writing | |

Business Administration

| | | |
|-------------|--------------------------------------|---|
| ACCTNG 2400 | Fundamentals of Financial Accounting | 3 |
| ACCTNG 2410 | Managerial Accounting | 3 |
| ENT 2030 | | |

| | | |
|-----------|--|---|
| MGMT 3600 | Management and Organizational Behavior | 3 |
|-----------|--|---|

| | | |
|-----------|-------------------------|---|
| MKTG 3700 | Principles of Marketing | 3 |
|-----------|-------------------------|---|

Select two of the following: 6

| | | |
|--------------|---|--|
| BUS AD 2900 | Legal Environment of Business | |
| FINANCE 3500 | Financial Management | |
| INFSYS 1800 | Computers and Information Systems | |
| MGMT 3611 | Advanced Management and Organizational Behavior | |
| MGMT 3621 | Human Resource Management | |
| MGMT 3622 | Industrial and Labor Relations | |
| MKTG 3710 | Consumer Behavior | |

Total Hours 49-51¹ Prerequisites to the required business administration courses.**Learning Outcomes**

Upon completion of the program, graduates will:

Have technical skills requisite for artistic self-expression (Performance)

Understand the common elements and organizational patterns of music and their interaction (Musicianship Skills and Analysis)

Have a rudimentary capacity to create original or derivative music (Composition/Improvisation)

Have basic knowledge of music history and repertoires through the present time (History and Repertory)

Be Able to work on musical problems by combining their capabilities in performance, aural, verbal and visual analysis; composition/improvisation; history and repertory (Synthesis)

Be Able to develop necessary professional abilities and dispositions in order to function in a field-based business internship (e.g. marketing, management, public relations, etc.)

Sample Four Year Plan**First Year**

| Fall | Hours | Spring | Hours |
|---------------|-------|--------------------------|-------|
| INTDSC 1003 | | 1 THRY COM 1311 | 3 |
| THRY COM 1300 | | 1 THRY COM 1312 | 2 |
| THRY COM 1301 | | 3 PRACTM 1150 | 1 |
| THRY COM 1302 | | 2 ECON 1001 | 3 |
| PRACTM 1140 | | 1 PSYCH 1003 or SOC 1010 | 3 |
| ENGL 1100 | | 3 AP MUS 14XX | 1 |
| MATH 1030 | | 3 EN PER XXXX | 1 |
| EN PER XXXX | | 1 | |
| AP MUS 14XX | | 1 | |
| | 16 | | 14 |

Second Year

| Fall | Hours | Spring | Hours |
|---|-------|-----------------|-------|
| THRY COM 2301 | | 3 THRY COM 2311 | 3 |
| THRY COM 2302 | | 2 THRY COM 2312 | 2 |
| M H L T 2010 | | 3 M H L T 2020 | 3 |
| PRACTM 2160 | | 1 PRACTM 2180 | 1 |
| ACCTNG 2400 | | 3 PRACTM 2510 | 2 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 ACCTNG 2410 | 3 |
| EN PER XXXX | | 1 EN PER XXXX | 1 |
| AP MUS 14XX | | 1 AP MUS 14XX | 1 |
| | 17 | | 16 |

Third Year

| Fall | Hours | Spring | Hours |
|---|-------|---|-------|
| MKTG 3700 | | 3 M H L T 1150, 1150, 1160, 1170, or 1180 | 3 |
| MGMT 3600 | | 3 HIST 1001 or 1002 | 3 |
| CORE - Communication Proficiency | | 3 ENGL 3100, 3120, or 3130 | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 General Education or Elective | 4 |
| EN PER XXXX | | 1 EN PER XXXX | 1 |
| AP MUS 34XX | | 1 AP MUS 34XX | 1 |
| | 14 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---|-------|--|-------|
| M H L T 42XX Music History Elective | | 3 M H L T 42XX: Music History Elective | 3 |
| INFSYS 1800 | | 3 PRACTM 4920 | 3 |
| ENT 2130 | | 3 Business Elective | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 General Education or Elective | 3 |
| EN PER XXXX | | 1 EN PER XXXX | 1 |
| AP MUS 34XX | | 1 AP MUS 34XX | 1 |
| | 14 | | 14 |

Total Hours: 120¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Music BM, Jazz Studies Emphasis**Degree Requirements**

Admission to all Music degree programs is by audition to demonstrate musical aptitude and potential, technical proficiency, and seriousness in selecting music as a four-year course of study. In addition to the applied music audition, placement examinations in music theory and music history may be required to confirm students' prior experience in these areas. Auditions can be scheduled at any time for the upcoming semester, and several pre-scheduled audition dates are also available in fall and early spring (contact the Music Department for more details). Students in Applied Music (private lessons) must pass a junior-standing examination to confirm their level of performance skills for enrollment in AP MUS 3440 – AP MUS 3459 or AP MUS 4440 – AP MUS 4459. This examination is

usually taken at the same time as the applied music jury at the end of the fourth semester of enrollment in AP MUS 1440 - AP MUS 1459.

Evidence of sound musicianship, a close acquaintance with an appropriate portion of musical literature, and the ability to bring it to actual performance are required for graduation in all Music degree programs. Students in the B.M., Performance Emphasis fulfill this requirement with junior and senior recitals. Students in all other degree programs fulfill this requirement with a senior recital. In some cases, upon the recommendation of the student's applied teacher, the senior recital (for non-performance majors only) may be replaced by participating in three regularly scheduled student recitals during the last two semesters of applied music study, or by performing for a special panel of faculty members.

General Education Requirements

UMSL's General Education requirements apply to all majors. Courses required for degree programs may not be taken on a satisfactory/unsatisfactory basis. Students must receive at least a C in each music course and maintain a GPA of 2.5 (3.0 for Music Education majors) in all music courses to meet degree requirements.

Non-Music majors are encouraged to take music courses (EN PER and MHLT) at the 1000- or 2000-level toward UMSL's Humanities and Fine Arts general education requirement. Non-Music majors wishing to perform with ensembles (EN PER 1410, University Singers; EN PER 1500, University Orchestra; EN PER 1530, University Wind Ensemble; EN PER 1550, Jazz Orchestra) should contact the ensemble's director for information about auditions. M H L T 1150, Drumming Cultures of the World; M H L T 1160, Musical Journey through Latin America; M H L T 1170, Musical Journey through the Far East; or M H L T 1180, Musical Journey through Africa will meet the University's Cultural Diversity study requirement.

Other Requirements

Music majors are required to enroll in an approved ensemble [University Wind Ensemble, University Singers, University Orchestra, or Jazz Orchestra (for Jazz Studies majors)] each semester and to study one applied area progressively each semester of the degree program. Music Education majors are exempt from these requirements during the student teaching semester. For all music majors, the applied lesson requirement consists of a weekly, individual lesson with your instructor, as well as a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. The following specific ensemble enrollments, depending upon the applied music area, are required:

- Wind and Percussion students—University Wind Ensemble;
- String students--University Orchestra;
- Voice students--University Singers;
- Keyboard and Guitar students--any approved ensemble, but those in the B.M. Music Education emphasis program must successfully audition for and enroll in an ensemble compatible with the teaching certification they are pursuing;
- Instrumental students may be required to participate in additional ensembles to enhance their musical development;
- Jazz Studies majors (any instrument)--Jazz Orchestra.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. All music majors whose primary applied area is not piano or organ are

required to pass an exam in piano proficiency before graduation. Music Education majors must pass this piano proficiency exam prior to student teaching.

The Music Department may require students to pass a placement test to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

Core Curriculum

The following core courses are required for all Music majors:

| | | |
|--|--|-----------|
| Music Theory | | |
| THRY COM 1300 | Introduction to Music Theory | 1 |
| THRY COM 1301 | Theory of Music I | 3 |
| THRY COM 1302 | Aural Training I | 2 |
| THRY COM 1311 | Theory of Music II | 3 |
| THRY COM 1312 | Aural Training II | 2 |
| THRY COM 2301 | Theory of Music III | 3 |
| THRY COM 2302 | Aural Training III | 2 |
| THRY COM 2311 | Theory of Music IV | 3 |
| THRY COM 2312 | Aural Training IV | 2 |
| Piano Proficiency | | |
| PRACTM 1140 | Piano Proficiency I | 1 |
| PRACTM 1150 | Piano Proficiency II | 1 |
| PRACTM 2160 | Piano Proficiency III | 1 |
| PRACTM 2180 | Piano Proficiency IV | 1 |
| Conducting | | |
| PRACTM 2510 | Conducting I | 2 |
| Music History and Literature | | |
| M H L T 2010 | History of Western Music I (MOTR MUSC 103) | 3 |
| M H L T 2020 | History of Western Music II (MOTR MUSC 104) | 3 |
| Choose one of the following courses: | | 3 |
| M H L T 1150 | Drumming Cultures of the World (MOTR MUSC 102) | |
| M H L T 1160 | Musical Journey through Latin America | |
| M H L T 1170 | Musical Journey through the Far East | |
| M H L T 1180 | Musical Journey Through Africa | |
| Recital | | |
| AP MUS 3510 | Senior Recital | 0 |
| Total Hours | | 36 |
| Specific Requirements for the Emphasis Area | | |
| ENT 2130 | Business in the Arts | 3 |
| M H L T 1200 | History of Jazz Music | 3 |
| PDGOGY 2220 | Jazz Pedagogy | 3 |
| THRY COM 2313 | Jazz Theory ¹ | 3 |
| THRY COM 2314 | Jazz Aural Training ² | 1 |
| THRY COM 3411 | Jazz Arranging | 3 |
| PRACTM 2170 | Jazz Keyboard Harmony I ³ | 1 |
| PRACTM 2171 | Jazz Keyboard Harmony II ⁴ | 1 |
| Applied Music (AP MUS) | | |

| | |
|---|-----------|
| 1 hour every semester in progress toward degree with a minimum of 8 credit hours | 8 |
| Ensemble | |
| EN PER 1550 Jazz Orchestra (Must be enrolled every semester in progress toward degree with a minimum of 4 credit hours) | 4 |
| EN PER 1530 University Wind Ensemble (2 semesters) | 2 |
| Jazz Combo/Improvisation | |
| EN PER 1542 Jazz Combo (8 semesters) | 8 |
| PRACTM 1200 Jazz Improvisation (4 semesters) | 4 |
| PRACTM 2200 Advanced Jazz Improvisation (4 semesters) | 4 |
| Total Hours | 48 |

- ¹ Taken instead of THRY COM 2311 to meet the general requirements for the degree.
- ² Taken instead of THRY COM 2312 to meet the general requirements for the degree.
- ³ Taken instead of PRACTM 2160 to meet the general requirements for the degree.
- ⁴ Taken instead of PRACTM 2180 to meet the general requirements for the degree.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Have technical skills requisite for artistic self-expression (Performance)
- Understand the common elements and organizational patters of music and their interaction (Musicianship Skills and Analysis)
- Have a rudimentary capacity to create original or derivative music (Composition/Improvisation)
- Have basic knowledge of music history and repertoires through the present time (History and Repertory)
- Be Able to work on musical problems by combining their capabilities in performance, aural, verbal and visual analysis; composition/improvisation; history and repertory (Synthesis)

Four Year Plan

| | | | |
|--------------------------------|--------------|---------------------------|--------------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | 1 | THRY COM 1311 | 3 |
| THRY COM 1300 | 1 | THRY COM 1312 | 2 |
| THRY COM 1301 | 3 | PRACTM 1150 | 1 |
| THRY COM 1302 | 2 | AP MUS 14XX | 1 |
| PRACTM 1140 | 1 | EN PER 1542 | 1 |
| AP MUS 14XX | 1 | EN PER 1550 | 1 |
| EN PER 1542 | 1 | PRACTM 1200 | 1 |
| EN PER 1550 | 1 | ENGL 1100 | 3 |
| PRACTM 1200 | 1 | EXPLORE - Social Sciences | 3 |
| CORE - Mathematics Proficiency | 3 | | |
| | 15 | | 16 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| THRY COM 2301 | 3 | THRY COM 2313 | 3 |
| THRY COM 2302 | 2 | THRY COM 2314 | 1 |

| | | | |
|---|--------------|---|--------------|
| EN PER 1530 | 1 | EN PER 1530 | 1 |
| M H L T 2010 | 3 | M H L T 2020 | 3 |
| PRACTM 2170 | 1 | PRACTM 2171 | 1 |
| AP MUS 14XX | 1 | PRACTM 2510 | 2 |
| EN PER 1542 | 1 | AP MUS 14XX | 1 |
| EN PER 1550 | 1 | EN PER 1542 | 1 |
| PRACTM 1200 | 1 | EN PER 1550 | 1 |
| HIST 1001 or 1002 | 3 | PRACTM 1200 | 1 |
| | 17 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ENT 2130 | 3 | PDGOGY 2220 | 3 |
| AP MUS 34XX | 1 | THRY COM 3411 | 3 |
| EN PER 1542 | 1 | AP MUS 34XX | 1 |
| CORE - Communication Proficiency | 3 | EN PER 1550 | 1 |
| EN PER 1550 | 1 | PRACTM 2200 | 1 |
| PRACTM 2200 | 1 | EN PER 1542 | 1 |
| EXPLORE - Mathematics and Life/ Natural Sciences | 3 | ENGL 3100 | 3 |
| | | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| | 13 | | 16 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| M H L T 1200 | 3 | M H L T 1150, 1160, 1170, or 1180 | 3 |
| CORE - Information Literacy | 3 | AP MUS 34XX | 1 |
| EXPLORE - Social Sciences | 3 | EN PER 1542 | 1 |
| AP MUS 34XX | 1 | AP MUS 3510 | 0 |
| PRACTM 2200 | 1 | EN PER 1550 | 1 |
| EN PER 1550 | 1 | PRACTM 2200 | 1 |
| EN PER 1542 | 1 | PRACTM 3920 | 2 |
| | | EXPLORE - Social Sciences | 3 |
| | | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| | 13 | | 15 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical full-time student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Music BM, Music Composition Emphasis Degree Requirements

Admission to all Music degree programs is by audition to demonstrate musical aptitude and potential, technical proficiency, and seriousness in selecting music as a four-year course of study. In addition to the applied music audition, placement examinations in music theory and music history may be required to confirm students' prior experience in these areas. Auditions can be scheduled at any time for the upcoming semester, and several pre-scheduled audition dates are also available in fall and early spring (contact the Music Department for more details). Students in Applied Music (private lessons) must pass a junior-standing examination

to confirm their level of performance skills for enrollment in AP MUS 3440 – AP MUS 3459 or AP MUS 4440 – AP MUS 4459. This examination is usually taken at the same time as the applied music jury at the end of the fourth semester of enrollment in AP MUS 1440 - AP MUS 1459.

Evidence of sound musicianship, a close acquaintance with an appropriate portion of musical literature, and the ability to bring it to actual performance are required for graduation in all Music degree programs. Students in the B.M., Performance Emphasis fulfill this requirement with junior and senior recitals. Students in all other degree programs fulfill this requirement with a senior recital. In some cases, upon the recommendation of the student's applied teacher, the senior recital (for non-performance majors only) may be replaced by participating in three regularly scheduled student recitals during the last two semesters of applied music study, or by performing for a special panel of faculty members.

General Education Requirements

UMSL's General Education requirements apply to all majors. Courses required for degree programs may not be taken on a satisfactory/unsatisfactory basis. Students must receive at least a C in each music course and maintain a GPA of 2.5 (3.0 for Music Education majors) in all music courses to meet degree requirements.

Non-Music majors are encouraged to take music courses (EN PER and MHLT) at the 1000- or 2000-level toward UMSL's Humanities and Fine Arts general education requirement. Non-Music majors wishing to perform with ensembles (EN PER 1410, University Singers; EN PER 1500, University Orchestra; EN PER 1530, University Wind Ensemble; EN PER 1550, Jazz Orchestra) should contact the ensemble's director for information about auditions. M H L T 1150, Drumming Cultures of the World; M H L T 1160, Musical Journey through Latin America; M H L T 1170, Musical Journey through the Far East; or M H L T 1180, Musical Journey through Africa will meet the University's Cultural Diversity study requirement.

Other Requirements

Music majors are required to enroll in an approved ensemble [University Wind Ensemble, University Singers, University Orchestra, or Jazz Orchestra (for Jazz Studies majors)] each semester and to study one applied area progressively each semester of the degree program. Music Education majors are exempt from these requirements during the student teaching semester. For all music majors, the applied lesson requirement consists of a weekly, individual lesson with your instructor, as well as a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. The following specific ensemble enrollments, depending upon the applied music area, are required:

- Wind and Percussion students—University Wind Ensemble;
- String students--University Orchestra;
- Voice students--University Singers;
- Keyboard and Guitar students--any approved ensemble, but those in the B.M. Music Education emphasis program must successfully audition for and enroll in an ensemble compatible with the teaching certification they are pursuing;
- Instrumental students may be required to participate in additional ensembles to enhance their musical development;
- Jazz Studies majors (any instrument)--Jazz Orchestra.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. All music majors whose primary applied area is not piano or organ are required to pass an exam in piano proficiency before graduation. Music Education majors must pass this piano proficiency exam prior to student teaching.

The Music Department may require students to pass a placement test to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

Core Curriculum

The following core courses are required for all Music majors:

| Music Theory | | |
|--------------------------------------|--|-----------|
| THRY COM 1300 | Introduction to Music Theory | 1 |
| THRY COM 1301 | Theory of Music I | 3 |
| THRY COM 1302 | Aural Training I | 2 |
| THRY COM 1311 | Theory of Music II | 3 |
| THRY COM 1312 | Aural Training II | 2 |
| THRY COM 2301 | Theory of Music III | 3 |
| THRY COM 2302 | Aural Training III | 2 |
| THRY COM 2311 | Theory of Music IV | 3 |
| THRY COM 2312 | Aural Training IV | 2 |
| Piano Proficiency | | |
| PRACTM 1140 | Piano Proficiency I | 1 |
| PRACTM 1150 | Piano Proficiency II | 1 |
| PRACTM 2160 | Piano Proficiency III | 1 |
| PRACTM 2180 | Piano Proficiency IV | 1 |
| Conducting | | |
| PRACTM 2510 | Conducting I | 2 |
| Music History and Literature | | |
| M H L T 2010 | History of Western Music I (MOTR MUSC 103) | 3 |
| M H L T 2020 | History of Western Music II (MOTR MUSC 104) | 3 |
| Choose one of the following courses: | | 3 |
| M H L T 1150 | Drumming Cultures of the World (MOTR MUSC 102) | |
| M H L T 1160 | Musical Journey through Latin America | |
| M H L T 1170 | Musical Journey through the Far East | |
| M H L T 1180 | Musical Journey Through Africa | |
| Recital | | |
| AP MUS 3510 | Senior Recital | 0 |
| Total Hours | | 36 |

Emphasis Area Requirements

| Theory and Composition | | |
|------------------------|--|---|
| THRY COM 3110 | Analysis of Music from 1900 to Present | 2 |
| THRY COM 3120 | Tonal Counterpoint | 2 |
| THRY COM 3310 | Studio Composition (six semesters) | 6 |
| THRY COM 3410 | Orchestration | 3 |

| | | |
|--|--|--------------|
| THRY COM 3420 | Choral Arranging | 2 |
| THRY COM 3130 | Advanced Analytical Techniques | 2 |
| or THRY COM 3140 | Readings in Music Theory | |
| Music History and Literature | | |
| M H L T 2030 | Special Topics in Musicology (taken twice) | 6 |
| Practicum | | |
| PRACTM 3521 | Conducting II - Instrumental | 2 |
| or PRACTM 3522 | Conducting II - Choral | |
| PRACTM 4100 | Senior Project in Theory/Composition | 2-4 |
| Applied Music (AP MUS) | | |
| 1 hour every semester in progress toward degree with a minimum of 8 credit hours | | 8 |
| Ensemble (EN PER) | | |
| Must be enrolled every semester in progress toward degree with a minimum of 4 credit hours | | 4 |
| Total Hours | | 39-41 |

Learning Outcomes

Upon completion of the program, graduates will:

- Have technical skills requisite for artistic self-expression (Performance)
- Understand the common elements and organizational patters of music and their interaction (Musicianship Skills and Analysis)
- Have a rudimentary capacity to create original or derivative music (Composition/Improvisation)
- Have basic knowledge of music history and repertoires through the present time (History and Repertory)
- Be Able to work on musical problems by combining their capabilities in performance, aural, verbal and visual analysis; composition/improvisation; history and repertory (Synthesis)

| | | | |
|---|--------------|-------------------------------|--------------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 THRY COM 1311 | 3 |
| THRY COM 1300 | | 1 THRY COM 1312 | 2 |
| THRY COM 1301 | | 3 PRACTM 1150 | 1 |
| THRY COM 1302 | | 2 AP MUS 14XX | 1 |
| PRACTM 1140 | | 1 EN PER XXXX | 1 |
| AP MUS 14XX | | 1 ENGL 1100 | 3 |
| EX PER XXXX | | 1 EXPLORE - Social Sciences | 3 |
| CORE - US History and Government | 3 | | |
| CORE - Mathematics Proficiency | 3 | | |
| | 16 | | 14 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| THRY COM 2301 | | 3 THRY COM 2311 | 3 |
| THRY COM 2302 | | 2 THRY COM 2312 | 2 |
| THRY COM 3310 | | 1 THRY COM 3300 | 1 |
| M H L T 2010 | | 3 M H L T 2020 | 3 |
| PRACTM 2160 | | 1 PRACTM 2180 | 1 |
| AP MUS 14XX | | 1 AP MUS 14XX | 1 |
| EN PER XXXX | | 1 EN PER XXXX | 1 |
| CORE - Communication Proficiency | 3 | 3 PRACTM 2510 | 2 |
| EXPLORE - Mathematics and Life/Natural Sciences | | 3 CORE - Information Literacy | 3 |
| | 18 | | 17 |

| | | | |
|---|--------------|-------------------------------------|--------------|
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| THRY COM 3310 | | 1 M H L T 1150, 1160, 1170, or 1180 | 3 |
| THRY COM 3410 | | 3 THRY COM 3110 | 2 |
| M H L T 2030 | | 3 THRY COM 3310 | 1 |
| AP MUS 34XX | | 1 PRACTM 3280 | 1 |
| EN PER XXXX | | 1 AP MUS 34XX | 1 |
| PRACTM 3521 | | 2 EN PER XXXX | 1 |
| ENGL 3100 | | 3 EXPLORE - Social Sciences | 3 |
| | | EXPLORE - Math and Sciences | 3 |
| | 14 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| M H L T 2030 | | 3 AP MUS 3510 | 0 |
| THRY COM 3310 | | 1 THRY COM 3120 | 2 |
| THRY COM 3130 or 3140 | | 2 THRY COM 3420 | 2 |
| EN PER XXXX | | 1 THRY COM 3310 | 1 |
| AP MUS 34XX | | 1 PRACTM 4100 | 3 |
| EXPLORE - Social Sciences | | 3 AP MUS 34XX | 1 |
| EXPLORE - Mathematics and Life/Natural Sciences | | 3 EN PER XXXX | 1 |
| | | Elective or minor | 2 |
| | 14 | | 12 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

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Music BM, Music Education Emphasis

Degree Requirements

Admission to all Music degree programs is by audition to demonstrate musical aptitude and potential, technical proficiency, and seriousness in selecting music as a four-year course of study. In addition to the applied music audition, placement examinations in music theory and music history may be required to confirm students' prior experience in these areas. Auditions can be scheduled at any time for the upcoming semester, and several pre-scheduled audition dates are also available in fall and early spring (contact the Music Department for more details). Students in Applied Music (private lessons) must pass a junior-standing examination to confirm their level of performance skills for enrollment in AP MUS 3440 – AP MUS 3459 or AP MUS 4440 – AP MUS 4459. This examination is usually taken at the same time as the applied music jury at the end of the fourth semester of enrollment in AP MUS 1440 - AP MUS 1459.

Evidence of sound musicianship, a close acquaintance with an appropriate portion of musical literature, and the ability to bring it to actual performance are required for graduation in all Music degree programs. Students in the B.M., Performance Emphasis fulfill this requirement with junior and senior recitals. Students in all other degree programs fulfill this requirement with a senior recital. In some cases, upon the recommendation of the student's applied teacher, the senior recital (for non-performance majors only) may

be replaced by participating in three regularly scheduled student recitals during the last two semesters of applied music study, or by performing for a special panel of faculty members.

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Other Requirements

Music majors are required to enroll in an approved ensemble [University Wind Ensemble, University Singers, University Orchestra, or Jazz Orchestra (for Jazz Studies majors)] each semester and to study one applied area progressively each semester of the degree program. Music Education majors are exempt from these requirements during the student teaching semester. For all music majors, the applied lesson requirement consists of a weekly, individual lesson with your instructor, as well as a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. The following specific ensemble enrollments, depending upon the applied music area, are required:

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- String students--University Orchestra;
- Voice students--University Singers;
- Keyboard and Guitar students--any approved ensemble, but those in the B.M. Music Education emphasis program must successfully audition for and enroll in an ensemble compatible with the teaching certification they are pursuing;
- Instrumental students may be required to participate in additional ensembles to enhance their musical development;
- Jazz Studies majors (any instrument)--Jazz Orchestra.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. All music majors whose primary applied area is not piano or organ are required to pass an exam in piano proficiency before graduation. Music Education majors must pass this piano proficiency exam prior to student teaching.

The Music Department may require students to pass a placement test to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

Core Curriculum

The following core courses are required for all Music majors:

Music Theory

| | | |
|---------------|------------------------------|---|
| THRY COM 1300 | Introduction to Music Theory | 1 |
| THRY COM 1301 | Theory of Music I | 3 |
| THRY COM 1302 | Aural Training I | 2 |
| THRY COM 1311 | Theory of Music II | 3 |
| THRY COM 1312 | Aural Training II | 2 |
| THRY COM 2301 | Theory of Music III | 3 |
| THRY COM 2302 | Aural Training III | 2 |
| THRY COM 2311 | Theory of Music IV | 3 |
| THRY COM 2312 | Aural Training IV | 2 |

Piano Proficiency

| | | |
|-------------|-----------------------|---|
| PRACTM 1140 | Piano Proficiency I | 1 |
| PRACTM 1150 | Piano Proficiency II | 1 |
| PRACTM 2160 | Piano Proficiency III | 1 |
| PRACTM 2180 | Piano Proficiency IV | 1 |

Conducting

| | | |
|-------------|--------------|---|
| PRACTM 2510 | Conducting I | 2 |
|-------------|--------------|---|

Music History and Literature

| | | |
|--------------|---|---|
| M H L T 2010 | History of Western Music I (MOTR MUSC 103) | 3 |
| M H L T 2020 | History of Western Music II (MOTR MUSC 104) | 3 |

Choose one of the following courses: 3

| | | |
|--------------|--|--|
| M H L T 1150 | Drumming Cultures of the World (MOTR MUSC 102) | |
| M H L T 1160 | Musical Journey through Latin America | |
| M H L T 1170 | Musical Journey through the Far East | |
| M H L T 1180 | Musical Journey Through Africa | |

Recital

| | | |
|-------------|----------------|---|
| AP MUS 3510 | Senior Recital | 0 |
|-------------|----------------|---|

Total Hours 36

In addition to the requirement for a successful audition on their primary instrument, piano and guitar students applying for the BM: Music Education program must also successfully audition for the full participation in (1) Applied Music (seven hours) and University Singers (for those seeking vocal/choral certification), or (2) Symphonic Band, Wind Ensemble, or Orchestra (for those seeking instrumental certification).

In addition to the required music core curriculum, candidates must complete the following:

Other General Education Requirements ¹

All B.M. in Music Education majors must meet the university and college general education requirements.

GPA Requirement

Students enrolled in B.M. in music education must maintain minimum GPAs (2.75 cumulative; 3.0 music; and 3.0 professional education).

Proficiency Exam

Students working toward certification in choral/vocal or instrumental music K-12 are required to pass a keyboard proficiency examination before admission to student teaching in music, usually before or during the sixth semester of their program.

¹ All of the courses in the General Education Requirement Area must be a minimum of two semester hours.

Instrumental Track

| | | |
|--|--|-----------|
| AP MUS 1410 - 3459 | | 7 |
| One hour every semester in progress toward degree with a minimum of 7 credit hours | | |
| EN PER 1500 | University Orchestra (MOTR PERF 102O) ¹ | 4 |
| or EN PER 1520 | University Symphonic Band (MOTR PERF 102B) | |
| or EN PER 1530 | University Wind Ensemble | |
| MUS ED 3570 | Curriculum and Methods of Teaching Elementary and Secondary General Music ² | 3 |
| MUS ED 3680 | Curriculum and Methods of Teaching Instrumental Music ² | 3 |
| PDGOGY 1220 | String and Percussion Techniques | 2 |
| PDGOGY 1230 | Brass and Woodwind Techniques | 2 |
| PRACTM 2610 | Instrumental Literature Laboratory | 1 |
| PRACTM 3521 | Conducting II - Instrumental | 2 |
| Total Hours | | 24 |

¹ One hour every semester in progress toward degree with a minimum of 4 credit hours in EN PER 1500, EN PER 1520, or EN PER 1530.

² Must be taken **in residence** before enrolling in SEC ED 4993 and SEC ED 4994.

Vocal Track ¹

| | | |
|--|--|-----------|
| AP MUS 1410 - 3459 | | 7 |
| One hour every semester in progress toward degree with a minimum of 7 credit hours | | |
| EN PER 1410 | The University Singers (MOTR PERF 102C) ² | 4 |
| MUS ED 3570 | Curriculum and Methods of Teaching Elementary and Secondary General Music ³ | 3 |
| MUS ED 3710 | Curriculum and Methods of Teaching Choral Music ³ | 3 |
| PRACTM 1250 | Singer's Diction: English, Italian And German | 1 |
| PRACTM 1260 | Singer's Diction: Latin, French, And Spanish | 1 |
| PRACTM 2611 | Choral Literature Laboratory | 1 |
| PRACTM 3522 | Conducting II - Choral | 2 |
| THRY COM 3420 | Choral Arranging | 2 |
| Total Hours | | 24 |

¹ Vocal certification students whose applied area is not voice must consult an advisor for additional courses.

² One hour every semester in progress toward degree with a minimum of 4 credit hours.

³ Must be taken **in residence** before enrolling in SEC ED 4993 and SEC ED 4994.

Professional Education and Student Teaching

Preparing for Teacher Education

The following courses must be completed prior to applying for admission to the Teacher Education Program:

| | | |
|-------------|---|---|
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |

Teacher Education Program

The following courses are completed after acceptance into the Teacher Education Program:

| | | |
|--------------|---|---|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| TCH ED 3312 | Psychology of Learning, Instruction, and Assessment | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|--|---|
| SEC ED 4992 | Practicum I: Site-Based Experience in Music | 3 |
| SEC ED 4993 | Practicum II: 12-Week Site-Based Experience in Music | 9 |
| SEC ED 4994 | Practicum II: 4-Week Site-Based Experience in Music | 3 |

Total Hours **36**

Learning Outcomes

Upon completion of the program, graduates will:

- Have technical skills requisite for artistic self-expression (Performance)
- Understand the common elements and organizational patterns of music and their interaction (Musicianship Skills and Analysis)
- Have a rudimentary capacity to create original or derivative music (Composition/Improvisation)
- Have basic knowledge of music history and repertoires through the present time (History and Repertory)
- Be Able to work on musical problems by combining their capabilities in performance, aural, verbal and visual analysis; composition/improvisation; history and repertory (Synthesis)
- Develop requisite knowledge base, skill sets and the professional dispositions needed to pass initial State of Missouri Teacher Licensure Exams (MOGEA, MOCA and MEES, "Candidate Level")

Sample Four Year Plans

Bachelor of Music in Music Education (Vocal)

| First Year | | | |
|---|-------|-------------------------------------|-------|
| Fall | Hours | Spring | Hours |
| THRY COM 1300 | | 1 THRY COM 1311 | 3 |
| THRY COM 1301 | | 3 THRY COM 1312 | 2 |
| THRY COM 1302 | | 2 PRACTM 1150 | 1 |
| PRACTM 1140 | | 1 AP MUS 14XX | 1 |
| AP MUS 14XX | | 1 EN PER 1410 | 1 |
| EN PER 1410 | | 1 TCH ED 1001 | 1 |
| ENGL 1100 | | 3 TCH ED 2001 | 1 |
| TCH ED 1000 | | 1 TCH ED 2000 | 1 |
| CORE - Mathematics Proficiency | | 3 TCH ED 2209 | 2 |
| EXPLORE - Social Sciences | | 3 EXPLORE - Math and Sciences | 3 |
| | | EXPLORE - US History and Government | 3 |
| | 19 | | 19 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| THRY COM 2301 | | 3 THRY COM 2311 | 3 |
| THRY COM 2302 | | 2 THRY COM 2312 | 2 |
| M H L T 2010 | | 3 M H L T 2020 | 3 |
| PRACTM 1250 | | 1 PRACTM 2180 | 1 |
| PRACTM 2160 | | 1 PRACTM 2510 | 2 |
| AP MUS 14XX | | 1 POL SCI 1100 | 3 |
| EN PER 1410 | | 1 AP MUS 14XX | 1 |
| ED PSY 2212 | | 3 EN PER 1410 | 1 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 COMM 1040 | 3 |
| | 18 | | 19 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| PRACTM 3522 | | 2 THRY COM 3420 | 2 |
| MUS ED 3570 | | 3 PRACTM 2611 | 1 |
| MUS ED 3710 | | 3 PRACTM 1260 | 1 |
| AP MUS 34XX | | 1 TCH ED 3310 | 3 |
| EN PER 1410 | | 1 TCH ED 4391 | 3 |
| TCH ED 3312 | | 3 AP MUS 34XX | 1 |
| | | EN PER 1410 | 1 |
| | | ENGL 3100 | 3 |
| | | CORE - Information Literacy | 3 |
| | 13 | | 18 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| AP MUS 3510 | | 0 SEC ED 4993 | 9 |
| AP MUS 34XX | | 1 SEC ED 4994 | 3 |
| EN PER 1410 | | 1 | |
| SPEC ED 3318 | | 3 | |
| TCH ED 3001 | | 1 | |
| SEC ED 4992 | | 3 | |
| Cultural Diversity Requirement | | 3 | |
| M H L T 1150, 1160, 1160, 1170, or 1180 | | 3 | |
| | 15 | | 12 |
| Total Hours: 133 | | | |

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are

encouraged to meet with their advisor each semester. All requirements are subject to change.

Bachelor of Music in Music Education (Instrumental)

| First Year | | | |
|---|-------|---|-------|
| Fall | Hours | Spring | Hours |
| THRY COM 1300 | | 1 THRY COM 1311 | 3 |
| THRY COM 1301 | | 3 THRY COM 1312 | 2 |
| THRY COM 1302 | | 2 PRACTM 1150 | 1 |
| PRACTM 1140 | | 1 AP MUS 14XX | 1 |
| AP MUS 14XX | | 1 EN PER XXXX | 1 |
| EN PER XXXX | | 1 TCH ED 1001 | 1 |
| ENGL 1100 | | 3 TCH ED 2001 | 1 |
| TCH ED 1000 | | 1 TCH ED 2000 | 1 |
| CORE - Mathematics Proficiency | | 3 TCH ED 2209 | 2 |
| | | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| | | CORE - US History and Government | 3 |
| | 16 | | 19 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| THRY COM 2301 | | 3 THRY COM 2311 | 3 |
| THRY COM 2302 | | 2 THRY COM 2312 | 2 |
| M H L T 2010 | | 3 M H L T 2020 | 3 |
| PRACTM 2160 | | 1 PRACTM 2180 | 1 |
| AP MUS 14XX | | 1 AP MUS 14XX | 1 |
| EN PER xxxx | | 1 EN PER XXXX | 1 |
| PDGOGY 1260 | | 2 PRACTM 2510 | 2 |
| ED PSY 2212 | | 3 PDGOGY 1250 | 2 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 POL SCI 1100 | 3 |
| | | COMM 1040 | 3 |
| | 19 | | 21 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| PRACTM 3521 | | 2 PDGOGY 1270 | 2 |
| PRACTM 2610 | | 1 AP MUS 34XX | 1 |
| AP MUS 34XX | | 1 EN PER XXXX | 1 |
| EN PER XXXX | | 1 TCH ED 4391 | 3 |
| MUS ED 3570 | | 3 ENGL 3100 | 3 |
| MUS ED 3680 | | 3 CORE - Information Literacy | 3 |
| TCH ED 3312 | | 3 EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | | 3 | |
| | 17 | | 16 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| AP MUS 34XX | | 1 SEC ED 4993 | 9 |
| EN PER XXXX | | 1 SEC ED 4994 | 3 |
| PDGOGY 1280 | | 2 | |
| SPEC ED 3318 | | 3 | |
| TCH ED 3001 | | 1 | |
| SEC ED 4992 | | 3 | |
| M H L T 1150, 1160, 1170, or 1180 | | 3 | |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 | |
| | 17 | | 12 |
| Total Hours: 137 | | | |

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used

in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Music BM, Music Theory Emphasis

Degree Requirements

Admission to all Music degree programs is by audition to demonstrate musical aptitude and potential, technical proficiency, and seriousness in selecting music as a four-year course of study. In addition to the applied music audition, placement examinations in music theory and music history may be required to confirm students' prior experience in these areas. Auditions can be scheduled at any time for the upcoming semester, and several pre-scheduled audition dates are also available in fall and early spring (contact the Music Department for more details). Students in Applied Music (private lessons) must pass a junior-standing examination to confirm their level of performance skills for enrollment in AP MUS 3440 – AP MUS 3459 or AP MUS 4440 – AP MUS 4459. This examination is usually taken at the same time as the applied music jury at the end of the fourth semester of enrollment in AP MUS 1440 - AP MUS 1459.

Evidence of sound musicianship, a close acquaintance with an appropriate portion of musical literature, and the ability to bring it to actual performance are required for graduation in all Music degree programs. Students in the B.M., Performance Emphasis fulfill this requirement with junior and senior recitals. Students in all other degree programs fulfill this requirement with a senior recital. In some cases, upon the recommendation of the student's applied teacher, the senior recital (for non-performance majors only) may be replaced by participating in three regularly scheduled student recitals during the last two semesters of applied music study, or by performing for a special panel of faculty members.

General Education Requirements

UMSL's General Education requirements apply to all majors. Courses required for degree programs may not be taken on a satisfactory/unsatisfactory basis. Students must receive at least a C in each music course and maintain a GPA of 2.5 (3.0 for Music Education majors) in all music courses to meet degree requirements.

Non-Music majors are encouraged to take music courses (EN PER and MHLT) at the 1000- or 2000-level toward UMSL's Humanities and Fine Arts general education requirement. Non-Music majors wishing to perform with ensembles (EN PER 1410, University Singers; EN PER 1500, University Orchestra; EN PER 1530, University Wind Ensemble; EN PER 1550, Jazz Orchestra) should contact the ensemble's director for information about auditions. M H L T 1150, Drumming Cultures of the World; M H L T 1160, Musical Journey through Latin America; M H L T 1170, Musical Journey through the Far East; or M H L T 1180, Musical Journey through Africa will meet the University's Cultural Diversity study requirement.

Other Requirements

Music majors are required to enroll in an approved ensemble [University Wind Ensemble, University Singers, University Orchestra, or Jazz Orchestra (for Jazz Studies majors)] each semester and to study one applied area progressively each semester of the degree program. Music Education majors are exempt from these requirements during the student teaching semester. For all music majors, the applied lesson requirement consists of a weekly, individual lesson with your instructor, as well as a

weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. The following specific ensemble enrollments, depending upon the applied music area, are required:

- Wind and Percussion students—University Wind Ensemble;
- String students--University Orchestra;
- Voice students--University Singers;
- Keyboard and Guitar students--any approved ensemble, but those in the B.M. Music Education emphasis program must successfully audition for and enroll in an ensemble compatible with the teaching certification they are pursuing;
- Instrumental students may be required to participate in additional ensembles to enhance their musical development;
- Jazz Studies majors (any instrument)--Jazz Orchestra.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. All music majors whose primary applied area is not piano or organ are required to pass an exam in piano proficiency before graduation. Music Education majors must pass this piano proficiency exam prior to student teaching.

The Music Department may require students to pass a placement test to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

Core Curriculum

The following core courses are required for all Music majors:

| Music Theory | | |
|--------------------------------------|--|---|
| THRY COM 1300 | Introduction to Music Theory | 1 |
| THRY COM 1301 | Theory of Music I | 3 |
| THRY COM 1302 | Aural Training I | 2 |
| THRY COM 1311 | Theory of Music II | 3 |
| THRY COM 1312 | Aural Training II | 2 |
| THRY COM 2301 | Theory of Music III | 3 |
| THRY COM 2302 | Aural Training III | 2 |
| THRY COM 2311 | Theory of Music IV | 3 |
| THRY COM 2312 | Aural Training IV | 2 |
| Piano Proficiency | | |
| PRACTM 1140 | Piano Proficiency I | 1 |
| PRACTM 1150 | Piano Proficiency II | 1 |
| PRACTM 2160 | Piano Proficiency III | 1 |
| PRACTM 2180 | Piano Proficiency IV | 1 |
| Conducting | | |
| PRACTM 2510 | Conducting I | 2 |
| Music History and Literature | | |
| M H L T 2010 | History of Western Music I (MOTR MUSC 103) | 3 |
| M H L T 2020 | History of Western Music II (MOTR MUSC 104) | 3 |
| Choose one of the following courses: | | 3 |
| M H L T 1150 | Drumming Cultures of the World (MOTR MUSC 102) | |

| | | |
|--|--|--------------|
| M H L T 1160 | Musical Journey through Latin America | |
| M H L T 1170 | Musical Journey through the Far East | |
| M H L T 1180 | Musical Journey Through Africa | |
| Recital | | |
| AP MUS 3510 | Senior Recital | 0 |
| Total Hours | | 36 |
| Theory and Composition | | |
| THRY COM 3110 | Analysis of Music from 1900 to Present | 2 |
| THRY COM 3120 | Tonal Counterpoint | 2 |
| THRY COM 3130 | Advanced Analytical Techniques | 2 |
| THRY COM 3140 | Readings in Music Theory | 2 |
| THRY COM 3410 | Orchestration | 3 |
| THRY COM 3420 | Choral Arranging | 2 |
| Music History and Literature | | |
| M H L T 2030 | Special Topics in Musicology (taken twice) | 6 |
| Practicum | | |
| PRACTM 3521 | Conducting II - Instrumental | 2 |
| or PRACTM 3522 | Conducting II - Choral | |
| PRACTM 3280 | Score Reading at the Keyboard | 1 |
| PRACTM 4100 | Senior Project in Theory/Composition | 2-4 |
| Applied Music (AP MUS) | | |
| 1 hour every semester in progress toward degree with a minimum of 8 credit hours. | | 8 |
| Ensemble (EN PER) | | |
| Must be enrolled every semester in progress toward degree with a minimum of 4 credit hours | | 4 |
| Total Hours | | 36-38 |

Learning Outcomes

Upon completion of the program, graduates will:

- Have technical skills requisite for artistic self-expression (Performance)
- Understand the common elements and organizational patters of music and their interaction (Musicianship Skills and Analysis)
- Have a rudimentary capacity to create original or derivative music (Composition/Improvisation)
- Have basic knowledge of music history and repertoires through the present time (History and Repertory)
- Be Able to work on musical problems by combining their capabilities in performance, aural, verbal and visual analysis; composition/ improvisation; history and repertory (Synthesis)
- Develop requisite knowledge, skills, and disposition needed to engage in scholarly dialogue through research and analysis

Sample Four Year Plan

| | | | |
|--|--------------|--|--------------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 THRY COM 1311 | 3 |
| THRY COM 1300 | | 1 THRY COM 1312 | 2 |
| THRY COM 1301 | | 3 PRACTM 1150 | 1 |
| THRY COM 1302 | | 2 AP MUS 14XX | 1 |
| PRACTM 1140 | | 1 EN PER XXXX | 1 |
| AP MUS 14XX | | 1 CORE - Communication Proficiency | 3 |
| EN PER XXXX | | 1 CORE - US History and Government | 3 |
| ENGL 1100 | | 3 EXPLORE - Social Sciences | 3 |
| CORE - Mathematics Proficiency | | 3 | |
| | | 16 | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| THRY COM 2301 | | 3 THRY COM 2311 | 3 |
| THRY COM 2302 | | 2 THRY COM 2312 | 2 |
| M H L T 2010 | | 3 M H L T 2020 | 3 |
| PRACTM 2160 | | 1 PRACTM 2180 | 1 |
| AP MUS 14XX | | 1 AP MUS 14XX | 1 |
| EN PER XXXX | | 1 EN PER XXXX | 1 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 PRACTM 2510 | 2 |
| | | CORE - Information Literacy | 3 |
| | | 14 | 16 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| THRY COM 3130 | | 2 M H L T 1150, 1160, 1170, or 1180 | 3 |
| THRY COM 3410 | | 3 THRY COM 3110 | 2 |
| M H L T 2030 | | 3 PRACTM 3280 | 1 |
| PRACTM 3521 | | 2 AP MUS 34XX | 1 |
| AP MUS 34XX | | 1 EN PER XXXX | 1 |
| EN PER XXXX | | 1 EXPLORE - Social Sciences | 3 |
| ENGL 3100 | | 3 EXPLORE Mathematics and Life/ Natural Sciences | 3 |
| | | 15 | 14 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| M H L T 2030 | | 3 THRY COM 3120 | 2 |
| THRY COM 3140 | | 2 THRY COM 3420 | 2 |
| AP MUS 34XX | | 1 AP MUS 34XX | 1 |
| EN PER XXXX | | 1 EN PER XXXX | 1 |
| EXPLORE - Social Sciences | | 3 PRACTM 4100 | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 Elective or minor | 3 |
| Elective or minor | | 3 | |
| | | 16 | 12 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Music BM, Performance Emphasis

Degree Requirements

Admission to all Music degree programs is by audition to demonstrate musical aptitude and potential, technical proficiency, and seriousness in selecting music as a four-year course of study. In addition to the applied music audition, placement examinations in music theory and music history may be required to confirm students' prior experience in these areas. Auditions can be scheduled at any time for the upcoming semester, and several pre-scheduled audition dates are also available in fall and early spring (contact the Music Department for more details). Students in Applied Music (private lessons) must pass a junior-standing examination to confirm their level of performance skills for enrollment in AP MUS 3440 – AP MUS 3459 or AP MUS 4440 – AP MUS 4459. This examination is usually taken at the same time as the applied music jury at the end of the fourth semester of enrollment in AP MUS 1440 - AP MUS 1459.

Evidence of sound musicianship, a close acquaintance with an appropriate portion of musical literature, and the ability to bring it to actual performance are required for graduation in all Music degree programs. Students in the B.M., Performance Emphasis fulfill this requirement with junior and senior recitals. Students in all other degree programs fulfill this requirement with a senior recital. In some cases, upon the recommendation of the student's applied teacher, the senior recital (for non-performance majors only) may be replaced by participating in three regularly scheduled student recitals during the last two semesters of applied music study, or by performing for a special panel of faculty members.

General Education Requirements

UMSL's General Education requirements apply to all majors. Courses required for degree programs may not be taken on a satisfactory/unsatisfactory basis. Students must receive at least a C in each music course and maintain a GPA of 2.5 (3.0 for Music Education majors) in all music courses to meet degree requirements.

Non-Music majors are encouraged to take music courses (EN PER and MHLT) at the 1000- or 2000-level toward UMSL's Humanities and Fine Arts general education requirement. Non-Music majors wishing to perform with ensembles (EN PER 1410, University Singers; EN PER 1500, University Orchestra; EN PER 1530, University Wind Ensemble; EN PER 1550, Jazz Orchestra) should contact the ensemble's director for information about auditions. M H L T 1150, Drumming Cultures of the World; M H L T 1160, Musical Journey through Latin America; M H L T 1170, Musical Journey through the Far East; or M H L T 1180, Musical Journey through Africa will meet the University's Cultural Diversity study requirement.

Other Requirements

Music majors are required to enroll in an approved ensemble [University Wind Ensemble, University Singers, University Orchestra, or Jazz Orchestra (for Jazz Studies majors)] each semester and to study one applied area progressively each semester of the degree program. Music Education majors are exempt from these requirements during the student teaching semester. For all music majors, the applied lesson requirement consists of a weekly, individual lesson with your instructor, as well as a weekly enrichment activity in pedagogy and literature, which may take the form of a studio class, master class, performances by and for our students, or other experience identified by the department. The following

specific ensemble enrollments, depending upon the applied music area, are required:

- Wind and Percussion students—University Wind Ensemble;
- String students--University Orchestra;
- Voice students--University Singers;
- Keyboard and Guitar students--any approved ensemble, but those in the B.M. Music Education emphasis program must successfully audition for and enroll in an ensemble compatible with the teaching certification they are pursuing;
- Instrumental students may be required to participate in additional ensembles to enhance their musical development;
- Jazz Studies majors (any instrument)--Jazz Orchestra.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. All music majors whose primary applied area is not piano or organ are required to pass an exam in piano proficiency before graduation. Music Education majors must pass this piano proficiency exam prior to student teaching.

The Music Department may require students to pass a placement test to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

Core Curriculum

The following core courses are required for all Music majors:

| Music Theory | | |
|--------------------------------------|--|---|
| THRY COM 1300 | Introduction to Music Theory | 1 |
| THRY COM 1301 | Theory of Music I | 3 |
| THRY COM 1302 | Aural Training I | 2 |
| THRY COM 1311 | Theory of Music II | 3 |
| THRY COM 1312 | Aural Training II | 2 |
| THRY COM 2301 | Theory of Music III | 3 |
| THRY COM 2302 | Aural Training III | 2 |
| THRY COM 2311 | Theory of Music IV | 3 |
| THRY COM 2312 | Aural Training IV | 2 |
| Piano Proficiency | | |
| PRACTM 1140 | Piano Proficiency I | 1 |
| PRACTM 1150 | Piano Proficiency II | 1 |
| PRACTM 2160 | Piano Proficiency III | 1 |
| PRACTM 2180 | Piano Proficiency IV | 1 |
| Conducting | | |
| PRACTM 2510 | Conducting I | 2 |
| Music History and Literature | | |
| M H L T 2010 | History of Western Music I (MOTR MUSC 103) | 3 |
| M H L T 2020 | History of Western Music II (MOTR MUSC 104) | 3 |
| Choose one of the following courses: | | 3 |
| M H L T 1150 | Drumming Cultures of the World (MOTR MUSC 102) | |
| M H L T 1160 | Musical Journey through Latin America | |
| M H L T 1170 | Musical Journey through the Far East | |

| | | |
|--------------------|--------------------------------|-----------|
| M H L T 1180 | Musical Journey Through Africa | |
| Recital | | |
| AP MUS 3510 | Senior Recital | 0 |
| Total Hours | | 36 |

Emphasis Area Requirements

| | | |
|-------------------------------|---|-----|
| PRACTM 1250 | Singer's Diction: English, Italian And German (voice majors only) | 1 |
| PRACTM 1260 | Singer's Diction: Latin, French, And Spanish (voice majors only) | 1 |
| PRACTM 3521 or PRACTM 3522 | Conducting II - Instrumental Conducting II - Choral | 2 |
| PRACTM 3920 | Senior Research | 2-4 |

Music Theory

| | | | |
|--------------------------------------|--|--|---|
| Select two of the following courses: | | | 4 |
| THRY COM 3110 | Analysis of Music from 1900 to Present | | |
| THRY COM 3120 | Tonal Counterpoint | | |
| THRY COM 3130 | Advanced Analytical Techniques | | |
| THRY COM 3140 | Readings in Music Theory | | |
| THRY COM 3410 | Orchestration | | |

Music History and Literature

| | | |
|--------------|--|---|
| M H L T 2030 | Special Topics in Musicology (taken twice) | 6 |
|--------------|--|---|

Applied Music (AP MUS)¹

| | |
|--|----|
| Must enroll every semester in progress toward degree with a minimum of 12 credit hours of applied music, 8 credit hours of which must be AP MUS 4440-4459 level. | 12 |
|--|----|

| | | |
|-------------|----------------|---|
| AP MUS 3500 | Junior Recital | 0 |
|-------------|----------------|---|

Ensemble (EN PER)

| | |
|--|---|
| Must be enrolled every semester in progress toward degree with a minimum of 4 credit hours | 4 |
|--|---|

Chamber Ensemble/Collaborative Performance

| | |
|---|---|
| Choose any of the following courses for a total of six hours: | 6 |
|---|---|

| | | |
|-------------|-----------------------------|--|
| EN PER 1541 | Chamber Ensemble Brass | |
| EN PER 1543 | Chamber Ensemble Percussion | |
| EN PER 1544 | Chamber Ensemble Strings | |
| EN PER 1545 | Chamber Ensemble Voice | |
| EN PER 1546 | Chamber Ensemble Woodwinds | |
| EN PER 1547 | Chamber Ensemble New Music | |
| EN PER 1560 | Opera Workshop | |
| EN PER 4560 | Advanced Opera Workshop | |
| PRACTM 1530 | Collaborative Piano I | |
| PRACTM 1540 | Collaborative Piano II | |
| PRACTM 1550 | Collaborative Piano III | |
| PRACTM 1570 | Piano Performance Class | |

| | |
|--------------------|--------------|
| Total Hours | 38-40 |
|--------------------|--------------|

¹ Students in Applied Music must pass a junior-standing exam to confirm their level of performance skills for enrollment in AP MUS 4440 - AP MUS 4459.

Foreign Language Requirement

Candidates pursuing the performance emphasis area with an applied area in voice must complete two semesters of one foreign language selected from French, German, or Italian.

Learning Outcomes

Upon completion of the program, graduates will:

- Have technical skills requisite for artistic self-expression (Performance)
- Understand the common elements and organizational patterns of music and their interaction (Musicianship Skills and Analysis)
- Have a rudimentary capacity to create original or derivative music (Composition/Improvisation)
- Have basic knowledge of music history and repertoires through the present time (History and Repertory)
- Be Able to work on musical problems by combining their capabilities in performance, aural, verbal and visual analysis; composition/improvisation; history and repertory (Synthesis)

Sample Four Year Plans

Bachelor of Music with an Emphasis in Performance (Instrumental)

| First Year | | | |
|--------------------------------|-----------|------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 THRY COM 1311 | 3 |
| THRY COM 1300 | | 1 THRY COM 1312 | 2 |
| THRY COM 1301 | | 3 PRACTM 1150 | 1 |
| THRY COM 1302 | | 2 AP MUS 14XX | 1 |
| PRACTM 1140 | | 1 EN PER 15XX | 1 |
| AP MUS 14XX | | 1 EN PER XXXX | 1 |
| EN PER XXXX | | 1 CORE - US History and Government | 3 |
| ENGL 1100 | | 3 EXPLORE – Social Sciences | 3 |
| CORE - Mathematics Proficiency | | 3 | |
| | 16 | | 15 |

| Second Year | | | |
|---------------------------|-----------|---|-----------|
| Fall | Hours | Spring | Hours |
| THRY COM 2301 | | 3 THRY COM 2311 | 3 |
| THRY COM 2302 | | 2 THRY COM 2312 | 2 |
| M H L T 2010 | | 3 M H L T 2020 | 3 |
| PRACTM 2160 | | 1 AP MUS 14XX | 1 |
| AP MUS 14XX | | 1 EN PER 15XX | 1 |
| EN PER XXXX | | 1 EN PER XXXX | 1 |
| EN PER 15XX | | 1 PRACTM 2180 | 1 |
| EXPLORE - Social Sciences | | 3 PRACTM 2510 | 2 |
| | | EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| | 15 | | 17 |

| Third Year | | | |
|---|-------|--|-------|
| Fall | Hours | Spring | Hours |
| AP MUS 44XX | | 2 M H L T 1150, 1160, 1170, or 1180 | 3 |
| EN PER XXXX | | 1 THRY COM 3XXX: Music Theory Elective | 2 |
| EN PER 15XX | | 1 AP MUS 3500 | 0 |
| PRACTM 3521 | | 2 AP MUS 44XX | 2 |
| EXPLORE – Mathematics and Life/ Natural Sciences | | 3 EN PER XXXX | 1 |
| General Education or Elective | | 3 EN PER 15XX | 1 |
| | | ENGL 3100 | 3 |

| | | |
|----------------------------------|---|---------------|
| | EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| | 12 | 15 |
| Fourth Year | | |
| Fall | Hours | Spring |
| M H L T 2030 | 3 AP MUS 3510 | 0 |
| PRACTM 3920 | 2 THRY COM 3XXX: Music Theory Elective | 2 |
| AP MUS 44XX | 2 M H L T 2030 | 3 |
| EN PER XXXX | 1 AP MUS 44XX | 2 |
| EN PER 15XX | 1 EN PER XXXX | 1 |
| CORE - Communication Proficiency | 3 EN PER 15XXX | 1 |
| EXPLORE – Social Sciences | 3 CORE – Information Literacy | 3 |
| | Elective or minor | 3 |
| | 15 | 15 |
| Total Hours: 120 | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

² Courses that meet this requirement are THRY COM 3110 (odd spring), THRY COM 3120 (even spring), THRY COM 3130 (odd fall), and THRY COM 3140 (even fall)

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Bachelor of Music with an Emphasis in Performance (Keyboard)

| | | |
|--|--|---------------|
| First Year | | |
| Fall | Hours | Spring |
| INTDSC 1003 ¹ | 1 THRY COM 1311 | 3 |
| THRY COM 1300 | 1 THRY COM 1312 | 2 |
| THRY COM 1301 | 3 EN PER 15XX or PRACTM 15XX: Chamber Ensemble/Collaborative Performance | 3 |
| THRY COM 1302 | 2 AP MUS 14XX | 1 |
| AP MUS 14XX | 1 EN PER XXXX | 1 |
| EN PER XXXX | 1 CORE - US History and Government | 3 |
| ENGL 1100 | 3 EXPLORE - Social Sciences | 3 |
| CORE - Mathematics Proficiency | 3 | |
| | 15 | 16 |
| Second Year | | |
| Fall | Hours | Spring |
| THRY COM 2301 | 3 THRY COM 2311 | 3 |
| THRY COM 2302 | 2 THRY COM 2312 | 2 |
| M H L T 2010 | 3 M H L T 2020 | 3 |
| EN PER 15XX or PRACTM 15XX: Chamber Ensemble/Collaborative Performance | 1 AP MUS 14XX | 1 |
| AP MUS 14XX | 1 EN PER XXXX | 1 |
| EN PER XXXX | 1 EN PER 15XX or PRACTM 15XX: Chamber Ensemble/Collaborative Performance | 1 |
| EXPLORE - Social Sciences | 3 PRACTM 2510 | 2 |
| | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| | 14 | 16 |

| | | |
|--|--|---------------|
| Third Year | | |
| Fall | Hours | Spring |
| PRACTM 3521 | 2 M H L T 1150, 1160, 1170, or 1180 | 3 |
| EN PER 15XX or PRACTM 15XX: Chamber Ensemble/Collaborative Performance | 1 THRY COM 3XXX: Music Theory Elective | 2 |
| AP MUS 44XX | 2 AP MUS 3500 | 0 |
| EN PER XXXX | 1 AP MUS 44XX | 2 |
| EXPLORE - Mathematics & Natural Sciences | 3 EN PER XXXX | 1 |
| General Education or Elective | 3 EN PER 15XX or PRACTM 15XX: Chamber Ensemble/Collaborative Performance | 1 |
| Elective or minor | 3 ENGL 3100 | 3 |
| | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| | 15 | 15 |

| | | |
|--|---------------------------------------|---------------|
| Fourth Year | | |
| Fall | Hours | Spring |
| M H L T 2030 | 3 AP MUS 3510 | 0 |
| PRACTM 3920 | 2 M H L T 3XXX Music History Elective | 3 |
| EN PER 15XX or PRACTM 15XX: Chamber Ensemble/Collaborative Performance | 1 M H L T 2030 | 3 |
| AP MUS 44XX | 2 AP MUS 44XX | 3 |
| EN PER XXXX | 1 EN PER XXXX | 1 |
| CORE - Communication Proficiency | 3 CORE – Information Literacy | 3 |
| EXPLORE - Social Sciences | 3 Elective or minor | 3 |
| | 15 | 16 |

Total Hours: 122

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

² Choose two of the following: THRY COM 3110 (odd spring), THRY COM 3120 (even spring), THRY COM 3130 (odd fall), and THRY COM 3140 (even fall)

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Bachelor of Music with an Emphasis in Performance (Voice)

| | | |
|---|--|---------------|
| First Year | | |
| Fall | Hours | Spring |
| INTDSC 1003 ¹ | 1 THRY COM 1311 | 3 |
| THRY COM 1300 | 1 THRY COM 1312 | 2 |
| THRY COM 1301 | 3 PRACTM 1150 | 1 |
| THRY COM 1302 | 2 AP MUS 14XX | 1 |
| PRACTM 1140 | 1 EN PER 1410 | 1 |
| AP MUS 14XX | 1 EN PER 1545 or 1560 | 1 |
| EN PER 1410 | 1 FGN LANG 1002 (Italian, French or German) | 5 |
| FGN LANG 1001 Language and Culture (Italian, French or German) | 5 ENGL 1100 | 3 |
| | 15 | 17 |
| Second Year | | |
| Fall | Hours | Spring |
| THRY COM 2301 | 3 THRY COM 2311 | 3 |

| | | | |
|---|-------|---|-------|
| THRY COM 2302 | 2 | THRY COM 2312 | 2 |
| EN PER 1545 or 1560 | 1 | EN PER 1545 or 1560 | 1 |
| M H L T 2010 | 3 | M H L T 2020 | 3 |
| PRACTM 1250 or 1260 | 1 | PRACTM 2180 | 1 |
| PRACTM 2160 | 1 | PRACTM 2510 | 2 |
| AP MUS 14XX | 1 | AP MUS 14XX | 1 |
| EN PER 1410 | 1 | EN PER 1410 | 1 |
| EXPLORE - Math and Sciences | 3 | Elective or minor | 1 |
| 16 | | 15 | |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| EN PER 1545 or 1560 | 1 | M H L T 1150, 1160, 1170, or 1180 | 3 |
| PRACTM 1260 | 1 | THRY COM 31XX: Music Theory Elective | 2 |
| PRACTM 3522 | 2 | AP MUS 44XX | 1 |
| AP MUS 44XX | 2 | EN PER 1410 | 1 |
| EN PER 1410 | 1 | AP MUS 3500 | 0 |
| CORE – US History and Government | 3 | EN PER 1545 or 1560 | 1 |
| CORE - Communication Proficiency | 3 | ENGL 3100 | 3 |
| CORE - Mathematics Proficiency | 3 | CORE - Information Literacy | 3 |
| 16 | | 14 | |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| M H L T 2030 | 3 | M H L T 42XX Music History Elective | 3 |
| PRACTM 3920 | 3 | AP MUS 44XX | 2 |
| AP MUS 44XX | 2 | AP MUS 3510 | 0 |
| EN PER 1410 | 1 | EN PER 1410 | 1 |
| THRY COM 31XX Theory Elective | 2 | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE - Mathematics and Natural/ Life Sciences | 3 | EXPLORE - Social Sciences | 3 |
| | | EXPLORE – Social Sciences | 3 |
| 14 | | 15 | |
| Total Hours: 122 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

² Choose two of the following: THRY COM 3110 (odd spring), THRY COM 3120 (even spring), THRY COM 3130 (odd fall), and THRY COM 3140 (even fall)

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Music Minor

1. Candidates must complete the following courses (28 hours):

| | | | |
|------------------------------|--|--|---|
| Music Theory | | | |
| THRY COM 1301 | Theory of Music I | | 3 |
| THRY COM 1302 | Aural Training I | | 2 |
| THRY COM 1311 | Theory of Music II | | 3 |
| THRY COM 1312 | Aural Training II | | 2 |
| Music History and Literature | | | |
| M H L T 2010 | History of Western Music I (MOTR MUSC 103) | | 3 |

| | | |
|---|---|----|
| M H L T 2030 | Special Topics in Musicology | 3 |
| Piano | | |
| PRACTM 1140 | Piano Proficiency I | 1 |
| PRACTM 1150 | Piano Proficiency II | 1 |
| Applied Music (AP MUS) | | |
| 1 hour every semester in progress toward minor with a minimum of 4 credit hours | | 4 |
| Ensemble | | |
| Ensemble (EN PER) (4 hours maximum credit) | | 2 |
| Select six credit hours from the following: | | 6 |
| M H L T 2020 | History of Western Music II (MOTR MUSC 104) | |
| PRACTM 2160 | Piano Proficiency III | |
| PRACTM 2180 | Piano Proficiency IV | |
| THRY COM 2301 | Theory of Music III | |
| THRY COM 2302 | Aural Training III | |
| THRY COM 2311 | Theory of Music IV | |
| THRY COM 2312 | Aural Training IV | |
| Total Hours | | 30 |

Music education methods courses and instrumental techniques courses may not be taken to complete this minor.

Non-keyboard players are required to pass an exam of piano proficiency or equivalent.

A GPA of 2.5 for all music hours is required to complete this minor.

Neuroscience Undergraduate Certificate

The undergraduate Certificate Program in Neuroscience is an interdisciplinary program requiring 20 credits of training in Neuroscience. The Program provides a group of related courses capped by a research experience. The Program is likely to be of particular interest to students who want to pursue graduate or professional training, but it is intended to appeal to any student interested in Neuroscience.

Courses taken for the certificate in the lower division (1000 and 2000 level) may satisfy general education requirements (that is, breadth requirements), if they are approved general education courses. Courses in the upper division (3000 level and above) may satisfy requirements for the student's major, consistently with the major's requirements. All required courses must be completed with a "B-"average or higher. Pass/Fail grades do not count.

Most courses required by the Certificate Program in Neuroscience have prerequisites. Some students may satisfy prerequisites by virtue of their prior curriculum. When this is not the case, students are responsible for satisfying the prerequisites.

Requirements

| | | |
|------------------------------|---|---|
| The two entry level courses: | | |
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) ¹ | 5 |
| or BIOL 1012 | General Biology: The Science of Life (MOTR BIOL 100) | |

| | | |
|--|--|---|
| or BIOL 1102 | Human Biology (MOTR LIFS 150) | |
| PSYCH 2211 | Introduction to Biological Psychology | 3 |
| Select one of the following statistics courses: | | 3 |
| BIOL 4122 | Biostatistics | |
| MATH 1320 | Introduction to Probability and Statistics | |
| PSYCH 2201 | Psychological Statistics | |
| SOC 3220 | Quantitative Data Analysis in Social Science Research | |
| Electives | | |
| Select two of the following: ² | | 6 |
| BIOL 1131 | Human Physiology and Anatomy I | |
| BIOL 1162 | General Microbiology | |
| BIOL 2012 | Genetics | |
| BIOL 2482 | Microbiology | |
| BIOL 3102 | Animal Behavior | |
| BIOL 3622 | Cell Biology | |
| BIOL 4502 | Evolution of Cognition | |
| BIOL 4822 | Introduction to Neuroscience | |
| CHEM 1052 | Chemistry for the Health Professions (MOTR CHEM 100) | |
| CHEM 4712 | Biochemistry | |
| CMP SCI 4300 | Introduction to Artificial Intelligence | |
| CMP SCI 4340 | Introduction to Machine Learning | |
| HONORS 3030 | Advanced Honors Seminar in the Social and Behavioral Sciences ³ | |
| HONORS 3160 | Honors Writing in the Sciences ³ | |
| PHIL 2280 | Minds, Brains, and Machines | |
| PHIL 3378 | Philosophy of Mind | |
| PHIL 3380 | Philosophy of Science | |
| PHIL 4478 | Topics in Philosophy of Mind and Philosophy of Language | |
| PHIL 4479 | Philosophy of Cognitive Science | |
| PHIL 4480 | Topics in Philosophy of Science ³ | |
| PHYSICS 4347 | Introduction to Biophysics | |
| PSYCH 4300 | Introduction to Psychopharmacology: Drugs and Mental Illness | |
| PSYCH 4340 | Introduction to Human Neuroanatomy | |
| PSYCH 4349 | Human Learning and Memory | |
| PSYCH 4350 | Emotions and the Brain | |
| PSYCH 4372 | Introduction to Social Neuroscience | |
| PSYCH 4374 | Introduction to Clinical Neuropsychology | |
| Select at least 3 credits from one or more semesters of research experience ⁴ | | 3 |
| BIOL 4905 | Research | |
| CHEM 3905 | Chemical Research | |
| CMP SCI 4880 | Individual Studies in Computer Science | |
| PHIL 4450 | Special Readings in Philosophy | |
| PHYSICS 3390 | Research | |

| | |
|--------------------|---------------------------------|
| PSYCH 3390 | Directed Research in Psychology |
| Total Hours | 20 |

- ¹ BIOL 1831 is strongly recommended, especially for those considering taking BIOL 4822 Introduction to Neurosciences towards their Neuroscience Certificate (BIOL 1831 is a prerequisite for BIOL 4822)"
- ² At least one elective must be taken outside the student's major
- ³ With permission of the program director
- ⁴ This requires completion of a Directed Research Assistantship with a Neuroscience faculty member within any of the participating departments. The research project must be approved in advance by the undergraduate advisor with the assistance of a committee of Neuroscience faculty. It is expected that this research will lead to a presentation of the research (e.g., at the UM-St. Louis Neuroscience seminar or the Undergraduate Research Symposium).

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Describe the molecular, cellular, and tissue-level organization of the central and peripheral nervous system.
- Understand the properties of cells that make up the nervous system including the propagation of electrical signals used for cellular communication.
- Relate the properties of individual cells to their function in organized neural circuits and systems.
- Explain how the interaction of cells and neural circuits leads to higher level activities such as cognition and behavior.
- Engage in research, generate testable scientific hypotheses, design experiments, and collect, analyze, and interpret data through collaborative research projects, lab work, internships, and coursework.
- Demonstrate critical thinking skills by analyzing and evaluating neuroscience primary literature.
- Effectively communicate scientific information in written and oral formats; prepare and formally present a scientific paper or poster about neuroscience research, including communication of quantitative data in statistics, graphs and tables.
- Create a career development plan that matches an accurate self-assessment of abilities, achievement, motivation and work habits with specific job opportunities in the neurosciences.

Nonprofit Organization Management and Leadership Graduate Certificate

Through the Public Policy Administration Program, UMSL offers the Graduate Certificate in Nonprofit Organization Management and Leadership for students who are current professional staff, board members, and other leaders of nonprofit and voluntary organizations, as well as those who plan to work in the field. The NPML certificate is the only nonprofit program in the St. Louis region that has full membership in the Nonprofit Academic Centers Council (NACC). The certificate can be taken by itself or in conjunction with the Master of Public Policy Administration degree or a graduate degree in another field. Course credits earned in the certificate program can be applied to the MPPA, but a separate application to the master's program is required.

Requirements

The Graduate Certificate in Nonprofit Organization Management and Leadership requires the completion of 18 credit hours. Nine of these include the following core courses:

| | | |
|---------------------|---|----------|
| P P ADM/SOC WK 6300 | Leadership and Management in Nonprofit Organizations | 3 |
| P P ADM/SOC WK 6310 | American Philanthropy and Nonprofit Resources Development | 3 |
| P P ADM/SOC WK 6311 | Staff Management Issues in Nonprofit Organizations | 1 |
| P P ADM/SOC WK 6312 | Legal Issues in Managing Nonprofit Organizations | 1 |
| P P ADM/SOC WK 6313 | Financial Issues in Managing Nonprofit Organizations | 1 |
| Total Hours | | 9 |

Six hours of electives are to be taken from approved courses in accounting, business administration, economics, management, marketing, political science, psychology, public policy administration, and sociology. A student may choose among these courses or other courses approved by the program director.

Three hours of internship are also required. Students who have significant relevant field experience in the nonprofit sector may request that the internship requirement be waived. To request a waiver, students must submit a written request outlining the student's professional or managerial field experience with appropriate documentation. Any request for a waiver from the internship requirement must be approved by the program director.

Students who receive a waiver must take an additional three hours of electives in lieu of the internship.

Requirements for admission to the graduate certificate program include an undergraduate degree and a GPA of 3.0 or better. Applicants must submit two letters of recommendation. At least one of the letters should be from a current or former college-level instructor. Applicants must submit a two-page personal statement explaining how the certificate program fits in the applicant's educational and professional goals. The letters and personal statement should be sent directly to the Public Policy Administration office.

Nursing BSN

Admission Requirements

The Bachelor of Science in Nursing prepares students for the Professional Registered Nurse Licensure Examination (NCLEX).

To be considered for entry into the BSN program, individuals must first be accepted to UMSL as an undergraduate student. Upon that acceptance, students should work with their College of Nursing Academic Advisor to ensure successful completion of prerequisite courses.

Admission to UMSL does not guarantee admission to the clinical phase in any of the Pre-Licensure BSN tracks. All applicants are placed in Pre-Nursing at time of admission. Clinical spaces are competitive, and the College of Nursing administratively moves students from Pre-Nursing to Nursing (clinical segment) based on cumulative GPA, successful completion of program prerequisite coursework, and available space.

Pre-Nursing Admission Criteria

First-time freshmen and transfer applicants who meet the following minimum criteria will be placed in the Pre-Nursing major.

- Admission to the University by completing the UMSL Undergraduate Application
- For first-time freshman applicants, a minimum high school GPA of 2.75
- For transfer applicants, a minimum cumulative GPA of 2.75

Nursing Clinical Admission Criteria: Traditional BSN

- Admission to the University by completing the UMSL Undergraduate Application
- Minimum cumulative GPA of 2.75
- Satisfactory completion of all general education course requirements
- Grade of B- or higher within 5 years of enrollment in the clinical major for the following courses: Chemistry, Anatomy & Physiology I, Anatomy & Physiology II, Microbiology
- Grade of C or higher in all *prerequisite* courses except in the case of the above-listed science courses

Students must complete additional requirements prior to attending clinical rotations: pass a required criminal background check, drug screening, register with the Missouri Family Care Safety Registry (MO FCSR), and comply with vaccine and immunization regulations.

General Education Course Requirements

Nursing majors must complete all general education requirements (p. 30) of the university as outlined in this Bulletin.

As part of meeting the university's general education requirements, the prerequisite courses listed under 1) Natural science course work, 2) Behavioral and social science course work, 3) Information literacy, and 4) Humanities, must be completed prior to beginning the clinical track. See a curriculum planning guide for specific courses and proper sequencing.

1) Natural Science Courses

| | | |
|-----------|--|---|
| BIOL 1131 | Human Physiology and Anatomy I | 4 |
| BIOL 1141 | Human Physiology and Anatomy II | 4 |
| BIOL 1162 | General Microbiology | 3 |
| CHEM 1052 | Chemistry for the Health Professions (MOTR CHEM 100) (or equivalent) | 4 |

2) Behavioral and Social Science Courses

| | | |
|------------|--|---|
| ECON 1000 | Economics in Everyday Life (MOTR ECON 100) (or equivalent) | 3 |
| PSYCH 1003 | General Psychology (MOTR PSYC 100) | 3 |
| PSYCH 2268 | Lifespan Developmental Psychology (MOTR PSYC 200) | 3 |

3) Information literacy

| | | |
|-----------|--|---|
| MATH 1105 | Basic Probability and Statistics (or equivalent) | 3 |
|-----------|--|---|

4) Humanities

| | | |
|-----------|-----------|---|
| PHIL 2256 | Bioethics | 3 |
|-----------|-----------|---|

Nursing Pre-Major Courses

| | | |
|--------------------|---|-----------|
| NURSE 1000 | Cultural Diversity in a Global Society | 3 |
| NURSE 1050 | Communication for the Healthcare Professional | 3 |
| NURSE 2050 | Pathophysiology | 3 |
| NURSE 2000 | Nutrition in Health | 3 |
| Total Hours | | 12 |

Nursing Major Courses

| | | |
|--------------------|--|-----------|
| NURSE 3000 | Health Promotion and Disease Prevention Concepts Across the Lifespan | 2 |
| NURSE 3020 | Fundamental Concepts of Professional Nursing Practice | 6 |
| NURSE 3030 | Health Assessment Concepts | 4 |
| NURSE 3040 | Concepts of Evidence-Based Practice | 3 |
| NURSE 3050 | Concepts of Pharmacology | 3 |
| NURSE 3060 | Behavioral Health Concepts | 5 |
| NURSE 3070 | Concepts of Caring for Adults I | 5 |
| NURSE 4010 | Concepts of Caring for Adults II | 5 |
| NURSE 4020 | Concepts of Caring for Women and the Childbearing Family | 3 |
| NURSE 4025 | Care of Women and Children Clinical | 2 |
| NURSE 4030 | Concepts of Caring for Children and Families | 3 |
| NURSE 4050 | Concepts of Community Focused Care | 5 |
| NURSE 4060 | Synthesis of Concepts in Professional Nursing | 4 |
| NURSE 4065 | Synthesis of Professional Practice Immersion Clinical | 4 |
| NURSE elective | | 3 |
| Total Hours | | 57 |

All undergraduate nursing students must have access to transportation to their clinical practice experiences. Students must provide their own transportation to and from clinical agencies, which may be scheduled throughout the St. Louis metropolitan area, including Jefferson County and Illinois. Students who must use public transportation must inform their Program Director.

Satisfactory/Unsatisfactory (Pass/Fail) Grading

Undergraduate nursing majors may not take required prerequisite general education or nursing courses on a satisfactory/unsatisfactory basis.

Credit by Transfer Examination

Credit may be granted for selected general studies. Please contact an advisor for information.

Latin Honor Requirements

In accordance with the University's Latin Honors policy (p. 23), candidates graduating from the College of Nursing in the 2023-2024 Academic Year must meet the following GPA qualifications:

| | |
|-----------------|-------|
| Summa Cum Laude | 3.972 |
| Magna Cum Laude | 3.902 |
| Cum Laude | 3.766 |

Learning Outcomes

- Integrate into practice theories and evidence-based concepts from nursing, the arts, sciences, and humanities to provide comprehensive nursing care in a variety of settings.
- Integrate principles of quality care, patient safety, health education, and management of care when organizing, coordinating, and engaging in professional nursing practice across the healthcare continuum
- Use evidence-based practice to promote health and wellness, manage illness, and prevent injury among individuals, families, communities, and populations
- Utilize health care technology and information management systems to promote quality care and patient safety
- Apply knowledge of health care policies in a regulatory environment and their influence on health care access and quality
- Utilize communication to enhance relationships with patients, families, and communities and collaboration among members of the healthcare team
- Provide culturally competent, compassionate, holistic care to promote optimal health for diverse individuals, families, communities, and populations throughout the lifespan in an effort to improve health equity
- Accept responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics
- Demonstrate motivation and self-direction in activities that contribute to lifelong personal, professional, and intellectual development
- Synthesize clinical reasoning and problem solving in professional practice

Sample Four Year Plan

Students who were admitted prior to Fall 2018 should follow the plan from the year they were admitted. Four Year plans for each catalog year prior to Fall 2018 can be found in the Archives Section.

First Year

| Fall | Hours | Spring | Hours |
|------------|-------|--------------|-----------|
| ENGL 1100 | | 3 BIOL 1131 | 4 |
| MATH 1030 | | 3 CHEM 1052 | 4 |
| BIOL 1102 | | 3 ECON 1000 | 3 |
| PSYCH 1003 | | 3 NURSE 1050 | 3 |
| NURSE 1000 | | 3 | |
| | | 15 | 14 |

Second Year

| Fall | Hours | Spring | Hours |
|---------------------------------|-------|-----------------------------------|-----------|
| BIOL 1141 | | 4 NURSE 2050 | 3 |
| BIOL 1162 | | 3 MATH 1105 | 3 |
| PSYCH 2268 | | 3 PHIL 2256 | 3 |
| NURSE 2000 | | 3 CORE: US History & Government | 3 |
| EXPLORE: Humanities & Fine Arts | | 3 EXPLORE: Humanities & Fine Arts | 3 |
| | | 16 | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|------------|-------|--------------|-------|
| NURSE 3000 | | 2 NURSE 3040 | 3 |
| NURSE 3020 | | 6 NURSE 3060 | 4 |
| NURSE 3030 | | 4 NURSE 3070 | 5 |

| | | |
|------------|--------------|----|
| NURSE 3050 | 3 NURSE 3090 | 1 |
| NURSE 3025 | 1 ENGL 3100 | 3 |
| NURSE 3080 | 0 NURSE 3080 | 0 |
| 16 | | 16 |

Fourth Year

| Fall | Hours | Spring | Hours |
|------------|-------|----------------|-------|
| NURSE 4010 | | 5 NURSE 4050 | 5 |
| NURSE 4020 | 4 | NURSE 4060 | 4 |
| NURSE 4030 | 4 | NURSE 4065 | 4 |
| NURSE 4040 | 1 | NURSE Elective | 2 |
| NURSE 3080 | 0 | | |
| 14 | | 15 | |

Total Hours: 121

PLEASE NOTE: This plan is an example of what an academic plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Nursing BSN, Accelerated Curriculum

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity, intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that measure their potential in nursing practice, education, research, and scholarship. We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Applicants to the accelerated nursing clinical program will be holistically reviewed using criteria such as GPA, academic performance in required pre-nursing courses, a personal statement, an essay, extra-curricular activities, honors, award recognitions, leadership roles, and work/volunteer experiences.

Clinical Admission Criteria: Accelerated BSN

The Bachelor of Science in Nursing prepares students for the Professional Registered Nurse Licensure Examination (NCLEX).

To be considered for entry into the BSN program, individuals must first be accepted to UMSL as an undergraduate student. Upon that acceptance, students should work with their College of Nursing Academic Advisor to ensure successful completion of prerequisite courses.

Admission to UMSL does not guarantee admission to the clinical phase in any of the Pre-Licensure BSN tracks. All applicants are placed in Pre-Nursing at time of admission. Clinical spaces are competitive, and the College of Nursing administratively moves students from Pre-Nursing to Nursing (clinical segment) based on cumulative GPA, successful completion of program prerequisite coursework, and available space.

- Admission to the University by completing the UMSL Undergraduate Application
- An earned bachelor's or graduate degree from an accredited institution recognized by the UMSL
- Minimum cumulative GPA of 3.0

- Grade of B- or higher within 5 years of clinical enrollment in the following courses: Chemistry, Anatomy & Physiology I, Anatomy & Physiology II, Microbiology
- Grade of C- or higher in Statistics and Human Growth and Development courses

Students must complete additional requirements prior to attending clinical rotations: pass a required criminal background check, drug screening, register with the Missouri Family Care Safety Registry (MO FCSR), and comply with vaccine and immunization regulations.

General Education Course Requirements

General Education Course Requirements for Students with a Bachelor's Degree

Students must have a Bachelor's Degree or a graduate degree to be admitted to the Accelerated BSN program. Students must also have completed the following courses with a grade of B- or higher within 5 years of clinical enrollment.

| | | |
|------------|--|---|
| BIOL 1131 | Human Physiology and Anatomy I | 4 |
| BIOL 1141 | Human Physiology and Anatomy II | 4 |
| BIOL 1162 | General Microbiology | 3 |
| CHEM 1052 | Chemistry for the Health Professions (MOTR CHEM 100) | 4 |
| MATH 1105 | Basic Probability and Statistics (or equivalent) | 3 |
| PSYCH 2268 | Lifespan Developmental Psychology (MOTR PSYC 200) | 3 |

Nursing Course Requirements

PRE-LICENSURE: Accelerated Option

| | | |
|------------|--|---|
| NURSE 3005 | Introduction to Professional Nursing | 3 |
| NURSE 3015 | Professional Nursing Concepts and Practice | 6 |
| NURSE 3035 | Health Assessment and Promotion | 3 |
| NURSE 3055 | Foundations of Nursing Pharmacotherapeutic Concepts | 3 |
| NURSE 3065 | Professional Nursing Adult and Elder Care I | 5 |
| NURSE 3075 | Professional Nursing Mental Health | 5 |
| NURSE 4015 | Professional Nursing Adult & Elder Care II | 5 |
| NURSE 4035 | Nursing Care of Children: Infancy to Adolescence | 4 |
| NURSE 4045 | Nursing Care of the Childbearing Patient-Family System | 4 |
| NURSE 4105 | Professional Nursing Leadership and Synthesis | 8 |
| NURSE 4125 | Community Nursing and Public Health | 5 |
| NURSE 4135 | Evidence-Based Practice: Integration of Research in Professional Nursing | 2 |

Total Hours 53

All undergraduate nursing students must have access to transportation to their clinical practice experiences. Students must provide their own

transportation to and from clinical agencies, which may be scheduled throughout the St. Louis metropolitan area, including Jefferson County and Illinois. Students who must use public transportation must inform their Program Director.

Satisfactory/Unsatisfactory (Pass/Fail) Grading

Undergraduate nursing majors may not take required prerequisite general education or nursing courses on a satisfactory/unsatisfactory basis.

Credit by Transfer Examination

Credit may be granted for selected general studies. Please contact an advisor for information.

Latin Honors Requirements

In accordance with the University's Latin Honors policy (p. 23), candidates graduating from the College of Nursing in the 2023-2024 Academic Year must meet the following GPA qualifications:

| | |
|-----------------|-------|
| Summa Cum Laude | 3.972 |
| Magna Cum Laude | 3.902 |
| Cum Laude | 3.766 |

Learning Outcomes

- Integrate theories and evidence-based concepts from nursing, the arts, sciences, and humanities to provide comprehensive nursing care in a variety of settings.
- Integrate principles of quality care, patient safety, health education, and management of care when organizing, coordinating, and engaging in professional nursing practice across the healthcare continuum.
- Use evidence-based practice to promote health and wellness, manage illness, and prevent injury among individuals, families, communities, and populations.
- Utilize health care technology and information management systems to promote quality care and patient safety.
- Apply knowledge of health care policies in a regulatory environment and their influence on health care access and quality.
- Utilize communication to enhance relationships with patients, families, and communities and collaboration among members of the healthcare team.
- Provide culturally competent, compassionate, holistic care to promote optimal health for diverse individuals, families, communities, and populations throughout the lifespan in an effort to improve health equity.
- Accept responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics.
- Demonstrate motivation and self-direction in activities that contribute to lifelong personal, professional, and intellectual development.
- Synthesize clinical reasoning and problem solving in professional practice.

Sample Plan of Study

This plan assumes that a student has completed all prerequisites for admission.

| First Year | | | | | |
|----------------|-------|----------------|-------|------------|-------|
| Fall | Hours | Spring | Hours | Summer | Hours |
| Eight Week One | | Eight Week One | | NURSE 4105 | 8 |
| NURSE 3005 | 3 | NURSE 3075 | 3 | NURSE 4125 | 5 |

| | | | | | |
|----------------|----|----------------|----|------------|----|
| NURSE 3015 | 6 | NURSE 4015 | 5 | NURSE 4135 | 2 |
| NURSE 3035 | 3 | Eight Week Two | | | |
| Eight Week Two | | NURSE 4035 | 4 | | |
| NURSE 3055 | 3 | NURSE 4045 | 4 | | |
| NURSE 3065 | 5 | | | | |
| | 20 | | 18 | | 15 |

Total Hours: 53

PLEASE NOTE: This plan is an example of what an academic plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Nursing BSN, RN to BSN Curriculum

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity, intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that demonstrate their potential in nursing practice, education, research, and scholarship. We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the authorization web page for more information: <https://www.umsel.edu/services/academic/nc-sara-authorization/index.html>

Admissions Criteria

- Admission to the University by completing the UMSL Undergraduate Application
- Graduate or enrolled for dual enrollment in either an state approved diploma or associate degree program in nursing.
- Evidence of current RN licensure or eligibility for RN licensure if in an associate degree program for dual enrollment.
- Cumulative GPA of 2.5 (4.0 scale)

General Education Course Requirements

Nursing majors must complete all general education requirements (p. 30) of the university as outlined in this Bulletin.

As part of meeting the university's general education requirements, the prerequisite courses listed under 1) Natural Science course work and 2) Behavioral and Social Science course work must be completed prior to beginning the clinical major. See a curriculum planning guide for specific courses and proper sequencing.

Students must be in residence for at least 24 of the last 30 hours or graded credit (exclusive of courses graded on a satisfactory/unsatisfactory basis), except under unusual circumstances, to be decided by the dean.

1) Natural Science course work

| | |
|---|---|
| 9 hours of coursework from the Math/Natural Sciences Explore Area | 9 |
|---|---|

2) Behavioral and Social Science course work

| | | |
|---------------------|------------------------------------|---|
| PSYCH 1003 | General Psychology (MOTR PSYC 100) | 3 |
| Psychology Elective | | 3 |

Nursing Course Requirements
RN to BSN Program

| | | |
|-------------|---|----|
| NURSE 3900 | Role of the Baccalaureate-Prepared Nurse | 3 |
| NURSE 3910 | Nursing Theory for Population Health | 3 |
| NURSE 3920 | Health Assessment for the Professional Nurse | 3 |
| NURSE 3930 | Nursing Research and Evidence-Based Practice for the Professional Nurse | 3 |
| NURSE 3940 | Leadership and Management for Professional Nursing | 3 |
| NURSE 4900 | Ethics and Values in Population Health | 3 |
| NURSE 4910 | Health Policy for the Professional Nurse | 3 |
| NURSE 4911 | Community and Population Health Synthesis ¹ | 6 |
| Total Hours | | 27 |

¹ Includes a laboratory and/or clinical component

All undergraduate nursing students must have access to transportation to their clinical practice experiences. Students must provide their own transportation to and from clinical agencies, which may be scheduled throughout the St. Louis metropolitan area, including Jefferson County and Illinois. Students who must use public transportation must inform their Program Director.

Satisfactory/Unsatisfactory (Pass/Fail) Grading

Undergraduate nursing majors may not take required prerequisite general education or nursing courses on a satisfactory/unsatisfactory basis.

Credit by Transfer Examination

Credit may be granted for selected general studies. Please contact an advisor for information.

Latin Honors Requirements

In accordance with the University's Latin Honors policy (p. 23), candidates graduating from the College of Nursing in the 2023-2024 Academic Year must meet the following GPA qualifications:

| | |
|-----------------|-------|
| Summa Cum Laude | 3.972 |
| Magna Cum Laude | 3.902 |
| Cum Laude | 3.766 |

Learning Outcomes

- Integrate into practice theories and evidence-based concepts from nursing, the arts, sciences, and humanities to provide comprehensive nursing care in a variety of settings.
- Integrate clinical reasoning and problem solving in professional practice.

- Administer culturally competent, compassionate, holistic care to promote healthy outcomes for diverse individuals, families, communities, and populations during all life phases.
- Use evidence-based practices to promote health, manage illness, and prevent injury among individuals, families, communities, and populations.
- Utilize communication skills to enhance relationships with patients and families and collaboration among members of the health care team.
- Assume responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics.
- Integrate principles of health education, management, leadership, quality care, and patient safety when organizing, coordinating, and engaging in professional practice.
- Demonstrate knowledge of health care policies and finance in a regulatory environment and their influence on health care access and quality.
- Exhibit motivation and self-direction in activities that contribute to lifelong personal, professional, and intellectual development.
- Utilize health care technology and information management systems to promote quality care and patient safety.

Sample Study Plan

This plan assumes that a student has completed all prerequisites for admission.

| First Year | | | | | |
|-----------------------|-------|-----------------------------------|-------|-------------------------|-------|
| Fall | Hours | Spring | Hours | Summer | Hours |
| NURSE 3900 (8 Week 1) | | 3 NURSE 3920 (8 Week 1) | | 3 NURSE 3930 (6 Week 1) | 3 |
| NURSE 3910 (8 Week 2) | | 3 Junior Level Writing (8 Week 2) | | 3 NURSE 3940 (6 Week 2) | 3 |
| 6 | | 6 | | 6 | |
| Second Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| NURSE 4900 (8 Week 1) | | 3 NURSE 4911 (Clinical Component) | 6 | | |
| NURSE 4910 (8 Week 2) | 3 | | | | |
| 6 | | 6 | | | |
| Total Hours: 30 | | | | | |

PLEASE NOTE: This plan is an example of what an academic plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Nursing DNP, Acute Care Pediatric Nurse Practitioner Emphasis

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity, intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that measure their potential in nursing practice, education, research, and scholarship.

We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Applicants to the DNP program will be holistically reviewed using criteria such as GPA, a personal statement, an essay, work/volunteer experiences, professional activities, leadership roles, honors, award recognitions, etc.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsml.edu/services/ctl/onlinelearning/state_authorization.html

Admission Criteria

BSN to DNP

The post-baccalaureate entry point is designed for registered nurses who have completed a Bachelor's of Science in Nursing degree and desire to obtain a doctoral degree in nursing practice. The student will develop the knowledge, skills, and expertise to become clinical scholars, clinical experts, and transformational leaders who will function at the highest level of nursing practice.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from a nationally accredited nursing program
- BSN 3.0 GPA (calculated on the last 60 hours of BSN coursework)
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course
- Acute Care Pediatric Nurse Practitioner (PNP-AC) track requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) track requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Direct Admit BSN to DNP Option

Direct admission to the BSN to DNP program is selective and open to students who have earned a BSN from UMSL or completed the UMSL CON Externship in Nursing Summer program and earned a BSN degree from a nationally accredited nursing program. This option is not available for PNP-AC or PMHNP emphasis areas.

Clinical Practice Requirement

Students admitted via the Direct Admit Option in the BSN to DNP Program, who do not have previous clinical experience as a Registered Nurse (RN), will be required to maintain clinical practice as a Registered Nurse throughout the duration of their tenure as an UMSL DNP student.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from UMSL **OR** completed the UMSL CON Externship in Nursing Summer Program and earned a BSN degree from a nationally accredited nursing program
- 3.75 GPA in the last 60 hours of BSN coursework
- Essay which meets expectations and attributes listed in the essay portion of the application

- Current professional licensure
- Completion of an undergraduate or graduate general statistics course

Once admitted, students must maintain a 3.0 GPA.

Spaces in the BSN to DNP program are limited and are first awarded to guaranteed applicants. Based on space availability, applications will be accepted until the class is full.

Degree Requirements

Core Content for BSN to DNP program

Completion of the BSN to DNP program has seven program emphasis areas: six Nurse Practitioner emphasis areas and a Leadership in Healthcare Systems emphasis area. All programs include coursework in Foundational Concepts, Clinical Expertise, and Integration of Practice.

Foundational Concepts

| | | |
|--------------------|---|-----------|
| NURSE 6111 | Healthcare Systems | 3 |
| NURSE 6130 | Research, Interventions and Evidence-Based Practice | 3 |
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7215 | Evidence-Based Practice for the DNP | 3 |
| NURSE 7220 | Leadership in Practice | 3 |
| NURSE 7230 | Epidemiology | 3 |
| NURSE 7240 | Health Informatics | 3 |
| NURSE 7260 | Program Evaluation and Quality Management in Healthcare | 3 |
| NURSE 7443 | Healthcare Policy and Economics | 3 |
| Total Hours | | 30 |

Clinical Expertise

| | | |
|--------------------|---|-----------|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| Total Hours | | 12 |

Integration of Practice

| | | |
|--------------------|---|-------------|
| NURSE 6954 | Advanced Practice Nursing: Practicum I ¹ | 1-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II ¹ | 1-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III ¹ | 1-4 |
| NURSE 7291 | DNP Clinical Scholarship Project I | 2 |
| NURSE 7292 | DNP Clinical Scholarship Project II | 2 |
| NURSE 7293 | DNP Clinical Scholarship Project III | 2 |
| Total Hours | | 9-18 |

¹ All students must complete a minimum of 8 hours of residency. One credit hour is equivalent to 75 residency hours.

Prior to completion of the DNP program, students will complete a clinical scholarship project that satisfies the graduate school requirement.

Specific Requirements for the Emphasis Area

For all Nurse Practitioner emphasis areas, a student must complete both focus content above and specialty courses based on area of specialty as listed below.

Diagnosis and Management Foundations

| | | |
|------------|---------------------------------|---|
| NURSE 6723 | Foundations of Pediatric Health | 3 |
|------------|---------------------------------|---|

Diagnosis and Management I

| | | |
|------------|--|---|
| NURSE 6743 | Pediatric Health I: Acute and Chronic Care | 4 |
|------------|--|---|

Diagnosis and Management II

| | | |
|------------|---|---|
| NURSE 6745 | Pediatric Health II: Complex Acute Care | 4 |
|------------|---|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 11 |
|--------------------|--|-----------|

Total credit hours in degree program: 70

Learning Outcomes

A successful graduate should, upon completion, be able to:

- Integrates evidence-based concepts from advanced practice nursing, the arts, sciences, and humanities to provide comprehensive, competent, holistic, and patient-centered care promoting healthy outcomes and health equity for diverse individuals, families, communities, and populations.
- Demonstrates clinical decision-making and actions based on ethical and legal obligations, standards of practice, economics, health equity, and nursing values.
- Applies knowledge of health care policies in their regulatory environment and their influence on health care access and quality.
- Generates, synthesizes, translates, applies, and disseminates research to improve health outcomes, quality of care, and minimize risk of harm.
- Evaluates approaches to practice utilizing information and communication technologies to promote, safe, high-quality care, and efficient health delivery services according to best practice, professional, and regulatory standards.
- Demonstrates responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics.

Nursing DNP, Adult-Gerontology Nurse Practitioner Emphasis

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity, intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that measure their potential in nursing practice, education, research, and scholarship.

We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Applicants to the DNP program will be holistically reviewed using criteria such as GPA, a personal statement, an essay, work/volunteer experiences, professional activities, leadership roles, honors, award recognitions, etc.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsf.edu/services/ctl/onlinelearning/state_authorization.html

Admission Criteria

BSN to DNP

The post-baccalaureate entry point is designed for registered nurses who have completed a Bachelor's of Science in Nursing degree and desire to obtain a doctoral degree in nursing practice. The student will develop the knowledge, skills, and expertise to become clinical scholars, clinical experts, and transformational leaders who will function at the highest level of nursing practice.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from a nationally accredited nursing program
- BSN 3.0 GPA (calculated on the last 60 hours of BSN coursework)
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course
- Acute Care Pediatric Nurse Practitioner (PNP-AC) track requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) track requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Direct Admit BSN to DNP Option

Direct admission to the BSN to DNP program is selective and open to students who have earned a BSN from UMSL or completed the UMSL CON Externship in Nursing Summer program and earned a BSN degree from a nationally accredited nursing program. This option is not available for PNP-AC or PMHNP emphasis areas.

Clinical Practice Requirement

Students admitted via the Direct Admit Option in the BSN to DNP Program, who do not have previous clinical experience as a Registered Nurse (RN), will be required to maintain clinical practice as a Registered Nurse throughout the duration of their tenure as an UMSL DNP student.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from UMSL **OR** completed the UMSL CON Externship in Nursing Summer Program and earned a BSN degree from a nationally accredited nursing program
- 3.75 GPA in the last 60 hours of BSN coursework
- Essay which meets expectations and attributes listed in the essay portion of the application

- Current professional licensure
- Completion of an undergraduate or graduate general statistics course

Once admitted, students must maintain a 3.0 GPA.

Spaces in the BSN to DNP program are limited and are first awarded to guaranteed applicants. Based on space availability, applications will be accepted until the class is full.

Degree Requirements

Core Content for BSN to DNP program

Completion of the BSN to DNP program has seven program emphasis areas: six Nurse Practitioner emphasis areas and a Leadership in Healthcare Systems emphasis area. All programs include coursework in Foundational Concepts, Clinical Expertise, and Integration of Practice.

Foundational Concepts

| | | |
|--------------------|---|-----------|
| NURSE 6111 | Healthcare Systems | 3 |
| NURSE 6130 | Research, Interventions and Evidence-Based Practice | 3 |
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7215 | Evidence-Based Practice for the DNP | 3 |
| NURSE 7220 | Leadership in Practice | 3 |
| NURSE 7230 | Epidemiology | 3 |
| NURSE 7240 | Health Informatics | 3 |
| NURSE 7260 | Program Evaluation and Quality Management in Healthcare | 3 |
| NURSE 7443 | Healthcare Policy and Economics | 3 |
| Total Hours | | 30 |

Clinical Expertise

| | | |
|--------------------|---|-----------|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| Total Hours | | 12 |

Integration of Practice

| | | |
|--------------------|---|-------------|
| NURSE 6954 | Advanced Practice Nursing: Practicum I ¹ | 1-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II ¹ | 1-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III ¹ | 1-4 |
| NURSE 7291 | DNP Clinical Scholarship Project I | 2 |
| NURSE 7292 | DNP Clinical Scholarship Project II | 2 |
| NURSE 7293 | DNP Clinical Scholarship Project III | 2 |
| Total Hours | | 9-18 |

¹ All students must complete a minimum of 8 hours of residency. One credit hour is equivalent to 75 residency hours.

Prior to completion of the DNP program, students will complete a clinical scholarship project that satisfies the graduate school requirement.

Specific Requirements for the Emphasis Area

For all Nurse Practitioner emphasis areas, a student must complete both focus content above and specialty courses as listed below.

Diagnosis and Management Foundations

| | | |
|------------|--|---|
| NURSE 6722 | Foundations of Adolescent and Geriatric Health | 3 |
|------------|--|---|

Diagnosis and Management I

| | | |
|------------|----------------|---|
| NURSE 6739 | Adult Health I | 4 |
|------------|----------------|---|

Diagnosis and Management II

| | | |
|------------|-----------------|---|
| NURSE 6740 | Adult Health II | 4 |
|------------|-----------------|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 11 |
|--------------------|--|-----------|

Total number of hours in degree program: 70

Learning Outcomes

- Integrates evidence-based concepts from advanced practice nursing, the arts, sciences, and humanities to provide comprehensive, competent, holistic, and patient-centered care promoting healthy outcomes and health equity for diverse individuals, families, communities, and populations. Translate research to improve healthcare delivery and health outcomes.
- Demonstrates clinical decision-making and actions based on ethical and legal obligations, standards of practice, economics, health equity, and nursing values.
- Applies knowledge of health care policies in their regulatory environment and their influence on health care access and quality.
- Generates, synthesizes, translates, applies, and disseminates research to improve health outcomes, quality of care, and minimize risk of harm.
- Evaluates approaches to practice utilizing information and communication technologies to promote, safe, high-quality care, and efficient health delivery services according to best practice, professional, and regulatory standards.
- Demonstrates responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics.

Nursing DNP, Family Nurse Practitioner Emphasis

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity, intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that measure their potential in nursing practice, education, research, and scholarship.

We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Applicants to the DNP program will be holistically reviewed using criteria such as GPA, a personal statement, an essay, work/volunteer experiences, professional activities, leadership roles, honors, award recognitions, etc.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsl.edu/services/ctl/onlinelearning/state_authorization.html

Admission Criteria

BSN to DNP

The post-baccalaureate entry point is designed for registered nurses who have completed a Bachelor's of Science in Nursing degree and desire to obtain a doctoral degree in nursing practice. The student will develop the knowledge, skills, and expertise to become clinical scholars, clinical experts, and transformational leaders who will function at the highest level of nursing practice.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from a nationally accredited nursing program
- BSN 3.0 GPA (calculated on the last 60 hours of BSN coursework)
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course
- Acute Care Pediatric Nurse Practitioner (PNP-AC) track requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) track requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Direct Admit BSN to DNP Option

Direct admission to the BSN to DNP program is selective and open to students who have earned a BSN from UMSL or completed the UMSL CON Externship in Nursing Summer program and earned a BSN degree from a nationally accredited nursing program. This option is not available for PNP-AC or PMHNP emphasis areas.

Clinical Practice Requirement

Students admitted via the Direct Admit Option in the BSN to DNP Program, who do not have previous clinical experience as a Registered Nurse (RN), will be required to maintain clinical practice as a Registered Nurse throughout the duration of their tenure as an UMSL DNP student.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from UMSL **OR** completed the UMSL CON Externship in Nursing Summer Program and earned a BSN degree from a nationally accredited nursing program
- 3.75 GPA in the last 60 hours of BSN coursework
- Essay which meets expectations and attributes listed in the essay portion of the application

- Current professional licensure
- Completion of an undergraduate or graduate general statistics course

Once admitted, students must maintain a 3.0 GPA.

Spaces in the BSN to DNP program are limited and are first awarded to guaranteed applicants. Based on space availability, applications will be accepted until the class is full.

Degree Requirements

Core Content for BSN to DNP program

Completion of the BSN to DNP program has seven program emphasis areas: six Nurse Practitioner emphasis areas and a Leadership in Healthcare Systems emphasis area. All programs include coursework in Foundational Concepts, Clinical Expertise, and Integration of Practice.

Foundational Concepts

| | | |
|--------------------|---|-----------|
| NURSE 6111 | Healthcare Systems | 3 |
| NURSE 6130 | Research, Interventions and Evidence-Based Practice | 3 |
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7215 | Evidence-Based Practice for the DNP | 3 |
| NURSE 7220 | Leadership in Practice | 3 |
| NURSE 7230 | Epidemiology | 3 |
| NURSE 7240 | Health Informatics | 3 |
| NURSE 7260 | Program Evaluation and Quality Management in Healthcare | 3 |
| NURSE 7443 | Healthcare Policy and Economics | 3 |
| Total Hours | | 30 |

Clinical Expertise

| | | |
|--------------------|---|-----------|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| Total Hours | | 12 |

Integration of Practice

| | | |
|--------------------|---|-------------|
| NURSE 6954 | Advanced Practice Nursing: Practicum I ¹ | 1-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II ¹ | 1-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III ¹ | 1-4 |
| NURSE 7291 | DNP Clinical Scholarship Project I | 2 |
| NURSE 7292 | DNP Clinical Scholarship Project II | 2 |
| NURSE 7293 | DNP Clinical Scholarship Project III | 2 |
| Total Hours | | 9-18 |

¹ All students must complete a minimum of 8 hours of residency. One credit hour is equivalent to 75 residency hours.

Prior to completion of the DNP program, students will complete a clinical scholarship project that satisfies the graduate school requirement.

Specific Requirements for the Emphasis Area

For all Nurse Practitioner emphasis areas, a student must complete both focus content above and specialty courses listed below.

Diagnosis and Management Foundations

| | | |
|------------|---------------------------------|---|
| NURSE 6723 | Foundations of Pediatric Health | 3 |
|------------|---------------------------------|---|

Diagnosis and Management I

| | | |
|------------|----------------|---|
| NURSE 6739 | Adult Health I | 4 |
|------------|----------------|---|

Diagnosis and Management II

| | | |
|------------|-----------------|---|
| NURSE 6740 | Adult Health II | 4 |
|------------|-----------------|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 11 |
|--------------------|--|-----------|

Total number of hours in degree program: 70

Learning Outcomes

- Integrates evidence-based concepts from advanced practice nursing, the arts, sciences, and humanities to provide comprehensive, competent, holistic, and patient-centered care promoting healthy outcomes and health equity for diverse individuals, families, communities, and populations.
- Demonstrates clinical decision-making and actions based on ethical and legal obligations, standards of practice, economics, health equity, and nursing values.
- Applies knowledge of health care policies in their regulatory environment and their influence on health care access and quality.
- Generates, synthesizes, translates, applies, and disseminates research to improve health outcomes, quality of care, and minimize risk of harm.
- Evaluates approaches to practice utilizing information and communication technologies to promote, safe, high-quality care, and efficient health delivery services according to best practice, professional, and regulatory standards.
- Demonstrates responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics.

Nursing DNP, Leadership in Population Health and Healthcare Systems Emphasis

Effective Fall 2021, this program will no longer accept applications.

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity, intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that measure their potential in nursing practice, education, research, and scholarship.

We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Applicants to the DNP program will be holistically reviewed using criteria such as GPA, a personal statement, an essay, work/volunteer experiences, professional activities, leadership roles, honors, award recognitions, etc.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsml.edu/services/ctl/onlinelearning/state_authorization.html

Admission Criteria

BSN to DNP

The post-baccalaureate entry point is designed for registered nurses who have completed a Bachelor's of Science in Nursing degree and desire to obtain a doctoral degree in nursing practice. The student will develop the knowledge, skills, and expertise to become clinical scholars, clinical experts, and transformational leaders who will function at the highest level of nursing practice.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from a nationally accredited nursing program
- BSN 3.0 GPA (calculated on the last 60 hours of BSN coursework)
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course
- Acute Care Pediatric Nurse Practitioner (PNP-AC) track requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) track requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Direct Admit BSN to DNP Option

Direct admission to the BSN to DNP program is selective and open to students who have earned a BSN from UMSL or completed the UMSL CON Externship in Nursing Summer program and earned a BSN degree from a nationally accredited nursing program. This option is not available for PNP-AC or PMHNP emphasis areas.

Clinical Practice Requirement

Students admitted via the Direct Admit Option in the BSN to DNP Program, who do not have previous clinical experience as a Registered Nurse (RN), will be required to maintain clinical practice as a Registered Nurse throughout the duration of their tenure as an UMSL DNP student.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from UMSL **OR** completed the UMSL CON Externship in Nursing Summer Program and earned a BSN degree from a nationally accredited nursing program
- 3.75 GPA in the last 60 hours of BSN coursework
- Essay which meets expectations and attributes listed in the essay portion of the application

- Current professional licensure
- Completion of an undergraduate or graduate general statistics course

Once admitted, students must maintain a 3.0 GPA.

Spaces in the BSN to DNP program are limited and are first awarded to guaranteed applicants. Based on space availability, applications will be accepted until the class is full.

Degree Requirements

Core Content for BSN to DNP program

Completion of the BSN to DNP program has seven program emphasis areas: six Nurse Practitioner emphasis areas and a Leadership in Healthcare Systems emphasis area. All programs include coursework in Foundational Concepts, Clinical Expertise, and Integration of Practice.

Foundational Concepts

| | | |
|--------------------|---|-----------|
| NURSE 6111 | Healthcare Systems | 3 |
| NURSE 6130 | Research, Interventions and Evidence-Based Practice | 3 |
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7215 | Evidence-Based Practice for the DNP | 3 |
| NURSE 7220 | Leadership in Practice | 3 |
| NURSE 7230 | Epidemiology | 3 |
| NURSE 7240 | Health Informatics | 3 |
| NURSE 7260 | Program Evaluation and Quality Management in Healthcare | 3 |
| NURSE 7443 | Healthcare Policy and Economics | 3 |
| Total Hours | | 30 |

Clinical Expertise

| | | |
|--------------------|---|-----------|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| Total Hours | | 12 |

Integration of Practice

| | | |
|--------------------|---|-------------|
| NURSE 6954 | Advanced Practice Nursing: Practicum I ¹ | 1-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II ¹ | 1-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III ¹ | 1-4 |
| NURSE 7291 | DNP Clinical Scholarship Project I | 2 |
| NURSE 7292 | DNP Clinical Scholarship Project II | 2 |
| NURSE 7293 | DNP Clinical Scholarship Project III | 2 |
| Total Hours | | 9-18 |

¹ All students must complete a minimum of 8 hours of residency. One credit hour is equivalent to 75 residency hours.

Prior to completion of the DNP program, students will complete a clinical scholarship project that satisfies the graduate school requirement.

Emphasis Area Requirements

For the Leadership in Population Health and Healthcare Systems emphasis area, a student must complete the focus content and specialty courses listed below.

Foundational Concepts

| | | |
|--------------------|---|-----------|
| NURSE 6111 | Healthcare Systems | 3 |
| NURSE 6130 | Research, Interventions and Evidence-Based Practice | 3 |
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7215 | Evidence-Based Practice for the DNP | 3 |
| NURSE 7220 | Leadership in Practice | 3 |
| NURSE 7230 | Epidemiology | 3 |
| NURSE 7240 | Health Informatics | 3 |
| NURSE 7260 | Program Evaluation and Quality Management in Healthcare | 3 |
| NURSE 7443 | Healthcare Policy and Economics | 3 |
| Nursing Elective | | 3 |
| Total Hours | | 33 |

Clinical Expertise

| | | |
|--------------------|---|-----------|
| NURSE 6418 | Organizational Behavior and Human Resource Management in Healthcare | 3 |
| NURSE 6521 | Healthcare Finance | 3 |
| NURSE 6527 | Patient Safety, Performance Improvement, and Compliance | 3 |
| NURSE 6730 | Nursing Administrative Leadership in Healthcare I | 3 |
| NURSE 6731 | Nursing Administrative Leadership in Healthcare II | 3 |
| Total Hours | | 15 |

Integration of Practice

| | | |
|--------------------|---|-----------|
| NURSE 6934 | Leadership in Population Health and Healthcare Systems Residency I ¹ | 2 |
| NURSE 6935 | Leadership in Population Health and Healthcare Systems Residency II ¹ | 2 |
| NURSE 7934 | Leadership in Population Health and Healthcare Systems Residency III ¹ | 2 |
| NURSE 7291 | DNP Capstone I | 2 |
| NURSE 7292 | DNP Capstone II | 2 |
| NURSE 7293 | DNP Capstone III | 2 |
| Total Hours | | 14 |

¹ All students must complete a minimum of 8 credit hours of residency.

Learning Outcomes

- Integrates evidence-based concepts from advanced practice nursing, the arts, sciences, and humanities to provide comprehensive, competent, holistic, and patient-centered care promoting healthy outcomes and health equity for diverse individuals, families, communities, and populations.
- Demonstrates clinical decision-making and actions based on ethical and legal obligations, standards of practice, economics, health equity, and nursing values.
- Applies knowledge of health care policies in their regulatory environment and their influence on health care access and quality.
- Generates, synthesizes, translates, applies, and disseminates research to improve health outcomes, quality of care, and minimize risk of harm.
- Evaluates approaches to practice utilizing information and communication technologies to promote, safe, high-quality care, and efficient health delivery services according to best practice, professional, and regulatory standards.
- Demonstrates responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics.

Nursing DNP, MSN to DNP Curriculum

The post master's entry point is designed for graduate-prepared nurses who want to develop the knowledge, skills, and expertise to become clinical scholars, transformational leaders, and function at the highest level of nursing practice while obtaining a terminal degree in nursing practice.

Admission Criteria

- Admission to the University by completing the UMSL Graduate School application
- MSN from a nationally accredited nursing program
- MSN 3.0 GPA
- Current professional licensure
- Completion of an undergraduate general statistics course or graduate level general statistics course

See the UMSL College of Nursing's website for the application process and specific program deadlines.

Degree Requirements

| | | |
|------------|---|---|
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7215 | Evidence-Based Practice for the DNP | 3 |
| NURSE 7220 | Leadership in Practice | 3 |
| NURSE 7230 | Epidemiology | 3 |
| NURSE 7240 | Health Informatics | 3 |
| NURSE 7260 | Program Evaluation and Quality Management in Healthcare | 3 |

| | | |
|--------------------|--------------------------------------|-----------|
| NURSE 7291 | DNP Clinical Scholarship Project I | 2 |
| NURSE 7292 | DNP Clinical Scholarship Project II | 2 |
| NURSE 7293 | DNP Clinical Scholarship Project III | 2 |
| NURSE 7443 | Healthcare Policy and Economics | 3 |
| Nursing elective | | 3 |
| Total Hours | | 33 |

Prior to completion of the DNP program, students will complete a clinical scholarship project that satisfies the graduate school requirement.

Learning Outcomes

A successful graduate should, upon completion, be able to:

- Integrates evidence-based concepts from advanced practice nursing, the arts, sciences, and humanities to provide comprehensive, competent, holistic, and patient-centered care promoting healthy outcomes and health equity for diverse individuals, families, communities, and populations.
- Demonstrates clinical decision-making and actions based on ethical and legal obligations, standards of practice, economics, health equity, and nursing values.
- Applies knowledge of health care policies in their regulatory environment and their influence on health care access and quality.
- Generates, synthesizes, translates, applies, and disseminates research to improve health outcomes, quality of care, and minimize risk of harm.
- Evaluates approaches to practice utilizing information and communication technologies to promote, safe, high-quality care, and efficient health delivery services according to best practice, professional, and regulatory standards.

Nursing DNP, Primary Pediatric Nurse Practitioner Emphasis

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity, intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that measure their potential in nursing practice, education, research, and scholarship. We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Applicants to the DNP program will be holistically reviewed using criteria such as GPA, a personal statement, an essay, work/volunteer experiences, professional activities, leadership roles, honors, award recognitions, etc.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsll.edu/services/ctl/onlinelearning/state_authorization.html

Admission Criteria

BSN to DNP

The post-baccalaureate entry point is designed for registered nurses who have completed a Bachelor's of Science in Nursing degree and desire to obtain a doctoral degree in nursing practice. The student will develop

the knowledge, skills, and expertise to become clinical scholars, clinical experts, and transformational leaders who will function at the highest level of nursing practice.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from a nationally accredited nursing program
- BSN 3.0 GPA (calculated on the last 60 hours of BSN coursework)
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course
- Acute Care Pediatric Nurse Practitioner (PNP-AC) track requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) track requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Direct Admit BSN to DNP Option

Direct admission to the BSN to DNP program is selective and open to students who have earned a BSN from UMSL or completed the UMSL CON Externship in Nursing Summer program and earned a BSN degree from a nationally accredited nursing program. This option is not available for PNP-AC or PMHNP emphasis areas.

Clinical Practice Requirement

Students admitted via the Direct Admit Option in the BSN to DNP Program, who do not have previous clinical experience as a Registered Nurse (RN), will be required to maintain clinical practice as a Registered Nurse throughout the duration of their tenure as an UMSL DNP student.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from UMSL **OR** completed the UMSL CON Externship in Nursing Summer Program and earned a BSN degree from a nationally accredited nursing program
- 3.75 GPA in the last 60 hours of BSN coursework
- Essay which meets expectations and attributes listed in the essay portion of the application
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course

Once admitted, students must maintain a 3.0 GPA.

Spaces in the BSN to DNP program are limited and are first awarded to guaranteed applicants. Based on space availability, applications will be accepted until the class is full.

Degree Requirements

Core Content for BSN to DNP program

Completion of the BSN to DNP program has seven program emphasis areas: six Nurse Practitioner emphasis areas and a Leadership in Healthcare Systems emphasis area. All programs include coursework in Foundational Concepts, Clinical Expertise, and Integration of Practice.

Foundational Concepts

| | | |
|--------------------|---|-----------|
| NURSE 6111 | Healthcare Systems | 3 |
| NURSE 6130 | Research, Interventions and Evidence-Based Practice | 3 |
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7215 | Evidence-Based Practice for the DNP | 3 |
| NURSE 7220 | Leadership in Practice | 3 |
| NURSE 7230 | Epidemiology | 3 |
| NURSE 7240 | Health Informatics | 3 |
| NURSE 7260 | Program Evaluation and Quality Management in Healthcare | 3 |
| NURSE 7443 | Healthcare Policy and Economics | 3 |
| Total Hours | | 30 |

Clinical Expertise

| | | |
|--------------------|---|-----------|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| Total Hours | | 12 |

Integration of Practice

| | | |
|--------------------|---|-------------|
| NURSE 6954 | Advanced Practice Nursing: Practicum I ¹ | 1-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II ¹ | 1-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III ¹ | 1-4 |
| NURSE 7291 | DNP Clinical Scholarship Project I | 2 |
| NURSE 7292 | DNP Clinical Scholarship Project II | 2 |
| NURSE 7293 | DNP Clinical Scholarship Project III | 2 |
| Total Hours | | 9-18 |

¹ All students must complete a minimum of 8 hours of residency. One credit hour is equivalent to 75 residency hours.

Prior to completion of the DNP program, students will complete a clinical scholarship project that satisfies the graduate school requirement.

Specific Requirements for the Emphasis Area

For all Nurse Practitioner emphasis areas, a student must complete both focus content above and specialty courses as listed below.

Diagnosis and Management Foundations

| | | |
|-----------------------------------|--|---|
| NURSE 6723 | Foundations of Pediatric Health | 3 |
| Diagnosis and Management I | | |
| NURSE 6743 | Pediatric Health I: Acute and Chronic Care | 4 |

Diagnosis and Management II

| | | |
|--------------------|---|-----------|
| NURSE 6744 | Pediatric Health II: Comprehensive Primary Care | 4 |
| Total Hours | | 11 |

Total number of hours in degree program: 70

Learning Outcomes

A successful graduate should, upon completion, be able to:

- Integrates evidence-based concepts from advanced practice nursing, the arts, sciences, and humanities to provide comprehensive, competent, holistic, and patient-centered care promoting healthy outcomes and health equity for diverse individuals, families, communities, and populations.
- Demonstrates clinical decision-making and actions based on ethical and legal obligations, standards of practice, economics, health equity, and nursing values.
- Applies knowledge of health care policies in their regulatory environment and their influence on health care access and quality.
- Generates, synthesizes, translates, applies, and disseminates research to improve health outcomes, quality of care, and minimize risk of harm.
- Evaluates approaches to practice utilizing information and communication technologies to promote, safe, high-quality care, and efficient health delivery services according to best practice, professional, and regulatory standards.
- Demonstrates responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics.

Nursing DNP, Psychiatric Mental Health Nurse Practitioner Emphasis

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity, intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that measure their potential in nursing practice, education, research, and scholarship. We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Applicants to the DNP program will be holistically reviewed using criteria such as GPA, a personal statement, an essay, work/volunteer experiences, professional activities, leadership roles, honors, award recognitions, etc.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsel.edu/services/ctl/onlinelearning/state_authorization.html

Admission Criteria**BSN to DNP**

The post-baccalaureate entry point is designed for registered nurses who have completed a Bachelor's of Science in Nursing degree and desire

to obtain a doctoral degree in nursing practice. The student will develop the knowledge, skills, and expertise to become clinical scholars, clinical experts, and transformational leaders who will function at the highest level of nursing practice.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from a nationally accredited nursing program
- BSN 3.0 GPA (calculated on the last 60 hours of BSN coursework)
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course
- Acute Care Pediatric Nurse Practitioner (PNP-AC) track requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) track requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Direct Admit BSN to DNP Option

Direct admission to the BSN to DNP program is selective and open to students who have earned a BSN from UMSL or completed the UMSL CON Externship in Nursing Summer program and earned a BSN degree from a nationally accredited nursing program. This option is not available for PNP-AC or PMHNP emphasis areas.

Clinical Practice Requirement

Students admitted via the Direct Admit Option in the BSN to DNP Program, who do not have previous clinical experience as a Registered Nurse (RN), will be required to maintain clinical practice as a Registered Nurse throughout the duration of their tenure as an UMSL DNP student.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from UMSL **OR** completed the UMSL CON Externship in Nursing Summer Program and earned a BSN degree from a nationally accredited nursing program
- 3.75 GPA in the last 60 hours of BSN coursework
- Essay which meets expectations and attributes listed in the essay portion of the application
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course

Once admitted, students must maintain a 3.0 GPA.

Spaces in the BSN to DNP program are limited and are first awarded to guaranteed applicants. Based on space availability, applications will be accepted until the class is full.

Degree Requirements**Core Content for BSN to DNP program**

Completion of the BSN to DNP program has seven program emphasis areas: six Nurse Practitioner emphasis areas and a Leadership in Healthcare Systems emphasis area. All programs include coursework in Foundational Concepts, Clinical Expertise, and Integration of Practice.

Foundational Concepts

| | | |
|--------------------|---|-----------|
| NURSE 6111 | Healthcare Systems | 3 |
| NURSE 6130 | Research, Interventions and Evidence-Based Practice | 3 |
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7215 | Evidence-Based Practice for the DNP | 3 |
| NURSE 7220 | Leadership in Practice | 3 |
| NURSE 7230 | Epidemiology | 3 |
| NURSE 7240 | Health Informatics | 3 |
| NURSE 7260 | Program Evaluation and Quality Management in Healthcare | 3 |
| NURSE 7443 | Healthcare Policy and Economics | 3 |
| Total Hours | | 30 |

Clinical Expertise

| | | |
|--------------------|---|-----------|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| Total Hours | | 12 |

Integration of Practice

| | | |
|--------------------|---|-------------|
| NURSE 6954 | Advanced Practice Nursing: Practicum I ¹ | 1-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II ¹ | 1-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III ¹ | 1-4 |
| NURSE 7291 | DNP Clinical Scholarship Project I | 2 |
| NURSE 7292 | DNP Clinical Scholarship Project II | 2 |
| NURSE 7293 | DNP Clinical Scholarship Project III | 2 |
| Total Hours | | 9-18 |

¹ All students must complete a minimum of 8 hours of residency. One credit hour is equivalent to 75 residency hours.

Prior to completion of the DNP program, students will complete a clinical scholarship project that satisfies the graduate school requirement.

Specific Requirements for the Emphasis Area

For all Nurse Practitioner emphasis areas, a student must complete both focus content above and specialty courses as listed below.

Diagnosis and Management Foundations

| | | |
|------------|--|---|
| NURSE 6721 | Foundations of Psychiatric Mental Health | 3 |
|------------|--|---|

Diagnosis and Management I

| | | |
|------------|-----------------------------|---|
| NURSE 6737 | Psychiatric Mental Health I | 4 |
|------------|-----------------------------|---|

Diagnosis and Management II

| | | |
|--------------------|------------------------------|-----------|
| NURSE 6738 | Psychiatric Mental Health II | 4 |
| Total Hours | | 11 |

Total number of hours in degree program: 70

Learning Outcomes

A successful graduate should, upon completion, be able to:

- Integrates evidence-based concepts from advanced practice nursing, the arts, sciences, and humanities to provide comprehensive, competent, holistic, and patient-centered care promoting healthy outcomes and health equity for diverse individuals, families, communities, and populations.
- Demonstrates clinical decision-making and actions based on ethical and legal obligations, standards of practice, economics, health equity, and nursing values.
- Applies knowledge of health care policies in their regulatory environment and their influence on health care access and quality.
- Generates, synthesizes, translates, applies, and disseminates research to improve health outcomes, quality of care, and minimize risk of harm.
- Evaluates approaches to practice utilizing information and communication technologies to promote, safe, high-quality care, and efficient health delivery services according to best practice, professional, and regulatory standards.
- Demonstrates responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics.

Nursing DNP, Women's Health Nurse Practitioner Emphasis

The UMSL College of Nursing is committed to admitting a diverse group of students who will become nurse leaders responsive to the specific needs of the communities and populations we serve. We value diversity, intellectual discourse and rigor, caring, professionalism, mutual respect and support, innovation, collaboration, and transparency. Applicants will be selected using inclusive and balanced admission criteria that measure their potential in nursing practice, education, research, and scholarship. We measure our success by graduates who become lifelong learners and leaders in their communities and in the profession of nursing.

Applicants to the DNP program will be holistically reviewed using criteria such as GPA, a personal statement, an essay, work/volunteer experiences, professional activities, leadership roles, honors, award recognitions, etc.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsl.edu/services/ctl/onlinelearning/state_authorization.html

Admission Criteria

BSN to DNP

The post-baccalaureate entry point is designed for registered nurses who have completed a Bachelor's of Science in Nursing degree and desire to obtain a doctoral degree in nursing practice. The student will develop the knowledge, skills, and expertise to become clinical scholars, clinical

experts, and transformational leaders who will function at the highest level of nursing practice.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from a nationally accredited nursing program
- BSN 3.0 GPA (calculated on the last 60 hours of BSN coursework)
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course
- Acute Care Pediatric Nurse Practitioner (PNP-AC) track requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) track requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Direct Admit BSN to DNP Option

Direct admission to the BSN to DNP program is selective and open to students who have earned a BSN from UMSL or completed the UMSL CON Externship in Nursing Summer program and earned a BSN degree from a nationally accredited nursing program. This option is not available for PNP-AC or PMHNP emphasis areas.

Clinical Practice Requirement

Students admitted via the Direct Admit Option in the BSN to DNP Program, who do not have previous clinical experience as a Registered Nurse (RN), will be required to maintain clinical practice as a Registered Nurse throughout the duration of their tenure as an UMSL DNP student.

General Admission Criteria:

- Admission to the University by completing the UMSL Graduate School application
- BSN from UMSL **OR** completed the UMSL CON Externship in Nursing Summer Program and earned a BSN degree from a nationally accredited nursing program
- 3.75 GPA in the last 60 hours of BSN coursework
- Essay which meets expectations and attributes listed in the essay portion of the application
- Current professional licensure
- Completion of an undergraduate or graduate general statistics course

Once admitted, students must maintain a 3.0 GPA.

Spaces in the BSN to DNP program are limited and are first awarded to guaranteed applicants. Based on space availability, applications will be accepted until the class is full.

Degree Requirements

Core Content for BSN to DNP program

Completion of the BSN to DNP program has seven program emphasis areas: six Nurse Practitioner emphasis areas and a Leadership in Healthcare Systems emphasis area. All programs include coursework in Foundational Concepts, Clinical Expertise, and Integration of Practice.

Foundational Concepts

| | | |
|------------|---|---|
| NURSE 6111 | Healthcare Systems | 3 |
| NURSE 6130 | Research, Interventions and Evidence-Based Practice | 3 |

| | | |
|--------------------|---|-----------|
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7215 | Evidence-Based Practice for the DNP | 3 |
| NURSE 7220 | Leadership in Practice | 3 |
| NURSE 7230 | Epidemiology | 3 |
| NURSE 7240 | Health Informatics | 3 |
| NURSE 7260 | Program Evaluation and Quality Management in Healthcare | 3 |
| NURSE 7443 | Healthcare Policy and Economics | 3 |
| Total Hours | | 30 |

Clinical Expertise

| | | |
|--------------------|---|-----------|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology for Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| Total Hours | | 12 |

Integration of Practice

| | | |
|--------------------|---|-------------|
| NURSE 6954 | Advanced Practice Nursing: Practicum I ¹ | 1-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II ¹ | 1-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III ¹ | 1-4 |
| NURSE 7291 | DNP Clinical Scholarship Project I | 2 |
| NURSE 7292 | DNP Clinical Scholarship Project II | 2 |
| NURSE 7293 | DNP Clinical Scholarship Project III | 2 |
| Total Hours | | 9-18 |

¹ All students must complete a minimum of 8 hours of residency. One credit hour is equivalent to 75 residency hours.

Prior to completion of the DNP program, students will complete a clinical scholarship project that satisfies the graduate school requirement.

Specific Requirements for the Emphasis Area

For all Nurse Practitioner emphasis areas, a student must complete both focus content above and as listed below.

Diagnosis and Management Foundations

| | | |
|------------------------------------|--|-----------|
| NURSE 6722 | Foundations of Adolescent and Geriatric Health | 3 |
| Diagnosis and Management I | | |
| NURSE 6739 | Adult Health I | 4 |
| Diagnosis and Management II | | |
| NURSE 6740 | Adult Health II | 4 |
| Total Hours | | 11 |

Total number of hours in degree program: 70

Learning Outcomes

A successful graduate should, upon completion, be able to:

- Integrates evidence-based concepts from advanced practice nursing, the arts, sciences, and humanities to provide comprehensive, competent, holistic, and patient-centered care promoting healthy outcomes and health equity for diverse individuals, families, communities, and populations.
- Demonstrates clinical decision-making and actions based on ethical and legal obligations, standards of practice, economics, health equity, and nursing values.
- Applies knowledge of health care policies in their regulatory environment and their influence on health care access and quality.
- Generates, synthesizes, translates, applies, and disseminates research to improve health outcomes, quality of care, and minimize risk of harm.
- Evaluates approaches to practice utilizing information and communication technologies to promote, safe, high-quality care, and efficient health delivery services according to best practice, professional, and regulatory standards.
- Demonstrates responsibility and accountability for decisions and actions based on professional intrapersonal values, ethical and legal obligations, standards of practice, social justice, and economics.

Nursing PhD

Applicants to the Ph.D. program will be holistically reviewed using criteria such as GPA, work/volunteer experience, scholarly writing or projects of any kind, leadership roles, honors, and awards.

For those not residing in Missouri or non-Missouri residents: Prospective students are responsible for reviewing the NC-SARA state authorizations page now and throughout their program to see if the UMSL PhD program is authorized in the state in which they reside. <https://online.missouri.edu/about/state-authorization>.

Admission Criteria

- Admission to the University by completing the UMSL Graduate School Application
- Completion of the College of Nursing supplemental application
- Graduation from a nationally accredited baccalaureate or master's nursing program with 3.25 minimum GPA (4.0 scale)

International applicants must meet minimum requirements on tests of written and spoken English (79 TOEFL, 6.5 IELTS, 53 PTE-A, or 105-110 Duolingo is desired). International students must also apply through the UMSLGLOBAL Services Office.

See the UMSL College of Nursing's Graduate School Profile for the application process and specific program deadlines.

Degree Requirements

There are 66 credits required to complete the degree. BSN to Ph.D. students complete a minimum of 48 credit hours of graduate-level course work, 6 credit hours of electives, and an additional 12 credit hours of dissertation. MSN to Ph.D. students complete a minimum of 45 post-

MSN credit hours and an additional 12 credit hours of dissertation, plus 9 credit hours are earned from Master's level work.

Nursing Science, Theory, and Discipline of Nursing

| | | |
|-------------|---|----|
| NURSE 6424 | Social Determinants of Health for Underserved Populations | 3 |
| NURSE 7200 | State of the Science in Nursing Research and Practice | 3 |
| NURSE 7403 | Development of the Nurse Scientist | 3 |
| NURSE 7481 | Development of Nursing Science and Theory | 3 |
| NURSE 7491 | Advanced Nursing Theory Development and Validation | 3 |
| Total Hours | | 15 |

Nursing Research Methods

| | | |
|------------|--|---|
| NURSE 7211 | Biostatistics I | 3 |
| NURSE 7488 | Introduction to Qualitative Research Methodologies and Methods | 3 |
| NURSE 7212 | Biostatistics II | 3 |
| NURSE 7490 | Advanced Nursing Research Designs and Methods | 3 |
| NURSE 7955 | Research Topics in Nursing and Health: Psychometrics | 3 |
| NURSE 7486 | Research Residency | 3 |

All Ph.D. students (BSN to Ph.D. and MSN to Ph.D.) are required to take 3 credit hours of research residency with a faculty member. The advisor must approve the residency placement to ensure it meets the College of Nursing guidelines.

| | |
|-------------|----|
| Total Hours | 18 |
|-------------|----|

Advanced Research Methods Course

| | | |
|------------------------------|---|---|
| Select one of the following: | | 3 |
| NURSE 7495 | Mixed Methods Research in Health Care | |
| NURSE 7497 | Design, Implementation and Evaluation of Health Interventions | |
| NURSE 7213 | Biostatistics III - Structural Equation Modeling | |
| NURSE 7496 | Seminar in Advanced Qualitative Research Methods | |
| NURSE 7957 | Research Topics in Nursing and Health: Hierarchical Linear Modeling | |
| Total Hours | | 3 |

Cognates

All Ph.D. students (BSN to Ph.D. and MSN to Ph.D.) are required to take a minimum of 9 credit hours of cognates in the related area of research. The advisor must approve the cognate to ensure it meets the College of Nursing guidelines.

Dissertation

| | | |
|------------|-----------------------|----|
| NURSE 7499 | Dissertation Research | 12 |
|------------|-----------------------|----|

Additional Required Course for BSN to Ph.D. Students

| | | |
|-------------|---|---|
| NURSE 6130 | Research, Interventions and Evidence-Based Practice | 3 |
| Electives | | 6 |
| Total Hours | | 9 |

PhD Program Learning Outcomes

Upon completion of the program, graduates will be able to:

- Become a steward of the discipline dedicated to the integrity of its work in the generation, critique, transformation, transmission, and use of its knowledge.
- Develop expertise in core knowledge and methods of the discipline and selected areas of theory and research to establish a program of research and scholarship about patient-related outcomes.
- Develop philosophical literacy and epistemic diversity, in addition to exploring the breadth of the discipline and depth of a particular area of related science.
- Acquire competencies to expand socially meaningful science that supports the discipline and practice of nursing.
- Articulate the clinical and policy implications of their research contributions by translating nursing research into practice and policy to improve health and healthcare systems.
- Provide leadership to effect change in healthcare practice, policy, and education issues by collaboration and partnerships in a data-rich world.
- Improve the healthcare outcomes for individuals, families, communities, and systems regionally, nationally, and internationally.
- Articulate up-to-date data content regarding determinants of health, health equity concepts and theories, structural inequities in health, promotion of cultural safety, and social justice (cultural humility, structural inequities in health including gender bias, and health disparities).

Optometry OD

First Year

Fall Semester

| Semester | Credit Hours | Lecture | Lab |
|--|--------------|---------|-----|
| 8010 Anatomy, Physiology and Disease Processes I | 5 | 4 | 2 |
| 8020 Basic and Clinical Optics I | 4 | 3 | 2 |
| 8030 Introduction to Optometry | 1 | 1 | |
| 8040 Neuroanatomy | 4 | 3 | 2 |
| 8050 Basic and Applied Immunology | 2 | 2 | |
| 8060 Biochemistry | 2 | 2 | |

| | | | |
|--|---|---|---|
| 8090 Case-Based 1 Discovery for the Developing Clinician | 1 | | |
| 8080 Clinical Optometry I | 2 | 1 | 2 |

Spring Semester

| Semester | Credit Hours | Lecture | Lab |
|--|--------------|---------|-----|
| 8110 Anatomy, Physiology and Disease Processes II | 4 | 3 | 2 |
| 8120 Basic and Clinical Optics II | 5 | 4 | 2 |
| 8160 Anatomy and Physiology of the Eye | 5 | 4 | 2 |
| 8180 Clinical Optometry II | 5 | 3 | 4 |
| 8190 Introduction to Clinical Diagnostic Reasoning | 1 | 1 | |
| 8230 Interpersonal Communication | 1 | 1 | |

Second Year

Fall Semester

| Semester | Credit Hours | Lecture | Lab |
|--------------------------------------|--------------|---------|-----|
| 8220 Ophthalmic Optics | 4 | 3 | 2 |
| 8240 Ocular Motility | 2 | 2 | |
| 8250 Monocular Sensory Processes | 5 | 4 | 2 |
| 8260 General and Ocular Pharmacology | 4 | 3 | 2 |
| 8280 Clinical Optometry III | 4 | 2 | 4 |

Spring Semester

| Semester | Credit Hours | Lecture | Lab |
|--|--------------|---------|-----|
| 8320 Ophthalmic Dispensing | 1 | | 2 |
| 8340 Binocular Vision and Space Perception | 4 | 3 | 2 |
| 8370 Foundations of Ocular and Systemic Disease and Management I | 5 | 4 | 2 |

| | | | |
|--|---|---|---|
| 8380 Clinical Optometry IV | 2 | 1 | 2 |
| 8390 Specialty Clinic Laboratory | 1 | | 2 |
| 8391 Clinical Topics in Contact lenses | 1 | 1 | |
| 8392 Clinical Topics in Binocular Vision and Pediatric Optometry | 1 | 1 | |
| 8393 Clinical Topics in Low Vision | 1 | 1 | |
| 8560 Public Health and Epidemiology | 2 | 2 | |

Third Year

Summer Semester

| Semester | Credit Hours | Lecture | Lab |
|---|--------------|---------|-----|
| 8460 Foundations of Ocular and Systemic Disease and Management II | 2 | 2 | |
| 8540 Binocular Vision Anomalies | 4 | 3 | 2 |
| 8650 Geriatric Optometry | 2 | 2 | |
| 8450 Introduction to Primary Care Clinic | 4 | | 8 |

Fall Semester

| Semester | Credit Hours | Lecture | Lab |
|--|--------------|---------|-----|
| 8470 Pharmaceutical Management in Patient Care | 2 | 2 | |
| 8500 Primary Care Clinic I | 6 | | 12 |
| 8520 Contact Lenses I | 3 | 2 | 2 |
| 8550 Low Vision | 2 | 1 | 2 |
| 8570 Advanced Topics in Ocular and Systemic Disease & Management | 6 | 5 | 2 |
| 8640 Pediatric Optometry | 2 | 2 | |

Spring Semester

| Semester | Credit Hours | Lecture | Lab |
|--|--------------|---------|-----|
| 8600 Primary Care Clinic II | 6 | | 12 |
| 8620 Contact Lenses II | 2 | 2 | |
| 8630 Practice Management I | 3 | 3 | |
| 8645 Neurologic Diseases | 2 | 2 | |
| 8660 Contact Lens Specialty Clinic | 1 | | 2 |
| 8670 Comprehensive Case Review and Analysis | 1 | 1 | |
| 8680 Ophthalmic Lasers | 2 | 2 | |
| 8690 Pediatric/Binocular Vision Specialty Clinic | 1 | | 2 |

Fourth Year

six clinical rotation and 2 courses required

Category 1 UM-St. Louis ¹

| | | |
|------------|--|---|
| OPTOM 8700 | UM-St. Louis Pediatric/Binocular Vision Patient Care | 3 |
| OPTOM 8710 | UM-St. Louis Contact Lens Patient Care | 3 |
| OPTOM 8720 | UMSL Eye Health Management Patient Care | 1 |

¹ Must enroll in OPTOM 8700, OPTOM 8710 and OPTOM 8720 concurrently.

Category 2 Institutional

| | | |
|------------|---|---|
| OPTOM 8780 | External Rotation in Institutional Patient Care | 7 |
|------------|---|---|

Category 3 Ocular Disease

| | | |
|------------|--|---|
| OPTOM 8790 | External Rotation in Ocular Disease Patient Care | 7 |
|------------|--|---|

Category 4 Community

| | | |
|------------|---|---|
| OPTOM 8730 | Community Service Patient Care Rotation A | 7 |
| OPTOM 8770 | Community Service Patient Care Rotation C | 7 |

Category 5 Specialty

| | | |
|------------|--|---|
| OPTOM 8800 | External Rotation in Pediatric/Binocular Vision Patient Care | 7 |
| OPTOM 8810 | External Rotation in Contact Lens Patient Care | 7 |

| | | |
|------------|---|---|
| OPTOM 8811 | External Rotation in Ophthalmic Surgical Patient Care | 7 |
| OPTOM 8812 | External Rotation in Geriatric Patient Care | 7 |
| OPTOM 8813 | External Rotation in Ophthalmic Sports Vision | 7 |
| OPTOM 8814 | External Rotation in Primary Care | 7 |
| OPTOM 8815 | External Rotation in Pathology and Treatment | 7 |
| OPTOM 8816 | External Rotation in Ophthalmic Laser Treatment | 7 |
| OPTOM 8817 | External Rotation in Rehabilitative Patient Care | 7 |
| OPTOM 8820 | External Rotation in Low Vision Patient Care | 7 |

Category 6 Elective

| | | |
|------------|---|---|
| OPTOM 8830 | External Rotation in General Patient Care | 7 |
| OPTOM 8840 | External Supplementary Rotation in General Patient Care | 7 |
| OPTOM 8850 | Supplementary Rotation in General Patient Care | 7 |

Required Courses

| | | |
|------------|-------------------------|---|
| OPTOM 8870 | Practice Management II | 2 |
| OPTOM 8880 | Practice Management III | 1 |

Due to advances in the optometric profession, sequencing of courses may change. The courses listed above are subject to change through normal academic procedures.

Elective Courses in the College of Optometry

| | | |
|------------|-------------------|-----|
| OPTOM 8400 | Directed Readings | 1-3 |
| OPTOM 8410 | Directed Research | 1-3 |

Organic Chemistry Graduate Certificate

The graduate certificate in organic chemistry is a 12-credit-hour program. It provides skills and training necessary to advance in the area of organic chemistry, which deals with the structure, properties, composition, reactions, and preparation of carbon-containing compounds. Organic chemists find careers in the rubber, plastics, petrochemical, pharmaceuticals, cosmetics, detergents, foods, coatings, dyestuff, and agrichemical industries. The certificate requires three organic chemistry lecture courses (each three credits) and one elective course (three credits). All students must take the three required courses and one elective course, subject to the Graduate School regulations.

A minimum of three of the courses must be taken at UMSL. Research credits must be taken from UMSL. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the Department of Chemistry and Biochemistry.

Certificate applicants must meet the general University of Missouri-St. Louis Graduate School admissions requirements to be admitted to the Certificate program. Students admitted to the Chemistry M.S. program are automatically eligible to pursue the Certificate; however, they must apply

separately to the Certificate program. Students must maintain a minimum GPA of 3.0 to remain in the Certificate program. The certificate is awarded after completion of the 12 credit hours of courses listed below. Students must apply to be awarded the Certificate. Courses taken while enrolled as an undergraduate may not be repeated nor will they count towards the Certificate.

This 12-credit-hour certificate program also counts toward the 30-credit-hour Master of Science in Chemistry degree program requirements. Students may choose to combine this Certificate with other courses and/or Certificates to obtain the Master of Science in Chemistry degree.

Required Courses

| | | |
|-----------|---|---|
| CHEM 5602 | Advanced Organic Chemistry I - Physical Organic | 3 |
| CHEM 5612 | Advanced Organic Chemistry II - Reactions And Synthesis | 3 |
| CHEM 5652 | Spectroscopic Identification of Organic Compounds | 3 |

Elective**3**

Choose one of the following:

| | |
|-----------|---|
| CHEM 5694 | Special Topics in Organic Chemistry |
| CHEM 6905 | Graduate Research in Chemistry ¹ |

¹ If CHEM 6905 is chosen, then the research project must be in organic chemistry.

Learning outcomes: Upon completion of the certificate, students will have an in-depth knowledge in the structure, synthesis, reactivity and the identification of organic compounds. Students will also be able to take responsibility for the success of projects involving organic chemistry.

Organizational Leadership BA, Community Studies Emphasis

The Organizational Leadership major is designed to provide adult students with the knowledge, skills, and credentials necessary to advance in a rapidly changing workplace. This program will help students understand theoretical and practical aspects of leadership across disciplines, while allowing them to focus on a specific emphasis area that interests them.

This program is for students who have completed at least 60 transferable credit hours at the undergraduate level or have been awarded an A.A. or A.S. degree (or A.A.S. degree with a general education emphasis). Students who do not have previous working experience and substantial transferred credits should consult with an advisor to determine if this program is the correct fit.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). The foreign language requirement for a B.A. must also be satisfied.

Core Courses

| | | |
|----------------|---|---|
| SOC 2001 | Introduction to Organizational Leadership | 3 |
| or INTDSC 2001 | Introduction to Organizational Leadership | |
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |

| | | |
|----------------|--|---|
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| or ENGL 3120 | Business Writing | |
| or ENGL 3130 | Technical Writing | |
| INFSYS 1800 | Computers and Information Systems | 3 |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |
| PHIL 2254 | Business Ethics | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| SOC 4001 | Organizational Leadership Capstone | 3 |
| or INTDSC 4001 | Organizational Leadership Capstone | |

Total Hours **30**

Students Seeking a B.A. in Organizational Leadership must complete one of the following emphasis areas:

- A. Computing and Information Security
- B. Community Studies
- C. Corporate Communication
- D. Criminal Justice
- E. Executive Leadership
- F. Health Communication
- G. Operational Excellence
- H. Social Justice
- I. Individualized Emphasis Area

Specific Requirements for the Emphasis Area

Students must complete at least 9 hours (three courses) of course work from the list below. 9

| | |
|---------------|---------------------------------------|
| SOC 1040 | Social Problems |
| SOC 1241 | Globalization and Social Change |
| SOC 2160 | Sociological Social Psychology |
| SOC 2203 | The City |
| SOC 3501 | Social Mapping for Change |
| SOC/MGMT 3612 | Professional Skills Development |
| SOC 4651 | Dilemmas in Organizational Leadership |

Total Hours Required **9**

Organizational Leadership BA, Computing and Information Security Emphasis

The Organizational Leadership major is designed to provide adult students with the knowledge, skills, and credentials necessary to advance in a rapidly changing workplace. This program will help students understand theoretical and practical aspects of leadership across disciplines, while allowing them to focus on a specific emphasis area that interests them.

This program is for students who have completed at least 60 transferable credit hours at the undergraduate level or have been awarded an A.A. or A.S. degree (or A.A.S. degree with a general education emphasis). Students who do not have previous working experience and substantial transferred credits should consult with an advisor to determine if this program is the correct fit.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). The foreign language requirement for a B.A. must also be satisfied.

Core Courses

| | | |
|----------------|---|---|
| SOC 2001 | Introduction to Organizational Leadership | 3 |
| or INTDSC 2001 | Introduction to Organizational Leadership | |
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| or ENGL 3120 | Business Writing | |
| or ENGL 3130 | Technical Writing | |
| INFSYS 1800 | Computers and Information Systems | 3 |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |
| PHIL 2254 | Business Ethics | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| SOC 4001 | Organizational Leadership Capstone | 3 |
| or INTDSC 4001 | Organizational Leadership Capstone | |

Total Hours **30**

Students Seeking a B.A. in Organizational Leadership must complete one of the following emphasis areas:

- A. Computing and Information Security
- B. Community Studies
- C. Corporate Communication
- D. Criminal Justice
- E. Executive Leadership
- F. Health Communication
- G. Operational Excellence
- H. Social Justice
- I. Individualized Emphasis Area

Specific Requirements for the Emphasis Area

| | | |
|-------------|---|---|
| INFSYS 2800 | Information Systems Concepts and Applications | 3 |
| INFSYS 3842 | Data Networks and Security | 3 |
| INFSYS 3848 | Introduction to Information Security | 3 |

Total Hours **9**

Organizational Leadership BA, Corporate Communication Emphasis

The Organizational Leadership major is designed to provide adult students with the knowledge, skills, and credentials necessary to advance in a rapidly changing workplace. This program will help students understand theoretical and practical aspects of leadership across disciplines, while allowing them to focus on a specific emphasis area that interests them.

This program is for students who have completed at least 60 transferable credit hours at the undergraduate level or have been awarded an A.A. or A.S. degree (or A.A.S. degree with a general education emphasis). Students who do not have previous working experience and substantial transferred credits should consult with an advisor to determine if this program is the correct fit.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). The foreign language requirement for a B.A. must also be satisfied.

Core Courses

| | | |
|--------------------|---|-----------|
| SOC 2001 | Introduction to Organizational Leadership | 3 |
| or INTDSC 2001 | Introduction to Organizational Leadership | |
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| or ENGL 3120 | Business Writing | |
| or ENGL 3130 | Technical Writing | |
| INFSYS 1800 | Computers and Information Systems | 3 |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |
| PHIL 2254 | Business Ethics | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| SOC 4001 | Organizational Leadership Capstone | 3 |
| or INTDSC 4001 | Organizational Leadership Capstone | |
| Total Hours | | 30 |

Students Seeking a B.A. in Organizational Leadership must complete one of the following emphasis areas:

- A. Computing and Information Security
- B. Community Studies
- C. Corporate Communication
- D. Criminal Justice
- E. Executive Leadership
- F. Health Communication
- G. Operational Excellence
- H. Social Justice
- I. Individualized Emphasis Area

Specific Requirements for the Emphasis Area

Students must complete at least 9 hours (three courses) of course work from the list below.

| | | |
|--------------------|--|----------|
| COMM 1150 | Introduction to Public Relations | 9 |
| COMM 3150 | Crisis, Disaster, and Risk Communication | |
| COMM 3370 | Social Media in Public Relations | |
| SOC 4651 | Dilemmas in Organizational Leadership | |
| Total Hours | | 9 |

Organizational Leadership BA, Criminal Justice Emphasis

The Organizational Leadership major is designed to provide adult students with the knowledge, skills, and credentials necessary to advance in a rapidly changing workplace. This program will help students understand theoretical and practical aspects of leadership across disciplines, while allowing them to focus on a specific emphasis area that interests them.

This program is for students who have completed at least 60 transferable credit hours at the undergraduate level or have been awarded an A.A. or A.S. degree (or A.A.S. degree with a general education emphasis). Students who do not have previous working experience and substantial transferred credits should consult with an advisor to determine if this program is the correct fit.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). The foreign language requirement for a B.A. must also be satisfied.

Core Courses

| | | |
|--------------------|---|-----------|
| SOC 2001 | Introduction to Organizational Leadership | 3 |
| or INTDSC 2001 | Introduction to Organizational Leadership | |
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| or ENGL 3120 | Business Writing | |
| or ENGL 3130 | Technical Writing | |
| INFSYS 1800 | Computers and Information Systems | 3 |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |
| PHIL 2254 | Business Ethics | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| SOC 4001 | Organizational Leadership Capstone | 3 |
| or INTDSC 4001 | Organizational Leadership Capstone | |
| Total Hours | | 30 |

Students Seeking a B.A. in Organizational Leadership must complete one of the following emphasis areas:

- A. Computing and Information Security
- B. Community Studies
- C. Corporate Communication
- D. Criminal Justice
- E. Executive Leadership
- F. Health Communication
- G. Operational Excellence
- H. Social Justice
- I. Individualized Emphasis Area

Specific Requirements for the Emphasis Area

Students must complete at least 9 hours (three courses) of course work from the list below.

| | |
|-------------|--|
| CRIMIN 1100 | Introduction to Criminology and Criminal Justice |
| CRIMIN 2130 | Criminal Justice Policy |
| CRIMIN 2250 | Courts |
| SOC 4651 | Dilemmas in Organizational Leadership |

Total Hours 9

Organizational Leadership BA, Executive Leadership Emphasis

The Organizational Leadership major is designed to provide adult students with the knowledge, skills, and credentials necessary to advance in a rapidly changing workplace. This program will help students understand theoretical and practical aspects of leadership across disciplines, while allowing them to focus on a specific emphasis area that interests them.

This program is for students who have completed at least 60 transferable credit hours at the undergraduate level or have been awarded an A.A. or A.S. degree (or A.A.S. degree with a general education emphasis). Students who do not have previous working experience and substantial transferred credits should consult with an advisor to determine if this program is the correct fit.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). The foreign language requirement for a B.A. must also be satisfied.

Core Courses

| | | |
|----------------|---|---|
| SOC 2001 | Introduction to Organizational Leadership | 3 |
| or INTDSC 2001 | Introduction to Organizational Leadership | |
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| or ENGL 3120 | Business Writing | |
| or ENGL 3130 | Technical Writing | |
| INFSYS 1800 | Computers and Information Systems | 3 |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |
| PHIL 2254 | Business Ethics | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| SOC 4001 | Organizational Leadership Capstone | 3 |
| or INTDSC 4001 | Organizational Leadership Capstone | |

Total Hours 30

Students Seeking a B.A. in Organizational Leadership must complete one of the following emphasis areas:

- A. Computing and Information Security
- B. Community Studies
- C. Corporate Communication
- D. Criminal Justice
- E. Executive Leadership
- F. Health Communication

- G. Operational Excellence
- H. Social Justice
- I. Individualized Emphasis Area

Specific Requirements for the Emphasis Area

Students must complete at least 9 hours (three courses) of course work from the elective list below.

| | |
|-------------|---|
| MGMT 3611 | Advanced Management and Organizational Behavior |
| MGMT 3612 | Professional Skills Development |
| or SOC 3612 | Professional Skills Development |
| MGMT 3625 | Leadership in Organizations |
| or SOC 3651 | Social Leadership |
| MGMT 3626 | Diversity Management |
| SOC 4651 | Dilemmas in Organizational Leadership |

Total Hours 9

Organizational Leadership BA, Health Communication Emphasis

The Organizational Leadership major is designed to provide adult students with the knowledge, skills, and credentials necessary to advance in a rapidly changing workplace. This program will help students understand theoretical and practical aspects of leadership across disciplines, while allowing them to focus on a specific emphasis area that interests them.

This program is for students who have completed at least 60 transferable credit hours at the undergraduate level or have been awarded an A.A. or A.S. degree (or A.A.S. degree with a general education emphasis). Students who do not have previous working experience and substantial transferred credits should consult with an advisor to determine if this program is the correct fit.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). The foreign language requirement for a B.A. must also be satisfied.

Core Courses

| | | |
|----------------|---|---|
| SOC 2001 | Introduction to Organizational Leadership | 3 |
| or INTDSC 2001 | Introduction to Organizational Leadership | |
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| or ENGL 3120 | Business Writing | |
| or ENGL 3130 | Technical Writing | |
| INFSYS 1800 | Computers and Information Systems | 3 |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |
| PHIL 2254 | Business Ethics | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| SOC 4001 | Organizational Leadership Capstone | 3 |

| | | |
|--------------------|------------------------------------|-----------|
| or INTDSC 4001 | Organizational Leadership Capstone | |
| Total Hours | | 30 |

Students Seeking a B.A. in Organizational Leadership must complete one of the following emphasis areas:

- A. Computing and Information Security
- B. Community Studies
- C. Corporate Communication
- D. Criminal Justice
- E. Executive Leadership
- F. Health Communication
- G. Operational Excellence
- H. Social Justice
- I. Individualized Emphasis Area

Specific Requirements for the Emphasis Area

| | | |
|--------------------|--|----------|
| COMM 1369 | Introduction to Health Communication | 3 |
| COMM 3150 | Crisis, Disaster, and Risk Communication | 3 |
| COMM 3368 | Advanced Health Communication | 3 |
| Total Hours | | 9 |

Organizational Leadership BA, Individualized Emphasis

The Organizational Leadership major is designed to provide adult students with the knowledge, skills, and credentials necessary to advance in a rapidly changing workplace. This program will help students understand theoretical and practical aspects of leadership across disciplines, while allowing them to focus on a specific emphasis area that interests them.

This program is for students who have completed at least 60 transferable credit hours at the undergraduate level or have been awarded an A.A. or A.S. degree (or A.A.S. degree with a general education emphasis). Students who do not have previous working experience and substantial transferred credits should consult with an advisor to determine if this program is the correct fit.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). The foreign language requirement for a B.A. must also be satisfied.

Core Courses

| | | |
|----------------|---|---|
| SOC 2001 | Introduction to Organizational Leadership | 3 |
| or INTDSC 2001 | Introduction to Organizational Leadership | |
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| or ENGL 3120 | Business Writing | |
| or ENGL 3130 | Technical Writing | |
| INFSYS 1800 | Computers and Information Systems | 3 |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |

| | | |
|--------------------|--|-----------|
| PHIL 2254 | Business Ethics | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| SOC 4001 | Organizational Leadership Capstone | 3 |
| or INTDSC 4001 | Organizational Leadership Capstone | |
| Total Hours | | 30 |

Students Seeking a B.A. in Organizational Leadership must complete one of the following emphasis areas:

- A. Computing and Information Security
- B. Community Studies
- C. Corporate Communication
- D. Criminal Justice
- E. Executive Leadership
- F. Health Communication
- G. Operational Excellence
- H. Social Justice
- I. Individualized Emphasis Area

An individualized emphasis area (9-hour course sequence) can be designed to suit an individual student's personal or professional needs. The courses for this emphasis area must be approved by the program adviser.

Organizational Leadership BA, Operational Excellence Emphasis

The Organizational Leadership major is designed to provide adult students with the knowledge, skills, and credentials necessary to advance in a rapidly changing workplace. This program will help students understand theoretical and practical aspects of leadership across disciplines, while allowing them to focus on a specific emphasis area that interests them.

This program is for students who have completed at least 60 transferable credit hours at the undergraduate level or have been awarded an A.A. or A.S. degree (or A.A.S. degree with a general education emphasis). Students who do not have previous working experience and substantial transferred credits should consult with an advisor to determine if this program is the correct fit.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). The foreign language requirement for a B.A. must also be satisfied.

Core Courses

| | | |
|----------------|---|---|
| SOC 2001 | Introduction to Organizational Leadership | 3 |
| or INTDSC 2001 | Introduction to Organizational Leadership | |
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| COMM 2231 | Communication in the Organization | 3 |
| COMM 2235 | Professional Communication | 3 |
| ENGL 3100 | Junior-Level Writing | 3 |
| or ENGL 3120 | Business Writing | |
| or ENGL 3130 | Technical Writing | |
| INFSYS 1800 | Computers and Information Systems | 3 |

| | | |
|----------------------------|--|-----------|
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |
| PHIL 2254 | Business Ethics | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| SOC 4001 or INTDSC 4001 | Organizational Leadership Capstone | 3 |
| Total Hours | | 30 |

Students Seeking a B.A. in Organizational Leadership must complete one of the following emphasis areas:

- A. Computing and Information Security
- B. Community Studies
- C. Corporate Communication
- D. Criminal Justice
- E. Executive Leadership
- F. Health Communication
- G. Operational Excellence
- H. Social Justice
- I. Individualized Emphasis Area

Specific Requirements for the Emphasis Area

| | | |
|--------------------|---|----------|
| SCMA 3300 | Business Analytics and Statistics | 3 |
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| SCMA 3320 | Advanced Supply Chain and Operations Management | 3 |
| Total Hours | | 9 |

These courses carry a prerequisite of MATH 1105 or higher.

Organizational Leadership BA, Social Justice Emphasis

The Organizational Leadership major is designed to provide adult students with the knowledge, skills, and credentials necessary to advance in a rapidly changing workplace. This program will help students understand theoretical and practical aspects of leadership across disciplines, while allowing them to focus on a specific emphasis area that interests them.

This program is for students who have completed at least 60 transferable credit hours at the undergraduate level or have been awarded an A.A. or A.S. degree (or A.A.S. degree with a general education emphasis). Students who do not have previous working experience and substantial transferred credits should consult with an advisor to determine if this program is the correct fit.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). The foreign language requirement for a B.A. must also be satisfied.

Core Courses

| | | |
|----------------------------|---|---|
| SOC 2001 or INTDSC 2001 | Introduction to Organizational Leadership | 3 |
| SOC 1010 | Introduction to Sociology (MOTR SOC 101) | 3 |
| COMM 2231 | Communication in the Organization | 3 |

| | | |
|---|---|-----------|
| COMM 2235 | Professional Communication | 3 |
| ENGL 3100 or ENGL 3120 or ENGL 3130 | Junior-Level Writing Business Writing Technical Writing | 3 |
| INFSYS 1800 | Computers and Information Systems | 3 |
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) | 3 |
| PHIL 2254 | Business Ethics | 3 |
| MGMT 3600 | Management and Organizational Behavior | 3 |
| SOC 4001 or INTDSC 4001 | Organizational Leadership Capstone | 3 |
| Total Hours | | 30 |

Students Seeking a B.A. in Organizational Leadership must complete one of the following emphasis areas:

- A. Computing and Information Security
- B. Community Studies
- C. Corporate Communication
- D. Criminal Justice
- E. Executive Leadership
- F. Health Communication
- G. Operational Excellence
- H. Social Justice
- I. Individualized Emphasis Area

Specific Requirements for the Emphasis Area

| | | |
|--------------------|-----------------------------|----------|
| SOC 1040 | Social Problems | 3 |
| CRIMIN 2130 | Criminal Justice Policy | 3 |
| COMM 2332 | Intercultural Communication | 3 |
| Total Hours | | 9 |

Personal Finance Literacy Education Graduate Certificate

This 12-hour program is designed to prepare high school teachers who teach personal finance. The program is intended to be a year-long program that admits for the Summer semester only.

Certificate Requirements

Summer

| | | |
|-------------|---------------------------------------|---|
| ECON 5052 | Economics for Educators | 3 |
| TCH ED 5500 | Methods for Teaching Personal Finance | 3 |

Fall

| | | |
|-----------|--------------------------------|---|
| ECON 5053 | Personal Finance for Educators | 3 |
|-----------|--------------------------------|---|

Spring

| | | |
|-------------|--|---|
| SEC ED 6416 | Curriculum Design for Educational Programs | 3 |
|-------------|--|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 12 |
|--------------------|--|-----------|

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Communicate personal finance content clearly.
- Use the national financial literacy standards in teaching personal finance.
- Evaluate the quality and usefulness of available personal finance teaching and learning materials.
- Apply strategies for teaching and learning personal finance.

Philosophy BA

Philosophy is about hard questions: Are we free? Is there a God? What is knowledge? What should I do with my life? In addressing these questions, philosophy develops your skills in thinking, analysis, writing, argumentation and critical reading. Studying philosophy makes you more open-minded: you'll encounter the ideas of people that have lived lives very different from yours, and you'll be impressed by them. Philosophy is enormously interesting and rewarding. If anyone ever asks you "why study philosophy" you'll answer "why haven't you started yet?"

The undergraduate major in philosophy requires 30 hours of philosophy coursework. A minimum of 18 hours in Philosophy must be taken from the UMSL Department of Philosophy. Courses above the 3000-level taken elsewhere do not count toward the major. Philosophy majors must complete all required courses (under Course Requirements) with a grade of "C-" or higher and maintain a 2.0 GPA for all their Philosophy coursework.

General Education Requirements

Majors must meet the university and college general education requirements. Candidates for the B.A. degree may take any foreign language to meet the foreign language requirement. Students who double major with a B.A. in Philosophy and a B.S. degree in Biology, Biochemistry and Biotechnology, Chemistry, Computer Science, Mathematics, or Physics may waive the foreign language requirement.

Course Requirements

History of Philosophy

Select one of the following: 3

| | |
|-----------|--|
| PHIL 1110 | Western Philosophy I: Antiquity to the Renaissance |
| PHIL 3301 | Ancient Philosophy |
| PHIL 3302 | Medieval Philosophy |

And one of the following: 3

| | |
|-----------|---|
| PHIL 1111 | Western Philosophy II: Descartes to the Present |
| PHIL 3303 | Early Modern Philosophy |
| PHIL 3304 | 19th and 20th Century Philosophy |

Logic

Select one of the following: 3

| | |
|-----------|-----------------------------------|
| PHIL 1160 | Critical Thinking (MOTR PHIL 101) |
| PHIL 3360 | Formal Logic |

Normative Philosophy

Select one of the following: 3

| | |
|-----------|--------------------------------------|
| PHIL 1030 | Present Moral Problems |
| PHIL 1130 | Approaches to Ethics (MOTR PHIL 102) |
| PHIL 4430 | Social and Political Philosophy |
| PHIL 4435 | Classical Ethical Theory |

PHIL 4438 Recent Ethical Theory

Junior Level Requirement

Select one of the following: 3

Any 3000 level Philosophy course not used to satisfy a requirement above, excluding PHIL 3320

Metaphysics and Epistemology Requirement

Select one of the following: 3

PHIL 3340 Knowledge and Reality

PHIL 4440 Theories of Knowledge

PHIL 4445 Metaphysics

Senior Capstone Requirement 3

Select any 4000 level Philosophy course, excluding PHIL 4458 and PHIL 4465, that has not been used to satisfy a requirement above

Elective Hours 9

Total Hours 30

Departmental Honors

Majors with a 3.2 or higher grade point average in all courses may, with the department's consent, earn departmental honors by:

1. Taking , Introduction to Formal Logic;
2. Completing at least 3 hours of PHIL 4450, Special Readings in Philosophy;
3. Submitting an acceptable thesis before the end of the senior year.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Recall a broad range of philosophers and philosophies in both western and non-western traditions and understand their interrelations and historical significance
- Demonstrate an ability to read and engage critically with historical and contemporary philosophical texts
- Demonstrate an ability to apply the distinctive methods of philosophy by reconstructing philosophical arguments and deliberating rationally over their merits
- Understand fundamental moral theories and demonstrate an ability to apply them to ethical problems and practical pursuits
- Demonstrate competence with formal reasoning tools such as syllogistic logic, propositional logic, quantificational logic, or probability theory and show an ability to apply those to tools in philosophical and everyday contexts
- Apply philosophical concepts, analytical skills, and critical thinking to disciplines and issues outside of philosophy
- Create and defend their own philosophical views, both by writing in a clear and persuasive style and in oral discussion with other students, faculty and members of the community
- Apply research skills, including an ability to work with primary and secondary literature, in writing argumentative philosophical papers in a chosen area of advanced study

Sample Four Year Plan

| First Year | | | |
|---|-------|---|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 | | 1 PHIL 1111 | 3 |
| PHIL 1110 | 3 | Foreign Language 1002 | 5 |
| ENGL 1100 | 3 | CORE – Communication Proficiency | 3 |
| CORE - Mathematics Proficiency | 3 | EXPLORE – Social Sciences | 3 |
| Foreign Language 1001 | 5 | EXPLORE – Mathematics and Life/ Natural Sciences | 3 |
| | 15 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| PHIL 1030 | 3 | PHIL 1160 | 3 |
| Foreign Language 2101 | 3 | EXPLORE – Social Sciences | 3 |
| CORE – Information Literacy | 3 | EXPLORE – Math and Like/Natural Sciences | 3 |
| CORE – US History and Government | 3 | Cultural Diversity Requirement | 3 |
| EXPLORE – Mathematics & Natural/ Like Sciences | 3 | Elective or minor | 3 |
| | 15 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| PHIL 3378 or 3380 | 3 | PHIL 4440 or 4445 | 3 |
| PHIL XXXX Philosophy Elective | 3 | PHIL XXXX Philosophy Elective | 3 |
| ENGL 3100 | 3 | EXPLORE - Social Sciences | 3 |
| EXPLORE – Social Sciences | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| PHIL XXXX Philosophy Elective | 3 | PHIL XXXX: Philosophy Capstone | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 1 |
| | 15 | | 13 |
| Total Hours: 120 | | | |

Philosophy MA

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL Bulletin. Students are considered for admission to the graduate program in Philosophy only after they have formally applied for admission through the Graduate School. Applications are completed on-line. In addition to the application students must also submit:

- Transcripts of undergraduate study.
- Writing sample, preferably around 15 pages.
- Three letters of recommendation.
- Personal statement explaining one's interest in the program.
- GRE scores (strongly recommended although not required).

Degree Requirements

To earn a M.A. in philosophy, students must complete at least 30 hours of graduate-level course work. In addition, students must write a thesis, for which they must take three to six credit hours of Thesis Research. Entering students must demonstrate a competence in logic, either by having passed the relevant course prior to admission or by taking

PHIL 5561: Graduate Formal Logic here at UMSL. Students should take PHIL 5400: Proseminar in Philosophy in the first year of residency. At least two-thirds of the course work must be completed in residence at UMSL. In addition, the courses taken are subject to two distribution requirements:

1. At least half of the courses must be at the 5000 level.
2. Two courses (6 credit hours) must be chosen from each of the following four subject areas:
 - Value Theory
 - History of Philosophy
 - Logic/Philosophy of Science
 - Epistemology/Metaphysics

Cooperative arrangement with Saint Louis University

The strengths of the UMSL Department of Philosophy are complemented by those of the Saint Louis University Philosophy Department, which has strengths in the history of philosophy as well as in philosophy of religion. To enhance students' opportunities for instruction and expertise, the two departments have worked out a cooperative arrangement that permits graduate philosophy students on each campus to take up to four courses at the partner institution. In any given semester, UMSL graduate students must take at least half of their courses at their home institution. Students admitted to the M.A. program on a probationary basis must take all their courses at UMSL during their first semester.

Expected Learning Outcomes

- Acquire advanced knowledge of traditional philosophical issues in the western tradition.
- Develop critical thinking skills based on knowledge of the standards governing logical reasoning.
- Acquire familiarity with philosophical issues that arise in some other disciplines (e.g. biology, art, education, etc.).
- Acquire a basic understanding of ethical principles and their role in resolving ethical disputes.
- Acquire the knowledge and skills required to write a paper identifying a philosophical issue and presenting arguments supporting a thesis for resolving it.

Philosophy MA Accelerated Master's Degree

The Accelerated MA Program in Philosophy provides an opportunity for students of recognized academic ability and educational maturity to fulfill integrated requirements of undergraduate and master's degree programs in three years from the beginning of their junior year. Students will be awarded the BA degree as soon as they satisfy the BA requirements, and will be awarded the MA degree when they satisfy the MA requirements. With a carefully designed program, a student can earn both degrees within as few as ten semesters.

Admission Requirements

Students should apply to the MA Program Director for admission to the Accelerated MA Program in Philosophy the semester they will complete 60 undergraduate credit hours or as soon thereafter as possible. It is also recommended that students complete the foreign language requirement and the junior-level writing requirement before applying. A cumulative

grade point average of 3.0 or higher and three letters of recommendation from faculty are required for consideration.

In their final semester in undergraduate status, and with the recommendation of the MA Program Director, students apply for admission to the graduate program. Students must maintain a grade point average of 3.0 or higher throughout the Accelerated MA Program.

Program Requirements

The combined program requires a minimum of 138 credit hours. Students accepted to the Accelerated MA degree program will be permitted to count up to 12 credit hours at the 4000-level or higher toward both the BA and MA degrees. The remaining 18 credit hours must be at the 5000 level.

In qualifying for the B.A., students must meet all university and college requirements, including all the requirements of the regular undergraduate major in philosophy. In qualifying for the M.A., students must meet all the requirements of the regular M.A. in philosophy except that they can count PHIL 5495 – Thesis Hours towards their distribution requirements.

Junior Year

Students will normally satisfy their History of Philosophy, Junior Level, and Logic requirements (the latter usually by taking PHIL 3360: Formal Logic), along with electives. Any courses still needed to satisfy college foreign language and expository writing requirements would also be taken during this year.

Senior Year Courses – 12 credits toward the BA and MA degree:

- Senior Capstone Requirement (3 credits)
- Any three 4000-level Philosophy course (9 credits)

Final Year Courses - 18 credits toward the MA degree only:

FALL (9 credits)

- Proseminar (3 credits)
- Any two 5000-level Philosophy courses (6 credits)

SPRING (9 credits)

- PHIL 5495 – Thesis Hours (3 credits)
- Any two 5000-level Philosophy courses (6 credits)

Awarding Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Philosophy Minor

Requirements

The undergraduate minor in philosophy requires any five philosophy courses, at least three of which must be taken at the 3000 level or higher. Students with particular interests are encouraged to use the tracks above to organize their minor. At least 6 hours of course work for the minor at the 2000 level or higher must be taken in residence in the UMSL Department of Philosophy.

A GPA of 2.0 or better is required in courses presented for the minor. Prospective minors are encouraged to consult with members of the department for advice in planning an appropriate sequence of courses.

Learning Outcomes

An ideal graduate with a Minor in Philosophy will:

- Be familiar with a range of philosophers and philosophies and understand their interrelations and historical significance.
- Demonstrate an ability to read and engage critically with historical and contemporary philosophical texts
- Demonstrate an ability to apply the distinctive methods of philosophy by reconstructing philosophical arguments and deliberating rationally over their merits
- Apply conceptual understanding and critical thinking in writing argumentative essay in a clear and persuasive style in some chosen area of advanced study

Philosophy of Science and Technology Minor

The Minor in Philosophy of Science and Technology (PST) is an interdisciplinary program requiring a minimum of 18 credits in PST.

All required courses must be completed with a "C" or higher. The satisfactory/unsatisfactory option may not be used. No transfer courses may be used towards the PST Minor. A minimum of 12 hours must be taken at 2000 and above with 9 of those hours being at 3000 or above. Courses in the upper division may satisfy requirements for the student's major, consistently with the major's requirements.

Requirements

Math

| | | |
|---|---|---|
| Select one of the following courses in either statistics or calculus: | | 3 |
| BIOL 4122 | Biostatistics | |
| ECON 3100 | Economic Data and Statistics | |
| MATH 1320 | Introduction to Probability and Statistics | |
| MATH 1800 | Analytic Geometry and Calculus I | |
| PSYCH 2201 | Psychological Statistics | |
| SOC 3220 | Quantitative Data Analysis in Social Science Research | |

Logic and Methodology

| | | |
|---|------------------------------------|-----|
| Select one of the following courses in either logic or methodology: | | 3-4 |
| ANTHRO 4310 | Laboratory Methods in Archaeology | |
| HIST 3199 | Introduction to Historical Inquiry | |
| PHIL 3360 | Formal Logic | |

| | | |
|---|---|--------------|
| PHIL 4460 | Topics in Logic | |
| PSYCH 2219 | Research Methods in Psychological Science | |
| SOC 3230 | Social Research Methods | |
| Philosophy | | |
| PHIL 3380 | Philosophy of Science | 3 |
| Select one of the following in the philosophy of science and technology: | | 3 |
| PHIL 2280 | Minds, Brains, and Machines | |
| PHIL 3380 | Philosophy of Science | |
| PHIL 4452 | | |
| PHIL 4479 | Philosophy of Cognitive Science | |
| PHIL 4480 | Topics in Philosophy of Science | |
| PHIL 4482 | | |
| PHIL 4483 | | |
| Science | | |
| Select 6 credit in the mathematical, physical, life, behavioral, or social sciences. ¹ | | 6 |
| Total Hours | | 18-19 |

¹ The science courses must be in addition to those satisfying the Gen Ed requirements and conditional upon their acceptance by the PST undergraduate advisor.

Prerequisites

Some courses required by the Minor in PST have prerequisites. Some students may satisfy prerequisites by virtue of their prior curriculum. When this is not the case, students are responsible for either satisfying the prerequisites by adding courses to their curriculum or obtaining a waiver from the instructor.

Physical Education BSEd PK-12 Emphasis

Through this degree teacher candidates are prepared to effectively teach health and physical education in K-12 settings. The requirements are listed below.

Degree Requirements

B.S.Ed. degree candidates must complete the following General Education courses required by the College of Education and the Missouri Department of Elementary and Secondary Education.

General Education and University Requirements:

CORE AREAS:

| | | |
|--|--|--|
| First Year Writing | | |
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | |
| or HIST 1111 | | |
| Math Proficiency (requirement varies by program) | | |
| MATH 1030 | College Algebra (MOTR MATH 130) | |
| or MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | |

| | | |
|---|---|--|
| or MATH 1021 | Choice and Chance | |
| or MATH 1025 | Geometry in the Real World | |
| or MATH 1045 | PreCalculus (MOTR MATH 150) | |
| Communication Proficiency | | |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |
| Information Literacy | | |
| ED TECH 2230 | Information Literacy | |
| American History or Government | | |
| HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |
| or HIST 1002 | American Civilization 1865 to Present (MOTR HIST 102) | |
| EXPLORE AREAS: | | |
| Humanities and Fine Arts | | |
| Three courses from two of the following fields: art, foreign language, music (excluding applied music), philosophy, theater, dance, and literature. | | |
| Social Science | | |
| ED PSY 2212 | Child and Adolescent Development | |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | |
| One additional 1000-2000 level course in Social Science Explore Area | | |
| Math and Life/Natural Sciences | | |
| BIOL 1012 | General Biology: The Science of Life (MOTR BIOL 100) | |
| PHYSICS 1001 | | |
| One additional 1000-2000 level course in Math and Life/Natural Sciences Explore Area | | |
| ADDITIONAL UNIVERSITY REQUIREMENT | | |
| ENGL 3100 | Junior-Level Writing | |

Program Requirements

Beginning with those students graduating in May, 2017 and receiving teacher certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Professional Education courses must be completed with a grade of C or better (a grade of C- or below is unacceptable).

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

B.S.Ed. and B.A. degrees with certification candidates must complete the following:

| | | |
|---|--|---|
| Introduction to Education | | |
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| Level I: Exploring Education as a Profession | | |
| TCH ED 2000 | Becoming a Professional Educator | 1 |

| | | |
|---|--|---|
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| HLTH PE 3277 | Foundations of Health and Physical Education Programs | 3 |
| HLTH PE 3280 | Human Anatomy and Physiology | 4 |
| Level II: Analyzing the Nature and Process of Education | | |
| ED PSY 3312 | | 3 |
| ED TECH 3135 | Technology for Educators | 1 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 3310 | Instructional Design and Technology Integration | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| HLTH PE 3275 | Psychological Aspects of Physical Education | 3 |
| HLTH PE 3284 | Physiology of Human Exercise | 3 |
| HLTH PE 3285 | Safety and Emergency Care for Health and Physical Education | 3 |
| HLTH PE 3380 | Introduction to Nutrition for Health and Performance | 3 |
| PHY ED 2134 | Personal Physical Fitness | 3 |
| PHY ED 3267 | Performance Analysis in Physical Education | 3 |
| PHY ED 3282 | Physical Growth and Motor Development | 3 |
| PHY ED 3283 | Kinesiology | 3 |
| 9 hours can be taken concurrently with Level III courses: | | |
| HLTH PE 3434 | Teaching of Health and Wellness | 4 |
| PHY ED 3261 | Physical Activity for Diverse Learners | 3 |
| PHY ED 3468 | Curriculum and Methods of Teaching Physical Education | 3 |
| Level III: Synthesizing Theory and Practice in Education | | |
| The following Health and Physical Education courses are required: | | |
| PHY ED 3422 | Teaching of Skills: Grades Pk-4 | 4 |
| PHY ED 3423 | Teaching of Skills: Grades 5-9 | 3 |
| PHY ED 3424 | Teaching of Skills: Grades 9-12 | 3 |
| PHY ED 3425 | Teaching Skills: Movement, Dance, and Rhythms | 3 |
| HLTH PE 4989 | Practicum I: Site-Based Experience in Physical Education | 3 |
| HLTH PE 4990 | Practicum II: 16-Week Site-Based Experience in Health and Physical Education | 9 |
| HLTH PE 4992 | Practicum II: 4-Week Site-Based Experience in Health and Physical Education | 3 |

Total Hours **89**

Minimum 124 hours

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|--------------------------------------|-------|
| ENGL 1100 | | 3 BIOL 1012 | 3 |
| HIST 1001 or 1002 | | 3 COMM 1040 | 3 |
| MATH 1020 or 1030 | | 3 ED PSY 2212 | 3 |
| TCH ED 1000 | | 1 TCH ED 1001 | 1 |
| EXPLORE - Humanities and Fine Arts | | 3 TCH ED 2000 | 1 |
| EXPLORE - Social Sciences | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| 16 | | 14 | |

Second Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|--|-------|----------------|-------|----------------|-------|
| ED TECH 2230 | | 3 HLTH PE 3277 | | 3 ENGL 3100 | 3 |
| PHY ED 2134 | | 3 HLTH PE 3380 | | 3 SPEC ED 3318 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 HLTH PE 3280 | | 4 TCH ED 3001 | 1 |
| EXPLORE - Math and Sciences | | 3 TCH ED 2001 | | | 1 |
| EXPLORE - Social Sciences ¹ | | 3 TCH ED 2209 | | | 2 |
| | | TCH ED 3310 | | | 3 |
| 15 | | 16 | | 7 | |

Third Year

| Fall | Hours | Spring | Hours |
|--------------|-------|---------------|-------|
| HLTH PE 3275 | | 3 PHY ED 3283 | 3 |
| HLTH PE 3284 | | 3 PHY ED 3423 | 3 |
| HLTH PE 3285 | | 3 PHY ED 3424 | 3 |
| HLTH PE 3434 | | 4 PHY ED 3282 | 3 |
| TCH ED 3312 | | 3 PHY ED 3468 | 3 |
| 16 | | 15 | |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------|-------|----------------|-------|
| HLTH PE 4989 | | 3 HLTH PE 4990 | 12 |
| PHY ED 3422 | | 4 | |
| PHY ED 3425 | | 3 | |
| PHY ED 3261 | | 3 | |
| PHY ED 3267 | | 3 | |

| | |
|-------------------------|-----------|
| TCH ED 4391 | 3 |
| 19 | 12 |
| Total Hours: 130 | |

¹ Course should also satisfy the Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Physics BA

Physicists investigate fundamental nature of the forces and particles, and the resultant states of matter, that make up the physical world. The Department of Physics and Astronomy at UMSL provides undergraduates with a broad-based education in the fundamental concepts of physics and the experimental and theoretical skills essential to practicing scientists. The BA degree offers students an opportunity to combine the rigorous study of physics with additional studies of languages and the liberal arts. This degree is an ideal preparation for a career that combines science with other fields, such as science journalism, science policy, or patent law.

General Education Requirements

Majors must complete the university and college general education requirements (p. 30). Any of the following courses may be used to satisfy the physical science requirement:

| | | |
|---------------|---|---|
| ASTRON 1001 | Cosmic Evolution Introductory Astronomy (MOTR ASTR 100) | 3 |
| ASTRON 1011 | Planets and Life in the Universe | 3 |
| ASTRON 1012 | The Violent Universe and the New Astronomy | 3 |
| ASTRON 1050 | Introduction to Astronomy I (MOTR ASTR 100) | 3 |
| ASTRON 1051 | Introduction to Astronomy II | 3 |
| ATM SCI 1001 | Elementary Meteorology | 3 |
| GEOL 1001 | General Geology | 3 |
| GEOL 1002 | Historical Geology | 3 |
| PHYSICS 1001 | How Things Work (MOTR PHYS 100) | 3 |
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1011L | Basic Physics I Laboratory | 1 |
| PHYSICS 1012 | Basic Physics II | 3 |
| PHYSICS 1012L | Basic Physics II Laboratory | 1 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |

Degree Requirements

All physics majors in all programs must complete the physics core curriculum with the exception that majors pursuing the Physics Education option are not required to take PHYSICS 1099 and CMP SCI 1250. In addition to the core courses, each individual program has its own specific requirements. Required Physics, Mathematics, Chemistry, Biology, and

Computer Science courses for a major or minor in physics may not be taken on a satisfactory/unsatisfactory grading basis.

Core Curriculum

| | | |
|---|---|-----------|
| The following physics courses are required: | | 23 |
| PHYSICS 1099 | Windows on Physics | |
| PHYSICS 2111 | Physics: Mechanics and Heat | |
| PHYSICS 2111L | Mechanics and Heat Laboratory | |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory | |
| PHYSICS 3200 | Mathematical Methods of Theoretical Physics | |
| PHYSICS 3221 | Mechanics | |
| PHYSICS 3223 | Electricity and Magnetism | |
| PHYSICS 3231 | Introduction to Modern Physics I | |
| Also required are: | | 26 |
| MATH 1800 | Analytic Geometry and Calculus I | |
| MATH 1900 | Analytic Geometry and Calculus II | |
| MATH 2000 | Analytic Geometry and Calculus III | |
| MATH 2020 | Introduction to Differential Equations | |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | |
| CMP SCI 1250 | Introduction to Computing | |
| Total Hours | | 49 |

Note: Students are urged to begin the calculus sequence [MATH 1800, Analytic Geometry and Calculus I] as soon as possible to avoid delays in graduation.

Students with experience in digital computer programming may be excused from CMP SCI 1250.

Bachelor of Arts in Physics

The B.A. program is tailored to students wishing to preserve the option for specialization in graduate school without sacrificing the advantages of a liberal arts education. In addition to the core curriculum, including the foreign language requirement, at least three electives at the 3000 or 4000 levels must be completed. It is recommended that at least one of these three electives include ASTRON 4322, PHYSICS 4311, or PHYSICS 4347 for the required capstone course. The Department of Physics and Astronomy will accept the three-course sequence in American Sign Language as a substitution for the foreign language requirement for the degree. At least 31 hours of physics courses, but no more than 45 hours, are required.

Program Purpose

The purpose of the B.A. in Physics program at the University of Missouri at St. Louis is to prepare students for a professional career and/or graduate or professional studies in a field that combines the physical sciences with aspects of the humanities or other professions, such as science advocacy, science policy, patent law, or science journalism.

Learning Outcomes

- Students will be able to demonstrate an of basic physics concepts including classical mechanics, electricity and magnetism, and modern physics
- Students will demonstrate proficiency in a foreign language
- Students will be able to demonstrate an understanding several advanced undergraduate areas of physics/astronomy, such as observational astrophysics, biophysics, quantum mechanics, or experimental design
- Students will be skilled in problem-solving, critical thinking and analytical reasoning as applied to scientific problems
- Students will be proficient in both written and oral communication of the results of scientific work
- Students will have the skills necessary for conducting original scientific research as part of an interdisciplinary problem-solving team
- Students will have the skills necessary to identify possible errors in scientific data, and to assess the significance of observed results

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|--------------------------|-------|-------------------------|-------|
| INTDSC 1003 ¹ | | 1 CHEM 1111 | 5 |
| PHYSICS 1099 | | 1 MATH 1800 | 5 |
| MATH 1030 | | 3 Foreign Language 1002 | 5 |
| MATH 1035 | 2 | | |
| Foreign Language 1001 | 5 | | |
| ENGL 1100 | 3 | | |
| | 15 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|-----------------------|-------|------------------------------------|-------|
| PHYSICS 2111 | | 4 PHYSICS 2112 | 4 |
| PHYSICS 2111L | | 1 PHYSICS 2112L | 1 |
| MATH 1900 | | 5 MATH 2000 | 5 |
| CMP SCI 1250 | | 3 CORE - US History and Government | 3 |
| Foreign Language 2101 | | 3 EXPLORE - Social Sciences | 3 |
| | 16 | | 16 |

Third Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|----------------------------------|-------|
| PHYSICS 3200 | | 3 PHYSICS 3221 | 3 |
| PHYSICS 3231 | | 3 PHYSICS 3223 | 3 |
| MATH 2020 | | 3 ENGL 3160 | 3 |
| CORE - Communication Proficiency | | 3 EXPLORE - Social Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 Cultural Diversity Requirement | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---|-------|--|-------|
| PHYSICS/ASTRON 3000+ Physics or Astronomy Elective elective | | 3 PHYSICS/ASTRON 3000+Physics or Astronomy lective | 3 |
| PHYSICS/ASTRON 3000+ Physics or Astronomy Elective elective | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Social Sciences | | 3 Elective or minor | 3 |
| EXPLORE - Social Sciences | | 3 Elective or minor | 3 |
| Elective or minor | | 1-3 Elective or minor | 3 |
| | 13-15 | | 15 |

Total Hours: 120-122

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in Physics

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Physics with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Physics BS, Astrophysics Emphasis

The study of astrophysics aims to understand the universe and everything within it in terms of the fundamental nature of forces and particles. The Department of Physics and Astronomy at UMSL is devoted to providing undergraduates with a broad-based education in astrophysics with the experimental, observational, and theoretical skills essential to practicing astronomers and astrophysicists. Undergraduate education in astrophysics prepares students for both graduate study and professional careers in astronomy, atmospheric science, image processing, cosmology, and instrumentation.

General Education Requirements

Majors must complete the university and college general education requirements (p. 30). Any of the following courses may be used to satisfy the physical science requirement:

| | | |
|---------------|---|---|
| ASTRON 1001 | Cosmic Evolution Introductory Astronomy (MOTR ASTR 100) | 3 |
| ASTRON 1011 | Planets and Life in the Universe | 3 |
| ASTRON 1012 | The Violent Universe and the New Astronomy | 3 |
| ASTRON 1050 | Introduction to Astronomy I (MOTR ASTR 100) | 3 |
| ASTRON 1051 | Introduction to Astronomy II | 3 |
| ATM SCI 1001 | Elementary Meteorology | 3 |
| GEOL 1001 | General Geology | 3 |
| GEOL 1002 | Historical Geology | 3 |
| PHYSICS 1001 | How Things Work (MOTR PHYS 100) | 3 |
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1011L | Basic Physics I Laboratory | 1 |
| PHYSICS 1012 | Basic Physics II | 3 |
| PHYSICS 1012L | Basic Physics II Laboratory | 1 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |

Degree Requirements

All physics majors in all programs must complete the physics core curriculum with the exception that majors pursuing the Physics Education option are not required to take PHYSICS 1099 and CMP SCI 1250. In addition to the core courses, each individual program has its own specific requirements. Required Physics, Mathematics, Chemistry, Biology, and Computer Science courses for a major or minor in physics may not be taken on a satisfactory/unsatisfactory grading basis.

Core Curriculum

The following physics courses are required: 23

| | |
|---------------|---|
| PHYSICS 1099 | Windows on Physics |
| PHYSICS 2111 | Physics: Mechanics and Heat |
| PHYSICS 2111L | Mechanics and Heat Laboratory |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory |
| PHYSICS 3200 | Mathematical Methods of Theoretical Physics |
| PHYSICS 3221 | Mechanics |
| PHYSICS 3223 | Electricity and Magnetism |
| PHYSICS 3231 | Introduction to Modern Physics I |

Also required are: 26

| | |
|--------------|---|
| MATH 1800 | Analytic Geometry and Calculus I |
| MATH 1900 | Analytic Geometry and Calculus II |
| MATH 2000 | Analytic Geometry and Calculus III |
| MATH 2020 | Introduction to Differential Equations |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) |
| CMP SCI 1250 | Introduction to Computing |

Total Hours 49

Note: Students are urged to begin the calculus sequence [MATH 1800, Analytic Geometry and Calculus I] as soon as possible to avoid delays in graduation.

Students with experience in digital computer programming may be excused from CMP SCI 1250.

Astrophysics Option

Students who have interests in the aerospace sciences or anticipate graduate studies in astrophysics may elect this option. At least 48 hours must be taken. In addition to the core curriculum, the following physics courses are required:

Physics

| | | |
|--------------|---------------------------------|---|
| PHYSICS 4323 | Modern Optics | 3 |
| PHYSICS 4331 | Intro to Quantum Mechanics | 3 |
| PHYSICS 4341 | Thermal and Statistical Physics | 3 |
| PHYSICS 4350 | Computational Physics | 3 |

Astronomy

| | | |
|--|---|---|
| ASTRON 1050 | Introduction to Astronomy I (MOTR ASTR 100) | 3 |
| ASTRON 1051 | Introduction to Astronomy II | 3 |
| ASTRON 4301 | Astrophysics | 3 |
| ASTRON 4322 | Observational Astronomy | 4 |
| Select one physics elective at or above the 4000 level. ¹ | | 3 |

Mathematics

| | | |
|-----------|---------------------------|---|
| MATH 2450 | Elementary Linear Algebra | 3 |
|-----------|---------------------------|---|

Total Hours 31

¹ With consent of the astronomy adviser, there may be substitution of ASTRON 1001, ASTRON 1011 or ASTRON 1012 for ASTRON 1050 or ASTRON 1051.

Program Purpose

The purpose of the B.S. in Physics (Astrophysics Option) program at the University of Missouri at St. Louis is to prepare students for a professional career in astrophysics or a related field, or for graduate studies in astrophysics.

Learning Outcomes

- Students will be able to demonstrate an understanding of basic physics concepts including classical mechanics, electricity and magnetism, thermal and statistical physics, modern optics, and quantum mechanics
- Students will be able to demonstrate an understanding of basic principles and concepts of modern astrophysics and observational astronomy
- Students will be able to perform astronomical observations, reduce and critically interpret their data
- Students will be skilled in problem-solving, critical thinking and analytical reasoning as applied to scientific problems
- Students will be proficient in both written and oral communication of the results of scientific work
- Students will have the skills necessary for conducting original scientific research as part of a problem-solving team

- Students will have the skills necessary to identify possible errors in scientific data, and to assess the significance of observed results

Sample Four Year Plan

| | | | |
|--|-------|--|-------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 ASTRON 1051 | 3 |
| PHYSICS 1099 | | 1 MATH 1800 | 5 |
| CHEM 1111 | | 5 CORE - US History and Government | 3 |
| MATH 1030 | | 3 EXPLORE - Social Sciences | 3 |
| MATH 1035 | | 2 | |
| ENGL 1100 | | 3 | |
| | 15 | | 14 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| PHYSICS 2111 | | 4 PHYSICS 2112 | 4 |
| PHYSICS 2111L | | 1 PHYSICS 2112L | 1 |
| MATH 1900 | | 5 MATH 2000 | 5 |
| ASTRON 1050 | | 3 MATH 2450 | 3 |
| CMP SCI 1250 | | 3 CORE - Communication Proficiency | 3 |
| | 16 | | 16 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| PHYSICS 3200 | | 3 PHYSICS 3221 | 3 |
| PHYSICS 3231 | | 3 PHYSICS 3223 | 3 |
| MATH 2020 | | 3 PHYSICS 4341 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 PHYSIC/ASTRON 4XXX Physics or Astronomy Course | 3 |
| Cultural Diversity Requirement | | 3 EXPLORE - Humanities & Fine Arts | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| PHYSICS 4331 | | 3 ASTRON 4301 or 4322 | 3 |
| PHYSICS 4323 | | 3 PHYSICS 4350 | 3 |
| PHYSICS 4XXX Physics or Astronomy Course | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| ENGL 3160 | | 3 EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | | 3 Elective or minor | 2 |
| | 15 | | 14 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Physics BS, Biophysics Emphasis

The study of astrophysics aims to understand the universe and everything within it in terms of the fundamental nature of forces and particles. The Department of Physics and Astronomy at UMSL is devoted to providing undergraduates with a broad-based education in astrophysics with the experimental, observational, and theoretical skills essential to practicing astronomers and astrophysicists. Undergraduate education in astrophysics prepares students for both graduate study and professional careers in

astronomy, atmospheric science, image processing, cosmology, and instrumentation.

General Education Requirements

Majors must complete the university and college general education requirements (p. 30). Any of the following courses may be used to satisfy the physical science requirement:

| | | |
|---------------|---|---|
| ASTRON 1001 | Cosmic Evolution Introductory Astronomy (MOTR ASTR 100) | 3 |
| ASTRON 1011 | Planets and Life in the Universe | 3 |
| ASTRON 1012 | The Violent Universe and the New Astronomy | 3 |
| ASTRON 1050 | Introduction to Astronomy I (MOTR ASTR 100) | 3 |
| ASTRON 1051 | Introduction to Astronomy II | 3 |
| ATM SCI 1001 | Elementary Meteorology | 3 |
| GEOL 1001 | General Geology | 3 |
| GEOL 1002 | Historical Geology | 3 |
| PHYSICS 1001 | How Things Work (MOTR PHYS 100) | 3 |
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1011L | Basic Physics I Laboratory | 1 |
| PHYSICS 1012 | Basic Physics II | 3 |
| PHYSICS 1012L | Basic Physics II Laboratory | 1 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |

Degree Requirements

All physics majors in all programs must complete the physics core curriculum with the exception that majors pursuing the Physics Education option are not required to take PHYSICS 1099 and CMP SCI 1250. In addition to the core courses, each individual program has its own specific requirements. Required Physics, Mathematics, Chemistry, Biology, and Computer Science courses for a major or minor in physics may not be taken on a satisfactory/unsatisfactory grading basis.

| | |
|---|---|
| Core Curriculum | |
| The following physics courses are required: | 23 |
| PHYSICS 1099 | Windows on Physics |
| PHYSICS 2111 | Physics: Mechanics and Heat |
| PHYSICS 2111L | Mechanics and Heat Laboratory |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory |
| PHYSICS 3200 | Mathematical Methods of Theoretical Physics |
| PHYSICS 3221 | Mechanics |
| PHYSICS 3223 | Electricity and Magnetism |
| PHYSICS 3231 | Introduction to Modern Physics I |
| Also required are: | 26 |
| MATH 1800 | Analytic Geometry and Calculus I |
| MATH 1900 | Analytic Geometry and Calculus II |
| MATH 2000 | Analytic Geometry and Calculus III |

| | |
|--------------------|---|
| MATH 2020 | Introduction to Differential Equations |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) |
| CMP SCI 1250 | Introduction to Computing |
| Total Hours | 49 |

Note: Students are urged to begin the calculus sequence [MATH 1800, Analytic Geometry and Calculus I] as soon as possible to avoid delays in graduation.

Students with experience in digital computer programming may be excused from CMP SCI 1250.

Biophysics Option

This option is designed for students who are interested in careers in various medical fields or biophysics. This option provides a strong preparation in physics, mathematics, chemistry, and biology for students who intend to apply for admission to medical schools. At least 41 hours of physics and biology combined, but no more than 51, are required. In addition to the core curriculum, the following physics and biology courses are required:

Physics

| | | |
|--|----------------------------|---|
| PHYSICS 4310 | Modern Electronics | 3 |
| PHYSICS 4347 | Introduction to Biophysics | 3 |
| Select two additional physics electives at the 4000 level. | | 6 |

Biology

| | | |
|---------------------------|--|---|
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) | 5 |
| BIOL 1821 | Introductory Biology: Organisms and the Environment (MOTR BIOL 150L) | 5 |
| BIOL 4732 or CHEM 4712 | Principles of Biochemistry Biochemistry | 3 |
| BIOL 4713 | Techniques in Biochemistry | 2 |

Chemistry

| | | |
|--------------------|---------------------------|-----------|
| CHEM 1121 | Introductory Chemistry II | 5 |
| CHEM 2612 | Organic Chemistry I | 3 |
| Total Hours | | 35 |

Program Purpose

The purpose of the B.S. in Physics (Biophysics Emphasis) program at the University of Missouri at St. Louis is to prepare students for a professional career in biophysics, biological physics, or a related interdisciplinary field, for graduate studies in in biophysics, biological physics, or a related interdisciplinary field, for training as a medical physicist, or for professional training such as medical school.

Learning Outcomes

- Students will be able to demonstrate a solid understanding of basic physics concepts including classical mechanics, electricity and magnetism, thermal and statistical physics, modern electronics, and quantum mechanics
- Students will have an understanding of basic biological concepts, from organ systems to biochemistry

- Students will have an understanding of the basic concepts of biophysics, and the various areas of interdisciplinary science where biophysics concepts and techniques are applicable
- Students will be skilled in problem-solving, critical thinking and analytical reasoning as applied to scientific problems
- Students will be proficient in both written and oral communication of the results of scientific work
- Students will have the skills necessary for conducting original scientific research as part of an interdisciplinary problem-solving team
- Students will have the skills necessary to identify possible errors in scientific data, and to assess the significance of observed results

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-----------|--------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 CHEM 1121 | 5 |
| PHYSICS 1099 | | 1 MATH 1800 | 5 |
| CHEM 1111 | | 5 BIOL 1831 | 5 |
| MATH 1030 | 3 | | |
| MATH 1035 | 2 | | |
| ENGL 1100 | 3 | | |
| | 15 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| PHYSICS 2111 | | 4 PHYSICS 2112 | 4 |
| PHYSICS 2111L | | 1 PHYSICS 2111L | 1 |
| MATH 1900 | | 5 MATH 2000 | 5 |
| CMP SCI 1250 | | 3 CHEM 2612 | 3 |
| BIOL 1821 | | 5 CORE - US History and Government | 3 |
| | 18 | | 16 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| PHYSICS 3200 | | 3 PHYSICS 3221 | 3 |
| PHYSICS 3231 | | 3 PHYSICS 3223 | 3 |
| MATH 2020 | | 3 PHYSICS 4341 | 3 |
| BIOL 4732 or CHEM 4712 | | 3 BIOL 4713 | 2 |
| CORE - Communication Proficiency | | 3 EXPLORE - Social Sciences | 3 |
| | 15 | | 14 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| PHYSICS 4310 | | 3 PHYSICS 4347 | 3 |
| PHYSICS 4331 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| ENGL 3160 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Social Sciences | 3 |
| Cultural Diversity Requirement | | 3 EXPLORE - Social Sciences | 3 |
| | 15 | | 15 |
| Total Hours: 123 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Physics BS, Engineering Physics Emphasis

Physicists strive to understand the fundamental nature of the forces and particles, and the resultant states of matter, that make up the physical world. Our Engineering Physics degree provides a grounding in this approach with an added emphasis on practical applications. The Department of Physics and Astronomy at UMSL provides a broad-based education in the fundamental concepts of engineering physics, with the experimental and theoretical skills essential to practicing scientists. Undergraduate education in physics prepares students for both graduate study and a wide variety of professional careers in fields such as applied physics and engineering.

General Education Requirements

Majors must complete the university and college general education requirements (p. 30). Any of the following courses may be used to satisfy the physical science requirement:

| | | |
|---------------|---|---|
| ASTRON 1001 | Cosmic Evolution Introductory Astronomy (MOTR ASTR 100) | 3 |
| ASTRON 1011 | Planets and Life in the Universe | 3 |
| ASTRON 1012 | The Violent Universe and the New Astronomy | 3 |
| ASTRON 1050 | Introduction to Astronomy I (MOTR ASTR 100) | 3 |
| ASTRON 1051 | Introduction to Astronomy II | 3 |
| ATM SCI 1001 | Elementary Meteorology | 3 |
| GEOL 1001 | General Geology | 3 |
| GEOL 1002 | Historical Geology | 3 |
| PHYSICS 1001 | How Things Work (MOTR PHYS 100) | 3 |
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1011L | Basic Physics I Laboratory | 1 |
| PHYSICS 1012 | Basic Physics II | 3 |
| PHYSICS 1012L | Basic Physics II Laboratory | 1 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |

Degree Requirements

All physics majors in all programs must complete the physics core curriculum with the exception that majors pursuing the Physics Education option are not required to take PHYSICS 1099 and CMP SCI 1250. In addition to the core courses, each individual program has its own specific requirements. Required Physics, Mathematics, Chemistry, Biology, and Computer Science courses for a major or minor in physics may not be taken on a satisfactory/unsatisfactory grading basis.

Core Curriculum

| | | |
|---|---|----|
| The following physics courses are required: | | 23 |
| PHYSICS 1099 | Windows on Physics | |
| PHYSICS 2111 | Physics: Mechanics and Heat | |
| PHYSICS 2111L | Mechanics and Heat Laboratory | |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | |

| | | |
|--------------------|---|-----------|
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory | |
| PHYSICS 3200 | Mathematical Methods of Theoretical Physics | |
| PHYSICS 3221 | Mechanics | |
| PHYSICS 3223 | Electricity and Magnetism | |
| PHYSICS 3231 | Introduction to Modern Physics I | |
| Also required are: | | 26 |
| MATH 1800 | Analytic Geometry and Calculus I | |
| MATH 1900 | Analytic Geometry and Calculus II | |
| MATH 2000 | Analytic Geometry and Calculus III | |
| MATH 2020 | Introduction to Differential Equations | |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) | |
| CMP SCI 1250 | Introduction to Computing | |
| Total Hours | | 49 |

Note: Students are urged to begin the calculus sequence [MATH 1800, Analytic Geometry and Calculus I] as soon as possible to avoid delays in graduation.

Students with experience in digital computer programming may be excused from CMP SCI 1250.

Engineering Physics Option

Students interested in careers in the research and development field of industry should consider this option. This program exposes the student to a basic engineering curriculum, as well as to areas of physics with industrial applications, such as electronics, modern optics, and linear analysis. At least 49 hours, but no more than 51, are required. In addition to the core curriculum, the following courses are required:

Joint Engineering

| | | |
|-----------|----------|---|
| ENGR 2310 | Statics | 3 |
| ENGR 2320 | Dynamics | 3 |

Joint Electrical Engineering

| | | |
|---------------|-------------------------------------|---|
| J E ENGR 2300 | Introduction to Electrical Networks | 3 |
|---------------|-------------------------------------|---|

Physics

| | | |
|--------------|---------------------------------|---|
| PHYSICS 4310 | Modern Electronics | 3 |
| PHYSICS 4311 | Advanced Physics Laboratory I | 3 |
| PHYSICS 4323 | Modern Optics | 3 |
| PHYSICS 4331 | Intro to Quantum Mechanics | 3 |
| PHYSICS 4341 | Thermal and Statistical Physics | 3 |

Mathematics

| | | |
|-----------|--|---|
| MATH 1320 | Introduction to Probability and Statistics | 3 |
| MATH 2450 | Elementary Linear Algebra | 3 |

Select one elective in mathematics at or above the 3000 level, or in a computer science at or above the 2000 level.

| | | |
|--------------------|--|-----------|
| Total Hours | | 33 |
|--------------------|--|-----------|

Program Purpose

The purpose of the B.S. in Physics (Engineering Physics Emphasis) program at the University of Missouri at St. Louis is to prepare students for a professional career in engineering, physics, or applied physics, or for graduate studies in engineering physics or a related field.

Learning Outcomes

- Students will be able to demonstrate an understanding of basic physics concepts including classical mechanics, electricity and magnetism, thermal and statistical physics, quantum mechanics, and modern electronics
- Students will be able to design and perform basic physics experiments, assess the significance of their results, and interpret the observed outcome
- Students will be able to demonstrate an understanding of statics, dynamics, and electrical networks
- Students will be skilled in problem-solving, critical thinking and analytical reasoning as applied to scientific problems
- Students will be proficient in both written and oral communication of the results of scientific work
- Students will have the skills necessary for conducting original scientific research as part of a problem-solving team
- Students will have the skills necessary to identify possible errors in scientific data, and to assess the significance of observed results

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|--------------|-------|------------------------------------|-------|
| INTDSC 1003 | | 1 MATH 1800 | 5 |
| PHYSICS 1099 | | 1 CMP SCI 1250 | 3 |
| CHEM 1111 | | 5 CORE - US History and Government | 3 |
| MATH 1035 | | 2 EXPLORE - Social Sciences | 3 |
| MATH 1030 | | 3 | |
| ENGL 1100 | | 3 | |
| | 15 | | 14 |

Second Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-------|-----------------|-------|
| PHYSICS 2111 | | 4 PHYSICS 2112 | 4 |
| PHYSICS 2111L | | 1 PHYSICS 2111L | 1 |
| MATH 1320 | | 3 MATH 2000 | 5 |
| MATH 1900 | | 5 MATH 2450 | 3 |
| CORE - Communication Proficiency | | 3 ENGR 2310 | 3 |
| | 16 | | 16 |

Third Year

| Fall | Hours | Spring | Hours |
|--------------------------------|-------|--------------------------------------|-------|
| PHYSICS 3200 | | 3 PHYSICS 3221 | 3 |
| PHYSICS 3231 | | 3 PHYSICS 3223 | 3 |
| MATH 2020 | | 3 PHYSICS 4341 | 3 |
| ENGR 2320 | | 3 J E ENGR 2300 | 3 |
| Cultural Diversity Requirement | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---------------------------|-------|--|-------|
| PHYSICS 4310 | | 3 PHYSICS 4311 | 3 |
| PHYSICS 4323 | | 3 CMP SCI 2XXX Computer Science course or MATH 3XXX Mathematics course | 3 |
| PHYSICS 4331 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| ENGL 3160 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Social Sciences | | 3 EXPLORE - Social Sciences | 3 |
| | 15 | | 15 |

Total Hours: 121

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

² One of these General Education courses must also fulfill the Cultural Diversity requirement.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Physics BS, General Physics Emphasis

Physicists investigate the fundamental nature of the forces and particles, and the resultant states of matter, that make up the physical world. The Department of Physics and Astronomy at UMSL is devoted to providing undergraduates with a broad-based education in the fundamental concepts of physics and with the experimental and theoretical skills essential to practicing scientists. Undergraduate education in physics prepares students for both graduate study and a wide variety of professional careers.

General Education Requirements

Majors must complete the university and college general education requirements (p. 30). Any of the following courses may be used to satisfy the physical science requirement:

| | | |
|---------------|---|---|
| ASTRON 1001 | Cosmic Evolution Introductory Astronomy (MOTR ASTR 100) | 3 |
| ASTRON 1011 | Planets and Life in the Universe | 3 |
| ASTRON 1012 | The Violent Universe and the New Astronomy | 3 |
| ASTRON 1050 | Introduction to Astronomy I (MOTR ASTR 100) | 3 |
| ASTRON 1051 | Introduction to Astronomy II | 3 |
| ATM SCI 1001 | Elementary Meteorology | 3 |
| GEOL 1001 | General Geology | 3 |
| GEOL 1002 | Historical Geology | 3 |
| PHYSICS 1001 | How Things Work (MOTR PHYS 100) | 3 |
| PHYSICS 1011 | Basic Physics I | 3 |
| PHYSICS 1011L | Basic Physics I Laboratory | 1 |
| PHYSICS 1012 | Basic Physics II | 3 |
| PHYSICS 1012L | Basic Physics II Laboratory | 1 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |

Degree Requirements

All physics majors in all programs must complete the physics core curriculum with the exception that majors pursuing the Physics Education option are not required to take PHYSICS 1099 and CMP SCI 1250. In addition to the core courses, each individual program has its own specific requirements. Required Physics, Mathematics, Chemistry, Biology, and Computer Science courses for a major or minor in physics may not be taken on a satisfactory/unsatisfactory grading basis.

Core Curriculum

The following physics courses are required: 23

| | |
|---------------|---|
| PHYSICS 1099 | Windows on Physics |
| PHYSICS 2111 | Physics: Mechanics and Heat |
| PHYSICS 2111L | Mechanics and Heat Laboratory |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics |
| PHYSICS 2112L | Electricity, Magnetism, and Optics Laboratory |
| PHYSICS 3200 | Mathematical Methods of Theoretical Physics |
| PHYSICS 3221 | Mechanics |
| PHYSICS 3223 | Electricity and Magnetism |
| PHYSICS 3231 | Introduction to Modern Physics I |

Also required are: 26

| | |
|--------------|---|
| MATH 1800 | Analytic Geometry and Calculus I |
| MATH 1900 | Analytic Geometry and Calculus II |
| MATH 2000 | Analytic Geometry and Calculus III |
| MATH 2020 | Introduction to Differential Equations |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) |
| CMP SCI 1250 | Introduction to Computing |

Total Hours 49

Note: Students are urged to begin the calculus sequence [MATH 1800, Analytic Geometry and Calculus I] as soon as possible to avoid delays in graduation.

Students with experience in digital computer programming may be excused from CMP SCI 1250.

General Physics Option

This option may be elected by students desiring a greater concentration in physics and mathematics and is recommended for students wishing to enter graduate study in physics. At least 50 hours are required. In addition to the core curriculum, the following physics courses are required:

Physics

| | | |
|--------------|---------------------------------|---|
| PHYSICS 4310 | Modern Electronics | 3 |
| PHYSICS 4311 | Advanced Physics Laboratory I | 3 |
| PHYSICS 4323 | Modern Optics | 3 |
| PHYSICS 4331 | Intro to Quantum Mechanics | 3 |
| PHYSICS 4341 | Thermal and Statistical Physics | 3 |
| PHYSICS 4350 | Computational Physics | 3 |

Select three electives at or above the 4000 level in physics or astronomy. 9

Astronomy

| | | |
|----------------|---|---|
| ASTRON 1050 | Introduction to Astronomy I (MOTR ASTR 100) | 3 |
| or ASTRON 1051 | Introduction to Astronomy II | |

Mathematics

| | | |
|---|---------------------------|---|
| MATH 2450 | Elementary Linear Algebra | 3 |
| Select one elective in mathematics at or above the 3000 level, or in computer science at or above the 2000 level. | | 3 |

Chemistry

| | | |
|-----------|---|---|
| CHEM 1121 | Introductory Chemistry II (or equivalent) | 5 |
|-----------|---|---|

Total Hours 41

Program Purpose

The purpose of the B.S. in Physics (General Physics Option) program at the University of Missouri at St. Louis is to prepare students for a professional career in physics or a related field, or for graduate studies in physics.

Learning Outcomes

- Students will be able to demonstrate an understanding of basic physics concepts including classical mechanics, electricity and magnetism, thermal and statistical physics, quantum mechanics, and modern electronics
- Students will be able to design and perform basic physics experiments, assess the significance of their results, and interpret the observed outcomes
- Students will be able to demonstrate an understanding of some areas of the most recent physics research, such as advances in materials physics or nanoscience
- Students will be skilled in problem-solving, critical thinking and analytical reasoning as applied to scientific problems
- Students will be proficient in both written and oral communication of the results of scientific work
- Students will have the skills necessary for conducting original scientific research as part of a problem-solving team
- Students will have the skills necessary to identify possible errors in scientific data, and to assess the significance of observed results

Sample Four Year Plan**First Year**

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|------------------------------------|-------|
| INTDSC 1003 ¹ | | 1 ASTRON 1051 | 3 |
| PHYSICS 1099 | | 1 CHEM 1121 | 5 |
| CHEM 1111 | | 5 MATH 1800 | 5 |
| MATH 1035 | | 2 CORE - US History and Government | 3 |
| ENGL 1100 | | 3 | |
| EXPLORE - Humanities and Fine Arts | | 3 | |
| | 15 | | 16 |

Second Year

| Fall | Hours | Spring | Hours |
|---------------------------|-------|--|-------|
| PHYSICS 2111 | | 4 PHYSICS 2112 | 4 |
| PHYSICS 2111L | | 1 PHYSICS 2111L | 1 |
| MATH 1900 | | 5 MATH 2000 | 5 |
| CMP SCI 1250 | | 3 MATH 2450 | 3 |
| EXPLORE - Social Sciences | | 3 CMP SCI 2XXX course or MATH 3XXX MATH course | 3 |
| | 16 | | 16 |

Third Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|---|-------|
| PHYSICS 3200 | | 3 PHYSICS 3221 | 3 |
| PHYSICS 3231 | | 3 PHYSICS 3223 | 3 |
| MATH 2020 | | 3 PHYSICS 4341 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 PHYSICS/ASTRON 4XXX Physics or Astronomy Course | 3 |
| CORE - Communication Proficiency | | 3 EXPLORE - Social Sciences | 3 |
| | 15 | | 15 |

| Fourth Year | | | |
|---|-------|---|-------|
| Fall | Hours | Spring | Hours |
| PHYSICS 4331 | | 3 PHYSICS 4311 | 3 |
| PHYSICS 4310 | | 3 PHYSICS 4350 | 3 |
| PHYSICS 4323 | | 3 PHYSICS/ASTRON 4XXX Physics or Astronomy Course | 3 |
| PHYSICS/ASTRON 4XXX Physics or Astronomy Course | | 3 EXPLORE - Humanities and Fine Arts ² | 3 |
| ENGL 3160 | | 3 EXPLORE - Social Sciences | 3 |
| | 15 | | 15 |
| Total Hours: 123 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

² This General Education course must also fulfill the Cultural Diversity Requirement.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in Physics

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Physics with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Physics Minor

Students may complete a minor in physics with the flexibility of emphasis on classical physics, modern physics, or a combination of the two areas. The following physics courses are required:

| | | |
|--|---|-----------|
| PHYSICS 1099 | Windows on Physics | 1 |
| PHYSICS 2111 | Physics: Mechanics and Heat | 4 |
| PHYSICS 2112 | Physics: Electricity, Magnetism, and Optics | 4 |
| PHYSICS 3200 | Mathematical Methods of Theoretical Physics | 3 |
| Select two additional emphasis courses from the following: | | 6 |
| PHYSICS 3221 | Mechanics | |
| PHYSICS 3223 | Electricity and Magnetism | |
| PHYSICS 3231 | Introduction to Modern Physics I | |
| PHYSICS 4310 | Modern Electronics | |
| Total Hours | | 18 |

A GPA of at least 2.0 is required in courses presented for a minor. It is required that a student completes a minimum of 6 hours of graded work in 2000 level or above courses on the UMSL campus.

Program Purpose

The purpose of the Minor in Physics at the University of Missouri at St. Louis is to provide students with a core knowledge of physics concepts to complement their major degree program.

Learning Outcomes

- Students will be able to demonstrate an understanding of basic physics concepts such as classical mechanics, electricity and magnetism, modern physics, and modern electronics
- Students will be skilled in problem-solving, critical thinking and analytical reasoning as applied to scientific problems
- Students will be proficient in both written and oral communication of the results of scientific work
- Students will have the skills necessary to identify possible errors in scientific data, and to assess the significance of observed results

Physics MS

Beginning Fall 2021, the program is no longer accepting applications.

Admission Requirements

The Department requires applicants to have adequate backgrounds in such areas as mechanics, thermodynamics, electromagnetism, optics, electronics, and modern physics. Students admitted to the program with deficiencies in these areas are required to take appropriate undergraduate courses. If necessary, a remedial program is determined in consultation with the department graduate studies director at the time of application for admission.

Degree Requirements

A student must complete 30 credit hours in graduate physics courses with at least 15 of these at the 5000 or 6000 level. Writing a thesis is optional. A maximum of six (3) credit hours of Research, PHYSICS 6490, may be counted toward the minimum 15 hours with (or without) the thesis option. Students must pass a comprehensive examination, which includes a defense of the thesis for students who have chosen to write one. A grade point average of 3.0 must be maintained during each academic year. Students must complete their degree program within 130 percent of the semester hour requirements for the degree. The requirements must be

fulfilled within six years from the time of admission. Two-thirds of required graduate credit must be taken in residence. There is no foreign language requirement.

Typical Program

First Semester

| | |
|---|---|
| PHYSICS: 6000 level and 4000, 5000 level course | 6 |
|---|---|

Second Semester

| | |
|---|---|
| PHYSICS: 6000 level and 4000, 5000 level course | 6 |
|---|---|

Third Semester

| | |
|---|---|
| PHYSICS: 6000 level and 4000, 5000 level course | 6 |
| PHYSICS 6490 Research | 3 |

Fourth Semester

| | |
|--|---|
| PHYSICS: 6000 level and 4000 level course | 6 |
| PHYSICS 6490 Research | 3 |

| | |
|--------------------|-----------|
| Total Hours | 30 |
|--------------------|-----------|

Physics PhD

Beginning Fall 2021, the program is no longer accepting applications.

Admission Requirements

The Department requires applicants to have adequate backgrounds in such areas as mechanics, thermodynamics, electromagnetism, optics, electronics, and modern physics. Students admitted to the program with deficiencies in these areas are required to take appropriate undergraduate courses. If necessary, a remedial program is determined in consultation with the department graduate studies director at the time of application for admission.

Degree Requirements

Students must complete a minimum of 42 hours past the master's degree with satisfactory performance. The university has a residency requirement of three years/six semesters (for those with master's degree, two years/ four semesters) at UMSL and/or Missouri S&T. The Ph.D. qualifying exam, dissertation, and dissertation exam are administered in cooperation with Missouri S&T. All graduate work requires B grades or better. The dissertation may be written in absentia, and there is no foreign language requirement.

Policy and Program Evaluation Graduate Certificate

The Graduate Certificate in Policy and Program Evaluation (PPE) provides students the opportunity to gain expertise in policy and program evaluation methods, including completion of an applied evaluation project. In addition to the public and nonprofit sectors, the certificate is appropriate for individuals in disciplines such as criminology, education, economics, gerontology, social work, and sociology who need to conduct assessments of the programs for which they are responsible.

Requirements

This program consists of a six-course sequence (18 credits): 5 required courses (15 credits) and 1 elective (3 credits). The Certificate may be taken by non-degree students or in conjunction with 1) the Master's in Public Policy Administration degree program; 2) the Master's in Social

Work/Master's in Gerontology degree programs; or 3) the Master's in Economics.

Students with sufficient job experience in program/policy evaluation may submit a written request to waive the Applied Evaluation Project requirement. If granted, this requirement will be replaced with a three-credit elective.

Students pursuing a graduate degree along with the certificate should check with their graduate advisor regarding which courses will also count towards their degree.

A maximum of two courses at the 4000 level can count towards the Certificate.

At least 12 of the 18 credits must be taken in residence at UMSL.

Required Courses:

| | | |
|-----------------|--|---|
| P P ADM 6000 | Introduction to Policy Analysis | 3 |
| P P ADM 6010 | Introduction to Policy Research | 3 |
| or SOC WK 5450 | Social Work Research Methods and Analysis | |
| or ECON 4100 | Introduction to Econometrics | |
| or ECON 5100 | Econometric Theory and Methods | |
| P P ADM 6750 | Applied Research Design | 3 |
| or SOC WK 6400 | Practice and Program Evaluation | |
| POL SCI 6402 | Intermediate Techniques in Policy Research | 3 |
| P P ADM 6950 | Internship (which must include an evaluation project) ¹ | 3 |
| or P P ADM 6751 | Applied Evaluation Project | |
| or SOC WK 6800 | Graduate Field Practicum II | |
| or SOC WK 6850 | Graduate Field Practicum III | |

| | |
|------------------|----------|
| Electives | 3 |
|------------------|----------|

| | |
|--------------|--|
| ECON 4110 | Applied Econometrics |
| ECON 4160 | Geospatial Analysis in the Social Sciences |
| ECON 4170 | Fundamentals of Cost-Benefit Analysis |
| POL SCI 6403 | Advanced Techniques in Policy Research |
| POL SCI 6404 | Multi-Method Research Design |

| | |
|--------------------|-----------|
| Total Hours | 18 |
|--------------------|-----------|

¹ SOC WK 6800 or SOC WK 6850 must include an evaluation project.

Requirements for admission to the graduate certificate program include an undergraduate degree and a GPA of 3.0 or better. Applicants must submit two letters of recommendation, preferably with at least one from a current or former college-level instructor. Applicants must submit a personal statement explaining how the certificate program fits in with the applicant's educational and professional goals. The letters and the personal statement should be sent directly to the Public Policy Administration Program.

Political Science BA

A degree in Political Science is the perfect choice for students who want to change the world. Our students gain knowledge about politics and policy, and develop sought-after skills--such as information-gathering

and processing, analysis, research, decision making, and oral and written communication--that are transferable to many career paths after graduation. Areas of concentration include American politics, international and comparative politics, urban politics, public law, public policy and administration, and gender and politics. In addition to formal course work, internships are available in which the student can apply classroom learning and gain practical field experience.

Career Outlook

Our graduates work in a variety of settings, as lawyers in the legal system, staff for government agencies, legislatures, and political campaigns, managers of public, private and nonprofit organizations, and advocates for a wide variety of social, environmental, and economic organizations. The variety of skills students develop, coupled with internship experience, make our graduates strong candidates on the job market. Early and mid-career Political Science graduates enjoy higher average salaries than those in Business Management and other fields. Political Science is also a path to graduate school and the top major of law school applicants

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). Political science courses may be used to satisfy the social sciences requirement. The foreign language requirement for the B.A. degree may be satisfied in any language.

Degree Requirements

All majors must complete at least 36, but no more than 51, hours of political science. All students are required to take the following core curriculum:

| Political Science | | |
|-------------------|--|----|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 1800 | Introduction to International Politics (MOTR POSC 201) | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |
| Total Hours | | 15 |

Majors are urged to take POL SCI 1100, POL SCI 1500, and POL SCI 1800 as early as possible since these courses are designed to provide a substantive foundation as well as conceptual and analytical tools for subsequent course work. Because the seminar topics in POL SCI 4950 change from semester to semester, the course can be repeated as an elective. All majors must take at least one Seminar in Political Science.

Students also must complete at least one course in four of the following political science areas:

- Public Law (chosen from among courses listed in bulletin at the 1000, 2000, or 3000 or 4000 level)
- American Politics (chosen from among courses listed in bulletin at the 1000, 2000, or 3000 or 4000 level).
- Public Policy and Administration (chosen from among courses listed in bulletin at the 1000, 2000, or 3000 or 4000 level).

- Comparative Politics (chosen from among courses listed in bulletin at the 1000, 2000, or 3000 or 4000 level).
- International Relations (chosen from among courses listed in bulletin at the 1000, 2000, or 3000 or 4000 level).

At least 15 hours of political science course work must be at the 3000 or 4000 level, including POL SCI 4950 Senior Seminar. B.A. degree students may take a maximum of 3 hours of political science on a satisfactory/unsatisfactory basis; this can include any course except the required courses in the core curriculum.

Note: As early as possible, students should determine their educational objectives and consult with an adviser regarding a plan of study. Those students who are uncertain of their future plans are urged to include in their 36-45 hours of political science a broad set of courses in American politics, public policy and administration, public law, comparative politics, international politics, political theory, and methodology. In addition to this general course of study in political science, the department offers B.A. degree students several specialized programs of study in political science geared to various student academic and career interests.

Departmental Honors

The department awards honors to students having a grade point average (GPA) of 3.2 in the major, an overall GPA of 3.2 (except in extraordinary circumstances), and successfully completed an honors thesis, project, or report.

Learning Outcomes

Graduates of this program will be able to:

- Explain the history, characteristics, and impact of legal, economic, and political institutions and systems, including international, national, state, and local governance.
- Apply various methods, tools, and sources applicable to the discipline of political science to answer important policy and political questions.
- Compare and contrast different ideologies, theories, and interpretations of politics.
- Assess political issues, formulate evidence-based recommendations, and communicate them with clarity and coherence.
- Plan, execute, and defend a major research project.

Sample Four Year Plan

| First Year | | | |
|--|-------|--|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 POL SCI 1500 | 3 |
| POL SCI 1100 | 3 | CORE - Communication Proficiency | 3 |
| ENGL 1100 | 3 | EXPLORE - Humanities & Fine Arts | 3 |
| CORE - Math Proficiency | 3 | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 Elective or minor | 3 |
| EXPLORE - Humanities & Fine Arts | 3 | | |
| | | 16 | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| POL SCI 1800 | | 3 POL SCI XXXX Political Science Course | 3 |
| EXPLORE - Humanities & Fine Arts | | 3 POL SCI XXXX Political Science Course | 3 |

| | | |
|---|---|---------------|
| EXPLORE - Mathematics & Life/ Natural Sciences | 3 Foreign Language 1002 | 5 |
| Foreign Language 1001 | 5 Cultural Diversity Requirement | 3 |
| | Elective or minor | 1 |
| | 14 | 15 |
| Third Year | | |
| Fall | Hours | Spring |
| POL SCI 3000 | 3 POL SCI XXXX Political Science Course | 3 |
| POL SCI XXXX Political Science Course | 3 POL SCI 3000+ level course | 3 |
| Foreign Language 2101 | 3 ENGL 3100 | 3 |
| Elective or minor | 3 Elective or minor | 3 |
| Elective or minor | 3 Elective or minor | 3 |
| | 15 | 15 |
| Fourth Year | | |
| Fall | Hours | Spring |
| POL SCI 3000+ level course | 3 POL SCI 4950 | 3 |
| POL SCI XXXX Political Science Course | 3 POL SCI 3000+ level course | 3 |
| Elective or minor | 3 Elective or minor | 3 |
| Elective or minor | 3 Elective or minor | 3 |
| Elective or minor | 3 Elective or minor | 3 |
| | 15 | 15 |
| Total Hours: 120 | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

B.S. Ed. in Secondary Education with Emphasis in Social Studies

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification.

Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in Political Science with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification

should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Political Science BA/MA Dual Degree Program

The 2+3 Combined BA/MA program in Political Science provides an opportunity for students of recognized academic ability and educational maturity to complete the requirements for both degrees in 5 years of full-time study.

The combined program requires a minimum of 140 credit hours of which at least 33 must be at the graduate level in political science. In qualifying for the BA, students must meet all University and College requirements. Students in the combined 2+3 who successfully complete the requirements for the MA degree will be awarded a BA degree simultaneously upon completion of at least 107 hours of undergraduate credit.

Student should apply to the Department for admission to the 2+3 combined degree program in Political Science during the semester they will complete 60 undergraduate credit hours. A cumulative grade point average of 3.0 or higher and two letters of recommendation from faculty are required. Students will be admitted to the 2+3 program under provisional status until they have completed 30 hours in that program with a grade point of 3.0 or higher. After completion of the provisional period, with the recommendation of the Graduate Director, students can be granted full admission into the 2+3 program.

Students must maintain a grade point average of 3.0 or higher throughout the combined program. Students who officially withdraw from the 2+3 combined degree program, who have successfully completed all the regular requirements for the BA degree (120 hours) will be awarded their BA degree.

Undergraduate Requirements for Student in the 2+3 Program

A. The following must be completed prior to enrolling in the 2+3 program

| | | |
|------------------------------|--|-----------|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| Select two of the following: | | 6 |
| POL SCI 1800 | Introduction to International Politics (MOTR POSC 201) | |
| POL SCI 2300 | State Politics | |
| POL SCI 2350 | Introduction to Urban Politics | |
| POL SCI 2400 | Public Administration | |
| Total Hours | | 12 |

B. Undergraduate Requirements Within the 2+3 Program

| | | |
|------------------------------|--------------------|---|
| Select two of the following: | | 6 |
| POL SCI 2280 | Judicial Politics | |
| POL SCI 3200 | Constitutional Law | |

| | | |
|--|---|-----------|
| POL SCI 3210 | Civil Liberties | |
| POL SCI 2330 | The American Presidency | |
| POL SCI 2331 | Congressional Politics | |
| POL SCI 3350 | Political Parties and Elections | |
| POL SCI 3470 | Negotiation, Collective Bargaining, and Dispute Resolution | |
| POL SCI 3480 | Environmental Policy | |
| Select two of the following: | | 6 |
| POL SCI 2510 | The Politics of European Union | |
| POL SCI 2530 | Political Systems of South America | |
| POL SCI 2540 | Political Systems of Mexico, Central America and the Caribbean | |
| POL SCI 2580 | African Politics | |
| POL SCI 3500 | The Politics of the Middle East: International and National Dynamics | |
| POL SCI 3830 | International Political Economy | |
| POL SCI 3850 | International Organizations and Global Problem-Solving | |
| POL SCI 4850 | International Law | |
| Select one additional course from B-1 or B-2 . | | 3 |
| Total Hours | | 15 |

C. Graduate Requirements

| | | |
|---|---|-----------|
| POL SCI 6401 | Introduction to Policy Research | 3 |
| Select three of the following: | | 9 |
| POL SCI 6420 | Proseminar in Public Law | |
| POL SCI 6430 | Proseminar in American Politics | |
| POL SCI 6440 | Public Administration: Theory & Practice | |
| POL SCI 6450 | | |
| POL SCI 6470 | Proseminar in Urban Politics | |
| POL SCI 6480 | Proseminar in International Relations | |
| Select five additional graduate Political Science classes. ¹ | | 15 |
| Select Exit Project or Internship or Thesis | | 6 |
| Total Hours | | 33 |

¹ Students should select an emphasis in American Politics, Public Policy, Comparative Politics, Political Theory, or International Relations.

Summary of Credits in Political Science:

- BA: 27 hours
(12 completed in lower division courses before admission to the 2+3 program)
- MA: 33 hours at the graduate level
- TOTAL: 60 hours in Political Science classes

Political Science MA

Admission Requirements: For admission, a student should have a baccalaureate degree with a minimum grade point average of 2.75 and an undergraduate background in the social sciences. Two letters of recommendation are also requested for each student applying to the program. Students who do not meet these requirements may be admitted upon approval of the department and the dean of the Graduate School. Application materials may be obtained from and should be returned to the office of the director of admissions.

Deadlines are July 1 for the fall semester; December 1 for the winter semester; and May 1 for the summer term.

Degree Requirements

Beyond the general requirements of the Graduate School, the department requires a minimum of 27 semester hours of course work, of which 18 hours must be at the 6400 level and 12 hours must be in core courses in political science, including:

| | | |
|--------------------------------|---|-----------|
| POL SCI 6401 | Introduction to Policy Research | 3 |
| Select three of the following: | | 9 |
| POL SCI 6410 | Introduction to Policy Analysis | |
| POL SCI 6420 | Proseminar in Public Law | |
| POL SCI 6430 | Proseminar in American Politics | |
| POL SCI 6440 | Public Administration: Theory & Practice | |
| POL SCI 6470 | Proseminar in Urban Politics | |
| POL SCI 6480 | Proseminar in International Relations | |
| Total Hours | | 12 |

Students can plan their degree program to reflect the following six emphasis areas:

- American Politics
- Comparative Politics
- International Politics
- Political Process and Behavior
- Public Administration and Public Policy
- Urban and Regional Politics

Students must also select one of the following exit projects: a six-hour thesis, a six-hour internship, or six hours of additional course work and an approved paper. Students will have a mid-program review at the end of 12-15 hours of course work, at which time they will discuss their academic performance and program with a faculty committee and determine the most appropriate exit project. Each candidate is given a final oral review conducted by a faculty committee and focused on the course work completed and the student's chosen exit project.

Political Science MA Accelerated Master's Degree

The Department of Political Science offers an Accelerated MA degree program that allows students to earn their undergraduate degree in Political Science, International Relations, or Public Policy Administration and their MA in Political Science in as few as 10 semesters of full-time

study. The Political Science MA program does not require a thesis, but all students are required to complete an exit project.

The combined program requires a minimum of 141 credit hours. Students accepted to the Accelerated MA degree program will be permitted to count up to 12 credit hours at the 4000 or 5000 level or higher toward both the undergraduate and MA degrees; these courses may require additional work as assigned by the instructor. The remaining 21 credit hours for the MA degree must be at the 6000 level.

Any 4000-level course taken before admission to the Accelerated MA program will apply to the undergraduate requirements only. Students are encouraged to work closely with the Undergraduate and Graduate Directors to ensure that required courses are timed appropriately. It is strongly recommended that students meet with the Graduate Director as soon as possible and ideally before their Junior year.

Eligibility

Students must have fulfilled the core curriculum requirements of the undergraduate major (with the exception of POL SCI 3000 and POL SCI 4950) prior to applying for the Accelerated MA program.

Admission Requirements

Provisional Admission

Applicants are considered for provisional admission if they meet the following criteria:

- Completed 60 undergraduate credit hours
- Achieved a cumulative grade point average of 3.0 or higher
- Submitted two letters of recommendation from faculty

The Graduate Director, in consultation with the Undergraduate Director, will determine whether the student can apply for provisional status. Graduate courses completed by undergraduate students who have been provisionally admitted to Accelerated Master's program will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. These courses must be approved before the semester starts. Therefore, it is recommended to apply for provisional status as a junior, preferably in the first semester of junior year.

Graduate Admission

Students should apply for admission to the graduate school in their final semester in undergraduate status. Students should meet with the Graduate Director each semester. Applicants are considered for graduate admission if they meet the following criteria.

- Are in their final semester in undergraduate status
- Completed 30 hours in Political Science with a grade point of 3.0 or higher
- Have a minimum GPA of 3.0 since being granted provisional status

Final decisions concerning graduate admission are made by the Graduate School in consultation with the Graduate Program Director. Students admitted to the graduate program must take graduate courses until the completion of the master's degree.

Program Requirements

Junior/Senior Year Courses

| | | |
|--------------|---------------------------------|---|
| POL SCI 6410 | Introduction to Policy Analysis | 3 |
|--------------|---------------------------------|---|

| | | |
|------------------------------------|--|----|
| POL SCI 6401 | Introduction to Policy Research | 3 |
| Two POL SCI Graduate Electives | | 6 |
| Final Year Courses | | |
| Select three of the following: | | 9 |
| POL SCI 6420 | Proseminar in Public Law | |
| POL SCI 6430 | Proseminar in American Politics | |
| POL SCI 6440 | Public Administration: Theory & Practice | |
| POL SCI 6450 | Proseminar in Comparative Politics | |
| POL SCI 6470 | Proseminar in Urban Politics | |
| POL SCI 6480 | Proseminar in International Relations | |
| Two POL SCI Graduate Electives | | 6 |
| Exit Project, Internship or Thesis | | 6 |
| Total Hours | | 33 |

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Political Science Minor

Requirements for Political Science Minors

A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor. Students may count no more than 3 hours in political science taken on a satisfactory/unsatisfactory basis toward the minor. Students taking an internship POL SCI 3940 may count no more than three hours of the internship toward the minor.

Specific Requirements for the Minor

Fifteen hours, chosen from among all political science courses.

Learning Outcomes

- Explain the characteristics and impact of political institutions and systems.
- Analyze the actions of political actors and their motives.
- Assess political issues, formulate evidence-based recommendations, and communicate them with clarity and coherence.

Political Science PhD

Beginning in Fall 2021, this program will not be accepting new applications until further notice.

The doctoral program emphasizes theoretical, analytic, and substantive approaches to public policy analysis and administration. Students are provided an opportunity to link core skills in policy analysis and political science with substantive emphasis in specific policy areas. The program is designed to prepare pre-career and mid-career students for advanced positions in policy research and administration, as well as for academic research and teaching.

Admission Requirements

Admission and financial aid decisions are made on the basis of past academic record, intellectual ability, and career commitment and performance. Applications are accepted from students who have either baccalaureate or master's degrees. Past graduate work will be credited toward degree requirements as appropriate. Applicants must submit:

1. complete academic transcripts,
2. three letters of recommendation,
3. aptitude tests of the GRE and
4. a statement of objectives for the course of study.

Application materials may be obtained from and should be returned to the office of the director of admissions. Applications for fall semester should be submitted by February 15 and for winter semester by October 15.

Graduate Assistantships Stipends for teaching and research assistantships (nine month/20 hours per week) are awarded on a competitive basis. Out-of-state educational fees are waived for graduate assistants.

Degree Requirements

The department requires 60 credit hours beyond the baccalaureate degree for completion of the Ph.D. To ensure sufficient background for doctoral-level policy courses, students must demonstrate appropriate competence in computing and data analysis during their course of study. Course requirements are as follows:

Core courses

(18 credit hours)

- 18 credit hours will be required in the areas of research methods, and policy process and institutions. Contact the department for specific courses.
- Additional Requirements (12 credit hours)
- In addition, students will select a minimum of 12 credit hours in public policy, theory, or process as they apply to major subfields in political science.

Policy Concentration

(24 credit hours)

Students, in consultation with the program director, will develop expertise in a substantive policy area. Policy concentrations (many interdisciplinary) include but are not limited to:

- American National Policy
- Urban Politics and Planning
- Comparative/International Policy
- Policy Analysis and Research Social Welfare

Internship

(6 credit hours) optional

The Ph.D. intern program offers an opportunity to gain first-hand experience in select research and administrative positions.

General Examination and Dissertation

Upon completion of course work, students are advanced to candidacy by successfully completing three general examinations,

1. public policy institutions, processes, and analysis,
2. methodology, and
3. the student's chosen subfield and area of policy concentration.

The degree is awarded upon completion and defense of the Ph.D. dissertation.

Primary Care Pediatric Post-Graduate Certificate

Post-graduate certificate (PGC) requirements are tailored to the individual student, depending on past academic work, experience, the student's goals, and specialty requirements. Upon completion of the PGC requirements, a certificate is awarded by the College of Nursing (CON) and Graduate School. Graduates are eligible to apply to take board certification exams in the advanced practice role and population for which they have been prepared.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsl.edu/services/ctl/onlinelearning/state_authorization.html.

Admission Criteria

- Admission to the University by completing the UMSL Graduate School application
- MSN, DNP from a nationally accredited nursing program
- MSN or DNP 3.0 minimum GPA
- Current professional licensure
- Acute Care Pediatric Nurse Practitioner (PNP-AC) post-graduate certificate requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) post-graduate certificate requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Certificate Requirements

Students must complete a minimum of 12 credit hours of coursework from the University of Missouri - St. Louis College of Nursing. Courses must be from the list below.

| | | |
|------------|---|---|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
|------------|---|---|

| | | |
|------------|---|-----|
| NURSE 6520 | Pharmacology For Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| NURSE 6743 | Pediatric Health I: Acute and Chronic Care | 4 |
| NURSE 6744 | Pediatric Health II: Comprehensive Primary Care | 4 |
| NURSE 6954 | Advanced Practice Nursing: Practicum I | 2-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II | 2-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III | 2-4 |

All students must complete 8 credit hours of Residency. One credit hours is equivalent to 75 residency hours.

Professional Writing Undergraduate Certificate

Requirements

Students may earn the Certificate in Professional Writing by completing 18 hours in selected writing courses with a grade point average of 3.0 or better. Interested students should contact the program coordinator for an application and assistance in selecting courses. Upon completion of four or five writing courses, please consult the coordinator to make arrangements for ENGL 4890. ENGL 2400 or ENGL 2410 and ENGL 4890 are required. Four additional courses are to be chosen from the following list:

Professional Writing Genre Courses

| | | |
|--------------------|---|---|
| ENGL/MEDIA ST 2080 | Advertising Copywriting | 3 |
| ENGL 2125 | Introduction to Technical Communication (MOTR ENGL 110) | 3 |
| ENGL 2180 | Introduction to News Writing | 3 |
| ENGL 3120 | Business Writing | 3 |
| ENGL 3130 | Technical Writing | 3 |
| ENGL/MEDIA ST 3150 | Feature Writing | 3 |
| COMM 2180 | Public Relations Writing | 3 |
| ENGL 4162 | Writers at Work | 3 |
| ENGL 4860 | Editing and the Production Process | 3 |
| ENGL 4870 | Advanced Business and Technical Writing | 3 |
| ENGL 4871 | Publishing: Writers, Editors, and Readers | 3 |
| ENGL 4880 | Writing for Teachers | 3 |

Academic Writing Courses

| | | |
|-----------|--|---|
| ENGL 2120 | Topics in Writing | 3 |
| ENGL 2400 | Rhetorical Ways with Words | 3 |
| ENGL 2410 | Literate Lives | 3 |
| ENGL 2810 | Traditional Grammar | 3 |
| ENGL 3090 | Turning the Kaleidoscope: How We Look at Texts | 3 |

| | | |
|-----------|---|---|
| ENGL 3100 | Junior-Level Writing | 3 |
| ENGL 3110 | Junior-Level Writing for International Students | 3 |
| ENGL 3160 | Writing in the Sciences | 3 |
| ENGL 3200 | Composing Disability | 3 |
| ENGL 4160 | Special Topics in Writing | 3 |
| ENGL 4790 | Rhetoric and Social Justice | 3 |
| ENGL 4810 | Descriptive English Grammar | 3 |

Creative Writing Courses

| | | |
|--|---|---|
| Students may take up to 2 creative writing courses | | |
| ENGL 2020 | Introduction to Creative Writing | 3 |
| ENGL 2030 | Poetry Writing Jumpstart | 3 |
| ENGL 2040 | Fiction Writing Jumpstart | 3 |
| ENGL 3030 | Improving on the Blank Page: Writing Poetry | 3 |
| ENGL 3040 | Lying to Tell a Truth: Writing Fiction | 3 |
| ENGL 4130 | A Machine Made of Words: Writing Your Best Poems | 3 |
| ENGL 4140 | Polishing Your Stories: Producing a Publishable Short Story | 3 |
| ENGL 4150 | Creative Non-Fiction | 3 |
| ENGL 4180 | Novel Beginnings | 3 |
| ENGL 4895 | Editing "Litmag" (can be taken as a capstone) | 3 |

Honors Courses

| | | |
|-------------|---|---|
| HONORS 2020 | Inquiries in the Fine and Performing Arts | 3 |
| HONORS 3100 | Honors Advanced Composition: Writing The City | 3 |
| HONORS 3020 | Advanced Honors Seminar in the Fine and Performing Arts | 3 |

Capstone Course

| | | |
|-----------|--|---|
| ENGL 4890 | Writing Internship (Required. Usually taken as the last course in the program. Must include an extensive final project.) | 3 |
| ENGL 4892 | Independent Writing Project | 3 |

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Write clearly, correctly, and concisely
- Develop knowledge of how writing impacts work and behavior in professional settings
- Employ a repertoire of writing strategies and practices in the workplace
- Effectively adapt content to a variety of professional audiences
- Discern the appropriate tone, style, and format needed for a given writing purpose, audience, and context
- Demonstrate advanced knowledge of rhetorical strategies to achieve specific results
- Practice solid revision and editing skills
- Integrate expectations about professional standards and persuasive, content-based thinking into their written communication

- Recognize and adjust to expectations in the global workplace setting.
- Develop a portfolio of professional writing that would serve in a job search
- Work independently and collaboratively on complex professional documents
- Adapt to new writing challenges quickly

Program Evaluation in Education Graduate Certificate

The Graduate Certificate in Program Evaluation in Education provides specialized study in the theory and practice of program evaluation. The program will build on the content area knowledge base of the individual's bachelors and masters degree. The focus of the Program Evaluation in Education certificate will be on the skills delineated in the standards and guidelines of the American Evaluation Association and the Joint Committee on Standards in Educational Evaluation.

The certificate will consist of 18 hours of core courses and internship experiences. Graduate credits earned in equivalent courses in Education or related Social Science disciplines may meet some of these requirements.

Research Methods

| | | |
|-------------|---|---|
| ED REM 6750 | Advanced Research Design In Education | 3 |
| ED REM 7771 | Quantitative Research Methods I | 3 |
| ED REM 7781 | Qualitative Methods in Educational Research I | 3 |

Program Evaluation

| | | |
|-------------|---|------|
| ED REM 6730 | Educational Program Development and Evaluation | 3 |
| ED REM 6732 | Advanced Educational Program Development and Evaluation | 3 |
| ED REM 6990 | Internship | 1-10 |

Total Hours **16-25**

Graduate Certificate programs are a minimum of 18 credit hours.

Psychiatric Mental Health Nurse Practitioner Post-Graduate Certificate

Post-graduate certificate (PGC) requirements are tailored to the individual student, depending on past academic work, experience, the student's goals, and specialty requirements. Upon completion of the PGC requirements, a certificate is awarded by the College of Nursing (CON) and Graduate School. Graduates are eligible to apply to take board certification exams in the advanced practice role and population for which they have been prepared.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsl.edu/services/ctl/onlinelearning/state_authorization.html.

Admission Criteria

- Admission to the University by completing the UMSL Graduate School application
- MSN, DNP from a nationally accredited nursing program
- MSN or DNP 3.0 minimum GPA
- Current professional licensure
- Acute Care Pediatric Nurse Practitioner (PNP-AC) post-graduate certificate requires at least one (1) year of inpatient pediatric nursing experience
- Psychiatric Mental Health Nurse Practitioner (PMHNP) post-graduate certificate requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Certificate Requirements

Students must complete a minimum of 12 credit hours of coursework from the University of Missouri - St. Louis College of Nursing. Courses must be from the list below.

| | | |
|------------|---|-----|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology For Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| NURSE 6737 | Psychiatric Mental Health I | 4 |
| NURSE 6738 | Psychiatric Mental Health II | 4 |
| NURSE 6954 | Advanced Practice Nursing: Practicum I | 2-4 |
| NURSE 6955 | Advanced Practice Nursing: Practicum II | 2-4 |
| NURSE 7954 | Advanced Practice Nursing: Practicum III | 2-4 |

All students must complete 8 credit hours of Residency. One credit hour is equal to 75 residency hours.

Psychological Sciences BA

By pursuing a Bachelor of Arts (BA) degree in Psychological Sciences, students will learn about mental processes, the brain, and behavior in humans and other animals. Students will also learn to think critically, to understand and conduct scientific research, to communicate clearly, to take ethical and social responsibility, and to plan their careers. An important difference between the BA and Bachelor of Science (BS) degrees in Psychological Sciences is that the BA degree involves learning a foreign language, while the BS degree involves taking additional math and science classes beyond the general education math and science classes. Upper-level psychology courses are used to explore the breadth of Psychological Sciences or to focus on a specific subdiscipline such as mental health/trauma, child/lifespan development, or biological psychology. Students will be led and inspired by the faculty of the Department of Psychological Sciences, who are passionate about teaching and are actively involved in scientific research and community service.

General Education Requirements

Majors must satisfy the university and college General Education curricular requirements (p. 30). Selected courses in Psychology may be used to meet General Education Social and Behavioral Sciences requirements.

Degree Requirements

| | | |
|---|--|-----------|
| PSYCH 1000 | Choosing a Career in Psychology ¹ | 1 |
| PSYCH 1003 | General Psychology (MOTR PSYC 100) | 3 |
| PSYCH 2201 | Psychological Statistics | 4 |
| PSYCH 2211 | Introduction to Biological Psychology | 3 |
| PSYCH 2219 | Research Methods in Psychological Science | 3 |
| PSYCH 2245 | Psychological Disorders | 3 |
| PSYCH 4999 | Integrated Psychology | 2 |
| PSYCH 2268 | Lifespan Developmental Psychology (MOTR PSYC 200) | 3 |
| or PSYCH 2270 | Developmental Psychology: Infancy, Childhood and Adolescence | |
| Select four Psychology courses numbered 3000 to 4998 ² | | 12 |
| Total Hours | | 34 |

¹ PSYCH 1000 requirement must be satisfied before the student completes 24 hours of course work.

² No more than 3 hours can be PSYCH 3295 or PSYCH 3390.

Additional Notes

Psychology majors must not take courses in excess of 50 hours in Psychology. Credits completed in Psychology in excess of 50 will not count toward graduation. For example, students earning 53 hours in Psychology will consequently be required to earn a minimum of 123 hours to graduate.

The three course sequence of Math, Psychological Statistics (PSYCH 2201), and Research Methods (PSYCH 2219) require a minimum of three semesters to complete. Students must satisfy the current University mathematical skills requirement before taking PSYCH 2201, Psychological Statistics. PSYCH 2201 is a prerequisite for PSYCH 2219, and hence, PSYCH 2201 must be completed with a grade of C- or higher PRIOR to enrollment in PSYCH 2219.

PSYCH 2201 and PSYCH 2219 cannot be taken concurrently. Students are advised to plan accordingly and to seek assistance from Psychology Academic Advising whenever needed.

Candidates for the B.A. must complete at least 34, but no more than 50, hours of courses taught by or cross-listed with the Department of Psychological Sciences.

Candidates must have a cumulative grade point average of 2.0 or higher in the major overall, and must earn a C- or above in each of the courses comprising the 34 credits applied to the B.A. degree in Psychology. Failure to earn a C- or above in the required courses will necessitate re-taking them for a satisfactory completion of the C- requirement. No Psychology courses taken on a satisfactory/unsatisfactory basis may be applied to the major.

In addition, candidates for the B.A. are required to satisfactorily complete 13 credit hours in one foreign language.

Graduate School Preparation

In addition to the required courses listed above, students interested in applying to graduate school in Psychology are strongly encouraged to become involved in a research project with a Psychology faculty member by securing enrollment in PSYCH 3390, Directed Studies. These positions are available on a limited and competitive basis. No enrollments in PSYCH 3390 are possible without special Instructor permission. Those invited to participate must obtain a special consent form from the instructor in order to enroll. Contact the Psychology Academic Advising office for more information on such positions (psy_advising@umsl.edu).

Learning Outcomes

Upon completion of the degree, graduates of the BA in Psychology program at UM-St. Louis will be able to:

- Demonstrate an integrative understanding of psychological concepts, theories, research, and historical trends in psychology and the prediction of behavior across the scientific subdisciplines (e.g., behavioral neuroscience, clinical, developmental, industrial/organizational, social, etc.). **(Psychological Science Knowledge Base)**
- Summarize and explain use of the scientific approach to solve behavioral problems and articulate how behavioral explanations rely on critical thinking, scientific reasoning, weighing evidence and tolerating ambiguity. **(Critical Thinking)**
- Identify and evaluate appropriate research methods in psychology, including research design, data analysis (i.e., selecting, conducting, and interpreting basic statistical tests) and data interpretation. **(Scientific Inquiry)**
- Communicate using a variety of formats in a clear, concise way. **(Communication)**
- Demonstrate respect for members of diverse groups with sensitivity to issues of power, privilege and discrimination, while adopting social and ethical values that build community at local, national and global levels. **(Ethical and Social Responsibility)**
- Display professionalism and ownership of professional growth and learning through an evolving career development plan tailored to one's accurate self-assessment of abilities, achievements, motivations and work habits. **(Professional Development)**

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-----------|---|-----------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 PSYCH 2268 or 2270 | 3 |
| PSYCH 1000 | | 1 PSYCH 2245 | 3 |
| PSYCH 1003 | | 3 BIOL 1012 | 3 |
| ENGL 1100 | | 3 EXPLORE - Mathematics and Life/Natural Sciences | 3 |
| MATH 1030 | | 3 Foreign Language 1001 | 5 |
| EXPLORE - Humanities and Fine Arts | | 3 | |
| | 14 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| PSYCH 2201 | | 4 PSYCH 2219 | 3 |
| CORE - US History and Government | | 3 Foreign Language 2101 | 3 |
| Foreign Language 1002 | | 5 CORE - Communication Proficiency | 3 |
| Cultural Diversity Requirement | | 3 EXPLORE - Humanities and Fine Arts | 3 |

| | | | |
|---|-------------------|---|--------------|
| | Elective or minor | 3 | |
| | 15 | 15 | |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ENGL 3100 | 3 | PSYCH 3XXX Psychology Sub Area Requirement | 3 |
| PSYCH 2211 | 3 | PSYCH 3XXX Psychology Sub Area Requirement | 3 |
| PSYCH 3XXX Psychology Sub Area Requirement | 3 | EXPLORE - Mathematics and Life/Natural Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | Elective or minor | 3 |
| EXPLORE - Mathematics and Life/Natural Sciences | 3 | Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| PSYCH 3000+ level course | 3 | PSYCH 4999 | 2 |
| Elective or minor | 12 | Elective or minor | 12 |
| | 15 | | 14 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student pursuing the B.A. degree. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Psychological Sciences BS

By pursuing a Bachelor of Science (BS) degree in Psychological Sciences, students will learn about mental processes, the brain, and behavior in humans and other animals. Students will also learn to think critically, to understand and conduct scientific research, to communicate clearly, to take ethical and social responsibility, and to plan their careers. An important difference between the BS and the Bachelor of Arts (BA) degrees in Psychological Sciences is that the BS degree involves taking additional math and science classes beyond the general education math and science classes, while the BA degree involves learning a foreign language. Students can use the upper-level psychology courses to explore the breadth of Psychological Sciences or to focus on a specific subdiscipline such as mental health/trauma, child/lifespan development, or biological psychology. Students will be led and inspired by the faculty of the Department of Psychological Sciences, who are passionate about teaching and are actively involved in scientific research and community service.

General Education Course Requirements

Majors must satisfy the university and college General Education curricular requirements (p. 30). Selected courses in Psychology may be used to meet General Education Social and Behavioral Sciences requirements.

Degree Requirements

| | | | |
|-------------|--|---|--|
| Core | | | |
| MATH 1030 | College Algebra (MOTR MATH 130) ¹ | 3 | |
| MATH 1035 | Trigonometry ¹ | 2 | |

| | | |
|---------------|--|---|
| PSYCH 1000 | Choosing a Career in Psychology ³ | 1 |
| PSYCH 1003 | General Psychology (MOTR PSYC 100) | 3 |
| PSYCH 2201 | Psychological Statistics | 4 |
| PSYCH 2211 | Introduction to Biological Psychology | 3 |
| PSYCH 2219 | Research Methods in Psychological Science | 3 |
| PSYCH 2245 | Psychological Disorders | 3 |
| PSYCH 2250 | Social Psychological Science | 3 |
| PSYCH 2268 | Lifespan Developmental Psychology (MOTR PSYC 200) | 3 |
| or PSYCH 2270 | Developmental Psychology: Infancy, Childhood and Adolescence | |
| PSYCH 4999 | Integrated Psychology | 2 |

Additional Requirements

| | | |
|---|-----------------------|----|
| PHIL 2256 | Bioethics | 3 |
| or PHIL 3380 | Philosophy of Science | |
| Select four Psychology courses numbered 3000 to 4998 ² | | 12 |
| In addition, select at least one of the following Psychology courses: | | 3 |

Neuroscience

| | |
|------------|--|
| PSYCH 4300 | Introduction to Psychopharmacology: Drugs and Mental Illness |
| PSYCH 4314 | Behavioral Neuroscience |
| PSYCH 4330 | |
| PSYCH 4340 | Introduction to Human Neuroanatomy |
| PSYCH 4349 | Human Learning and Memory |
| PSYCH 4350 | Emotions and the Brain |
| PSYCH 4372 | Introduction to Social Neuroscience |

Clinical

| | |
|------------|--|
| PSYCH 3340 | Clinical Issues of Childhood |
| PSYCH 3500 | Health Psychology |
| PSYCH 3820 | Cross-Cultural Psychology |
| PSYCH 4374 | Introduction to Clinical Neuropsychology |

Applied

| | |
|------------|---|
| PSYCH 3318 | Industrial and Organizational Psychology |
| PSYCH 4250 | Stereotyping, Prejudice, and Discrimination |
| PSYCH 4365 | Psychological Testing and Assessment |

Math and Natural Science 4-5

Choose one of the following:

| | |
|-----------|--|
| BIOL 1141 | Human Physiology and Anatomy II |
| BIOL 1831 | Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L) |
| CHEM 1111 | Introductory Chemistry I (MOTR CHEM 150L) |
| CHEM 1121 | Introductory Chemistry II |
| MATH 1800 | Analytic Geometry and Calculus I |

| | |
|--|-----------------|
| PHYSICS 1011 | Basic Physics I |
| Social Science | 3 |
| Select one course from Anthropology, Criminology & Criminal Justice, Economics, Political Science, and Sociology | |
| Total Hours | 55-56 |

Candidates for the B.S. in Psychology must complete at least 40, but no more than 50, hours of courses taught by or cross-listed with the Department of Psychological Sciences. In addition to the above courses, students must complete the following:

- ¹ Students who test into MATH 1045 may meet the math core requirement in lieu of taking MATH 1030 and MATH 1035.
- ² No more than 3 hours can be PSYCH 3295 or PSYCH 3390.
- ³ PSYCH 1000 requirement must be satisfied before the student completes 24 hours of course work.

Candidates must have a cumulative grade point average of 2.0 or higher in the major overall, and must earn a C- or above in each of the courses comprising the 40 credits applied to the B.S. degree in Psychology. Failure to earn a C- or above in the these required courses will necessitate re-taking them for a satisfactory completion of the C- requirement in all 40 hours. No Psychology courses taken on a satisfactory/unsatisfactory basis may be applied to the major.

Graduate School Preparation

In addition to the required courses listed above, students interested in applying to graduate school in Psychology are strongly encouraged to become involved in a research project with a Psychology faculty member by securing enrollment in PSYCH 3390, Directed Studies. These positions are available on a limited and competitive basis. No enrollments in PSYCH 3390 are possible without special Instructor permission. Those invited to participate must obtain a special consent form from the instructor in order to enroll. Contact the Psychology Academic Advising office for more information on such positions (psy_advising@umsl.edu).

Learning Outcomes

Upon completion of the degree, graduates of the BS in Psychology program at UM-St. Louis will be able to:

- Demonstrate an integrative understanding of psychological concepts, theories, research, and historical trends in psychology and the prediction of behavior across the scientific subdisciplines (e.g., behavioral neuroscience, clinical, developmental, industrial/organizational, social, etc.). **(Psychological Science Knowledge Base)**
- Summarize and explain use of the scientific approach to solve behavioral problems and articulate how behavioral explanations rely on critical thinking, scientific reasoning, weighing evidence and tolerating ambiguity. **(Critical Thinking)**
- Evaluate and identify appropriate research methods in psychology and at least one other STEM discipline, including research design, data analysis (i.e., selecting, conducting, and interpreting basic statistical tests) and data interpretation. **(Scientific Inquiry)**
- Communicate using a variety of formats in a clear, concise way. **(Communication)**
- Demonstrate respect for members of diverse groups with sensitivity to issues of power, privilege and discrimination, while adopting social and

ethical values that build community at local, national and global levels. **(Ethical and Social Responsibility)**

- Display professionalism and ownership of professional growth and learning through an evolving career development plan tailored to one's accurate self-assessment of abilities, achievements, motivations and work habits. **(Professional Development)**

Sample Four Year Plan

| First Year | | | |
|--|-----------|---|-----------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 PSYCH 2245 | 3 |
| PSYCH 1000 | | 1 PSYCH 2268 or 2270 | 3 |
| PSYCH 1003 | | 3 BIOL 1012 | 3 |
| ENGL 1100 | | 3 MATH 1035 | 2 |
| MATH 1030 | | 3 CORE - Communication Proficiency | 3 |
| EXPLORE - Humanities & Fine Arts | | 3 EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| | 14 | | 17 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| PSYCH 2201 | | 4 PSYCH 2219 | 3 |
| CORE - US History and Government | | 3 PSYCH 2250 | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 PSYCH XXXX Mathematics and Natural Science Major Requirement | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| Cultural Diversity Requirement | | 3 Elective or minor | 3 |
| | 16 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| PSYCH 2211 | | 3 PSYCH 3XXX Psychology Sub Area Requirement | 3 |
| PHIL 2256 or 3380 | | 3 PSYCH 3XXX Psychology Sub Area Requirement | 3 |
| PSYCH 3XXX Psychology Sub Area Requirement | | 3 PSYCH 3XXX Social Science Major Requirement | 3 |
| ENGL 3100 | | 3 EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| PSYCH 3000+ course | | 3 PSYCH 4999 | 2 |
| Additional Neuroscience, Clinical, or Applied Psychology course | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 14 |
| Total Hours: 121 | | | |

- ¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Psychology BA, Collaborative Psychology Degree Program

The Collaborative Psychology Degree program is a 100% online program designed to offer coursework from the University of Missouri – St. Louis (UMSL) and the University of Missouri- Columbia (MU). While students may take courses offered by MU, students earning this degree through UMSL must complete all UMSL degree, college, and university graduation requirements. Students are reminded to check the UMSL courses section of this bulletin and the MU undergraduate catalog for course descriptions and prerequisite information.

General Education Requirements

Majors must satisfy the university and college General Education curricular requirements (p. 30). Selected courses in Psychology may be used to meet General Education Social and Behavioral Sciences requirements.

Degree Requirements

- The psychology major requires a minimum of 30 credit hours in psychology coursework.
- All courses that count toward the psychology major requirements must be completed with a grade of C- or higher.
- Students must complete a statistics and research methods sequence of PSYCH 2201 (UMSL) and PSYCH 2219 (UMSL) or PSYCH 3010 (MU) and PSYCH 3020 (MU). Both courses in the sequence must be completed at the same campus. PSYCH 2219 (UMSL) or PSYCH 3020 (MU) must be completed before the capstone (PSYCH 4999).
- Students must complete at least 12 hours in psychology courses numbered 3000 or above.
- Students may use no more than 12 hours of Topics Courses, Special Problems Courses, Special Readings Courses, or Internship Courses (PSYCH 2392 (UMSL), PSYCH 3392 (UMSL), PSYCH 2950 (MU), PSYCH 4940 (MU), PSYCH 4950 (MU) and PSYCH 4960 (MU)) toward graduation. Within the 12 hours, no more than 9 hours may be Special Problems Courses. (i.e., psychology research credit hours). A student may complete either 6 hours of PSYCH 2950 (MU) and 3 hours of PSYCH 4950 (MU), or they may complete 3 hours of PSYCH 2950 (MU) and 6 hours of PSYCH 4950 (MU).

Core Courses

| | | |
|----------------------------------|--|-----|
| PSYCH 1000 | Choosing a Career in Psychology | 1 |
| PSYCH 1003 | General Psychology (MOTR PSYC 100) (or MU PSYCH 1000) | 3 |
| PSYCH 2201 & PSYCH 2219 | Psychological Statistics and Research Methods in Psychological Science | 6-7 |
| or MU PSYCH 3010 & MU PSYCH 3020 | and | |
| PSYCH 4999 | Integrated Psychology | 2 |

Distribution Requirements

Cognitive/Neuroscience Distribution 6

Choose two of the following courses:

| | |
|------------|--|
| PSYCH 2211 | Introduction to Biological Psychology (or MU PSYCH 2210) |
| PSYCH 2200 | Drugs and Behavior (or MU PSYCH 2220) |

| | |
|------------|--|
| PSYCH 3500 | Health Psychology (or MU PSYCH 3830) |
| PSYCH 4356 | Cognitive Processes (or MU PSYCH 3160) |
| PSYCH 4110 | Perception (offered through MU) |
| PSYCH 4210 | Physiological Psychology (offered through MU) |
| PSYCH 3870 | Sleep and Sleep Disorders (offered through MU) |

Clinical/Social/Developmental Distribution 6

Choose two of the following courses:

| | |
|-------------|--|
| PSYCH 2230 | Psychology of Gender (or MU PSYCH 3451) |
| PSYCH 2250 | Social Psychological Science (or MU PSYCH 2310) |
| PSYCH 2270 | Developmental Psychology: Infancy, Childhood and Adolescence |
| PSYCH 2268 | Lifespan Developmental Psychology (MOTR PSYC 200) (or MU PSYCH 2410) |
| PSYCH 2245 | Psychological Disorders (MU PSYCH 2510) |
| PSYCH 2520 | Introduction to Addiction Science (offered through MU) |
| PSYCH 3351 | Positive Motivation (offered through MU) |
| PSYCH 4830 | Psychology of Women (offered through MU) |
| PSYCH 3232 | Psychology of Trauma |
| PSYCH 3280 | Psychology of Death and Dying |
| PSYCH 3346 | Introduction to Clinical Psychology (or MU PSYCH 3510) |
| PSYCH 3500 | Health Psychology (or MU PSYCH 3830) |
| PSYCH 4250 | Stereotyping, Prejudice, and Discrimination |
| PSYCH 4275 | Drug Use and Addiction: People, Policy, and Practice |
| PSYCH 4365 | Psychological Testing and Assessment |
| PSYCH 4376 | Mental Health and Aging |
| PSYCH 4441 | Psychology of Youths' Close Relationships (offered through MU) |
| PSYCH 2511 | Military and Veterans Psychology (offered through MU) |
| PSYCH 3511 | Emotion Regulation and the Brain (offered through MU) |
| PSYCH 3370 | The Science of Mindfulness (offered through MU) |
| PSYCH 3480 | Individual Differences (offered through MU) |
| PSYCH 4563 | Behavioral and Technology Addictions (offered through MU) |
| PSYCH 4980W | Human Relationships Capstone (offered through MU) |

Electives

6

Two additional PSYCH courses totaling no less than 6 credit hours at the 2000 level or above.

Total Hours 30-31

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate an integrative understanding of psychological concepts, theories, research, and historical trends in psychology and the prediction of behavior across the scientific subdisciplines (e.g., behavioral neuroscience, clinical, developmental, industrial/organizational, social, etc.)
- Summarize and explain use of the scientific approach to solve behavioral problems and articulate how behavioral explanations rely on critical thinking, scientific reasoning, weighing evidence and tolerating ambiguity.
- Identify and evaluate appropriate research methods in psychology, including research design, data analysis (i.e., selecting, conducting, and interpreting basic statistical tests) and data interpretation.
- Communicate using a variety of formats in a clear, concise way.
- Demonstrate respect for members of diverse groups with sensitivity to issues of power, privilege and discrimination, while adopting social and ethical values that build community at local, national and global levels.
- Display professionalism and ownership of professional growth and learning through an evolving career development plan tailored to one's accurate self-assessment of abilities, achievements, motivations and work habits.

Psychology MA, Behavioral Neuroscience Emphasis

The University of Missouri-St. Louis offers a program of studies leading to a Master of Arts Degree in Psychology with a specialization in Behavioral Neuroscience. Masters students take classes with Doctoral level students. Students will choose between a thesis and a non-thesis option.

Thesis students conduct research in a core area of study including neurophysiological correlates of posttraumatic stress disorder, self-reflection and default mode network, the neurocognition of emotion and romantic love, prejudice and discrimination, and health disparities. We soon will have training on the neuroscience of substance abuse and addiction. Students are enrolled into a research group headed by a faculty member with research interests in one of the areas identified above. That professor serves as the student's primary mentor throughout their graduate training, though communication and collaboration with other laboratories are encouraged.

Research Facilities: The Department is equipped with several EEG systems, physiological research suites including eye-tracking, cardiovascular measures, and skin conductance. Many faculty have connections to facilities with magnetic resonance imaging equipment.

Degree Requirements

A total of 30 credit hours is required for the MA degree with an emphasis in the behavioral-neuroscience field of experimental psychology. Students will choose between a thesis and a non-thesis option.

Thesis Option

Students are required to complete a master's thesis for this program. Theses should follow the procedures in the Behavioral-Neuroscience Handbook and on the Graduate School website.

| Required Coursework | | |
|---------------------|---|-----------|
| PSYCH 5340 | Human Neuroanatomy | 3 |
| PSYCH 5400 | Seminar: Special Topics in Behavioral Neuroscience ¹ | 4 |
| PSYCH 5407 | Psychopharmacology | 3 |
| PSYCH 5465 | Seminar: Behavioral Neuroscience | 3 |
| PSYCH 5468 | Seminar: Cognitive and Affective Processes | 3 |
| PSYCH 7421 | Quantitative Methods I | 4 |
| PSYCH 7422 | Quantitative Methods II | 4 |
| PSYCH 7483 | Directed Research | 4 |
| or PSYCH 7484 | Directed Readings | |
| PSYCH 7491 | MA Thesis Research | 2 |
| Total Hours | | 30 |

¹ One credit hour taken per semester.

Non-Thesis Option

| Required Coursework | | |
|--------------------------------------|---|-----------|
| PSYCH 5340 | Human Neuroanatomy | 3 |
| PSYCH 5400 | Seminar: Special Topics in Behavioral Neuroscience ¹ | 3 |
| PSYCH 5407 | Psychopharmacology | 3 |
| PSYCH 5465 | Seminar: Behavioral Neuroscience | 3 |
| PSYCH 5468 | Seminar: Cognitive and Affective Processes | 3 |
| PSYCH 7421 | Quantitative Methods I | 4 |
| PSYCH 7422 | Quantitative Methods II | 4 |
| Electives | | 7 |
| Choose two of the following courses: | | |
| PSYCH 4350 | Emotions and the Brain | |
| PSYCH 4349 | Human Learning and Memory | |
| PSYCH 4374 | Introduction to Clinical Neuropsychology | |
| PSYCH 4275 | Drug Use and Addiction: People, Policy, and Practice | |
| PSYCH 7423 | Quantitative Methods III | |
| PSYCH 7483 | Directed Research | |
| or PSYCH 7484 | Directed Readings | |
| Total Hours | | 30 |

¹ One credit hour taken per semester.

Psychology Minor

Requirements for the Minor

Candidates must complete a minimum of 15 hours of courses taught by or cross-listed with the Psychology Department, including at least 6 hours

at the 3000 or 4000 level (no more than 3 of these can be PSYCH 3390). Candidates must have a cumulative grade point average of 2.0 or higher in the minor. Psychology courses taken on a satisfactory/unsatisfactory basis may not be applied to the minor.

Learning Outcomes

Graduates of the Minor in Psychology at UM-St. Louis will be able to:

Psychological Sciences Knowledge Base:

- Apply basic psychological terminology, concepts and theories to explain behavior and mental processes.
- Discuss practical applications of psychological principles and science within their major area of study and to everyday life.

Scientific Inquiry and Critical Thinking:

- Identify and describe the potential for flaws in behavioral explanations based on simplistic, personal theories and demonstrate an appreciation for psychology as a science.
- Summarize criteria and strategies for identifying objective sources of psychological information.

Communication:

- Express in writing basic concepts and findings from the psychological sciences.
- Interpret quantitative data displayed in graphs and tables.

Ethical and Social Responsibility:

- Consider ethical issues that reflect principles in the APA Ethics Code.

Professional Development:

- Describe how knowledge and skills from the psychological sciences apply to business, health care, educational, and other workplace settings.

Psychology PhD, Behavioral Neuroscience Emphasis

The Behavioral Neuroscience program provides opportunities for study, research, and training in various areas including psychophysiology, psychopharmacology, neuroendocrinology, cognitive neuroscience, and neuropsychology. This program prepares students for research careers in academia or industries, such as pharmaceutical firms and medical schools. Full-time enrollment is required.

The Behavioral Neuroscience program provides opportunities for study, research, and training in various areas including psychophysiology, psychopharmacology, neuroendocrinology, cognitive neuroscience, and neuropsychology. This program prepares students for research careers in academia or industries, such as pharmaceutical firms and medical schools. Full-time enrollment is required.

Admission Requirements

In addition to meeting the general admission requirements of the Graduate School, applicants should have completed undergraduate courses at minimum in general psychology, psychological statistics, and research

methods. Each doctoral program has additional admission requirements specific to that program.

The Application Deadline for the Behavioral Neuroscience Program is January 15.

Teaching and Research Assistantships

Stipends for teaching and research assistantships are available for the doctoral programs only.

Learning Outcomes for the Ph.D. in Behavioral Neuroscience

The graduate program in Behavioral Neuroscience has the following goals. Outcome measures for each goal allow the faculty to assess the students.

Goal 1. Students will gain a broad-based foundation of terminology and basic and conceptual knowledge necessary for teaching and research in the Behavioral Neuroscience field. Outcome measures include grades in coursework, performance on both the written and oral segments of the qualifying exam, as well as active participation in our journal reading groups.

Goal 2. Beginning early in their studies, students will learn the basic skills to conduct research in a variety of different paradigms. Outcome measures include successful accomplishments in the laboratories of mentor professors.

Goal 3. Beginning early in their studies, students will come to recognize the key to success in the Behavioral Neuroscience field is publishing and seeking grant support. Outcome measures include an easily observable mindset that assesses all scholarly activities in regard to possible publication and/ or a suitable idea for submission to a grant agency. Also, regular attendance is expected at all relevant colloquia on campus and at the grant writing seminars offered by the Behavioral Neuroscience faculty.

Goal 4. Students will come to recognize the importance of writing and will be constantly developing their writing skills as applied to manuscript preparations and grant applications. Outcome measures are the numbers of manuscripts written and submitted to journals or grant agencies each year.

Goal 5. As they progress through the program, students will show increasing self-reliance to initiate a research project and carry it to its completion. Outcome measures are numbers and quality of self-initiated research projects.

Goal 6. At the end of their graduate studies, the students will have grown into full colleagues of the faculty and be ready for careers in research and teaching. Outcome measures are a quality dissertation that is successfully defended before peers and being hired for a suitable position (post-doc, assistant professor, junior-level researcher) in the field.

Psychology PhD, Clinical Community Psychology Emphasis

The Clinical Psychology program has been fully accredited by the American Psychological Association since 1977 and is patterned upon the scientist-practitioner model of clinical training. Students are not considered for admission on a part-time basis. Through the medium of courses, practicums, and research experiences, this emphasis area

prepares Clinical Psychologists for careers in research, teaching, and clinical practice.

Admission Requirements

In addition to meeting the general admission requirements of the Graduate School, applicants should have completed undergraduate courses at minimum in general psychology, psychological statistics, and research methods. Each doctoral program has additional admission requirements specific to that program.

The Application Deadline for the Clinical Psychology Program is January 15.

Teaching and Research Assistantships

Stipends for teaching and research assistantships are available for the doctoral programs only.

Degree Requirements

Students in the Clinical Psychology program participate for three years in the Psychology Department's Community Psychological Services clinic. This facility provides psychological services to the public and consultation to outside agencies. Students also receive clinical experience in clerkships and during a full-time, year-long internship. Research requirements include an initial independent research project, a major critical review of research in a specialty area, and a dissertation.

The Clinical Psychology graduate program is accredited by the American Psychological Association and the course offerings fulfill specific training domains associated with APA accreditation.

I. Broad-based foundation of knowledge and conceptual skills necessary for psychological research and practice.

The following courses address this goal:

| | | |
|------------|--|---|
| PSYCH 5465 | Seminar: Behavioral Neuroscience | 3 |
| PSYCH 5468 | Seminar: Cognitive and Affective Processes | 3 |
| PSYCH 6466 | Seminar: Developmental Psychology | 3 |
| PSYCH 7403 | Psychopathology | 3 |
| PSYCH 7412 | Social Psychology | 3 |
| PSYCH 7405 | | 3 |

II. Trained to evaluate and conduct methodologically sound research of potential benefit to the practice of psychology.

| | | |
|------------|--|---|
| PSYCH 7421 | Quantitative Methods I | 4 |
| PSYCH 7422 | Quantitative Methods II | 4 |
| PSYCH 7474 | Research Methods in Psychology | 3 |
| PSYCH 7485 | Seminar in Clinical Science (2 semesters) | 6 |
| PSYCH 7487 | Thesis Research Project (5 semesters) | 5 |
| PSYCH 7488 | Specialty Examination Research (3 semesters) | 3 |
| PSYCH 7492 | Ph D Thesis Research (per semester) | 1 |

III. Training in multiple approaches to assessment and treatment that is theory-based and research-supported.

| | | |
|---|--|----|
| PSYCH 7404 | Introduction to Clinical Assessment I | 4 |
| PSYCH 7406 | Introduction to Clinical Assessment II | 4 |
| PSYCH 7430 | Introduction to Clinical Skills | 1 |
| PSYCH 7434 | Foundations of Clinical Interventions | 3 |
| PSYCH 7442 | Seminar: Cognitive and Behavioral Interventions | 3 |
| PSYCH 7439 | Summer Supervision (3 semesters) | 3 |
| PSYCH 7433 | Clerkship in Clinical Psychology (6 semesters) | 6 |
| PSYCH 7431 | Clinical Supervision (7 semesters) | 19 |
| PSYCH 7450 | Clinical Internship I (2 semesters) | 2 |
| PSYCH 7451 | Clinical Internship II | 1 |
| Choose 3 courses from offerings that may include: | | 9 |
| PSYCH 7447 | Trauma and Recovery | |
| PSYCH 6415 | Seminar in Health Psychology & Behavioral Medicine | |
| PSYCH 6410 | | |
| PSYCH 7419 | | |
| PSYCH 5407 | Psychopharmacology | |
| PSYCH 5001 | | |

IV. Develop a firm basis for ethical decision-making and adherence to professional standards of conduct in research and practice.

| | | |
|------------|--------------------------------|---|
| PSYCH 7432 | Ethics and Professional Issues | 3 |
|------------|--------------------------------|---|

V. Develop and display sensitivity and adaptability in the applications of research, assessment and treatment approaches to diverse populations.

| | | |
|------------|---|---|
| PSYCH 6448 | Multicultural Issues in Clinical Psychology | 3 |
|------------|---|---|

Psychology PhD, Industrial and Organizational Psychology Emphasis

Effective Fall 2018, the Industrial Organizational Psychology program will no longer be accepting applications.

Industrial/Organizational Psychology

The Industrial/Organizational Psychology program is offered in cooperation with selected faculty from the College of Business to prepare students for careers in industry or academia. This program embraces the scientist-practitioner model and provides a balanced training in I/O. This emphasis provides "industrial" training in areas such as personnel selection, training, and test development/validation, as well as "organizational" training in areas such as work motivation, leadership, and group processes. Research and other training experiences in various settings are also incorporated.

Learning Outcomes for the Ph.D. in Industrial/Organizational Psychology:

The Ph.D. in Industrial/Organizational (IO) Psychology has the following goals:

- Goal 1.** Students will gain a broad-based foundation of knowledge and conceptual skills necessary for applied psychological research and practice.
- Goal 2.** Students will develop the ability to evaluate and conduct methodologically sound research of potential benefit to the theory and practice of psychology.
- Goal 3.** Students will develop the ability to apply psychological principles that are theory-based and research-supported to individuals and groups in organizational settings.
- Goal 4.** Students will develop a firm basis for ethical decision-making in research and practice.
- Goal 5.** Students will display adaptability in their applications of research, assessment and practical psychological approaches to individuals and groups in organizational settings.

Public and Nonprofit Administration Minor

Requirements for Political Science Minors

A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor. Students may count no more than 3 hours in political science taken on a satisfactory/unsatisfactory basis toward the minor. Students taking an internship POL SCI 3940 may count no more than three hours of the internship toward the minor.

| | | |
|-------------------------------|--|----|
| Select five of the following: | | 15 |
| POL SCI 2400 | Public Administration | 15 |
| POL SCI 2420 | Introduction to Public Policy | |
| POL SCI 2430 | Public and Nonprofit Organizational Behavior | |
| POL SCI 3420 | Public and Nonprofit Personnel Management | |
| POL SCI 3440 | Public and Nonprofit Budgeting | |
| POL SCI 3450 | Urban Administration | |
| POL SCI 3700 | Nonprofit Organizations and Social Equity | |
| POL SCI 3710 | Nonprofits, Civil Society and Volunteerism | |
| POL SCI 3900 | Special Readings ¹ | |
| POL SCI 3940 | Public Affairs Internship ¹ | |
| Total Hours | | 15 |

¹ May be taken with approval of the faculty advisor.

Public Law Minor

Requirements for Political Science Minors

A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor. Students may count no more than 3 hours in political science taken on a satisfactory/unsatisfactory basis toward the minor. Students taking an internship POL SCI 3940 may count no more than three hours of the internship toward the minor.

Specific Requirements for the Minor

| | | |
|-------------------------------|--|----|
| Select five of the following: | | 15 |
| POL SCI 1200 | Foundations of Law: An Introduction to Legal Studies | 15 |
| POL SCI 2260 | Law, Politics and Society | |
| POL SCI 2280 | Judicial Politics | |
| POL SCI 2290 | Gender and the Law | |
| POL SCI 3200 | Constitutional Law | |
| POL SCI 3210 | Civil Liberties | |
| POL SCI 3220 | Labor and Employment Law | |
| POL SCI 3260 | The Supreme Court | |
| POL SCI 3900 | Special Readings (when appropriate) ¹ | |
| POL SCI 3940 | Public Affairs Internship ¹ | |
| Total Hours | | 15 |

¹ May be taken with approval of the faculty advisor.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- **Explain key topics concerning public law.**
- Describe the evolution of legal principles to used to determine the liberties and rights of individuals and groups.
- Locate, apply, and clearly communicate information relative to aspects of judicial system, including statutes, court decisions, and constitutional provisions.

Public Policy Administration BSPPA

The BSPPA degree has two emphasis areas and a track. The first is a public administration emphasis, which emphasizes management in both the public and nonprofit sectors; it may produce a terminal degree or be a precursor to graduate training. The second is a public policy emphasis in which a student may focus on a particular policy area and also acquire specialized analytic training and research skills, in preparation for relevant entry-level jobs in the public or the voluntary sector as well as in certain parts of the private sector. The track area focuses explicitly on the administrative and leadership concerns of organizations in the nonprofit

sector, which constitutes a growing field of research and employment opportunities.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). Political science courses may be used to satisfy the social sciences requirement.

Degree Requirements

All BSPPA majors must complete at least 33 but no more than 51, hours in political science. The following core curriculum is required of all BSPPA majors:

Political Science

| | | |
|--------------|--|-----|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 2400 | Public Administration | 3 |
| POL SCI 2420 | Introduction to Public Policy | 3 |
| POL SCI 3940 | Public Affairs Internship | 1-6 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |

Total Hours 25-30

In addition, students must provide a demonstration of computer proficiency through one of the following:

- INFSYS 1800 Computers and Information Systems, extension courses, or other study approved by the BSPPA coordinator.
- BSPPA students may take a maximum of 3 hours of political science on a satisfactory/ unsatisfactory basis, except for the following (which may not be taken on a satisfactory/unsatisfactory basis):

| | | |
|--------------|--|-----|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 2400 | Public Administration | 3 |
| POL SCI 2420 | Introduction to Public Policy | 3 |
| POL SCI 3940 | Public Affairs Internship | 1-6 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Explain the characteristics and impact of policy-making institutions and systems, including national, state, and local governments.
- Demonstrate an understanding of administrative systems and processes.

- Apply various methods, tools, and sources to answer important management and policy questions.
- Analyze policies, programs, and relevant issues, formulate evidence-based recommendations, and communicate them with clarity and coherence.
- Apply public policy administration knowledge and engage in real-world problem solving through an internship.
- Plan, execute, and defend a major research project.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-----------|------------------------------|-----------|
| INTDSC 1003 ¹ | | 1 POL SCI 1500 | 3 |
| POL SCI 1100 | 3 | ECON 1001 | 3 |
| CORE - Math Proficiency | | 3 ENGL 1100 | 3 |
| CORE - Communicating Proficiency | | 3 EXPLORE - Math and Science | 3 |
| EXPLORE - Math and Life Sciences | 3 | EXPLORE - Social Sciences | 3 |
| EXPLORE - Humanities | 3 | | |
| | 16 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-----------|--|-----------|
| POL SCI 2400 | | 3 POL SCI 2420 | 3 |
| ECON 1002 | | 3 Policy Concentration course ² | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 CORE - Information Literacy | 3 |
| EXPLORE - Math and Sciences | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| Elective or minor | | 3 EXPLORE - Social Science | 3 |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|--|-----------|---|-----------|
| POL SCI 3000 | | 3 Policy Concentration Courses ² | 6 |
| Policy Concentration Course ² | | 3 ENGL 3100 | 3 |
| EXPLORE - Social Sciences | | 3 Elective or minor | 6 |
| Elective or minor | 6 | | |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--|-----------|-----------------------------------|-----------|
| POL SCI 3940 | | 3 POL SCI 4950 | 3 |
| Policy Concentration Course ² | | 3 Political Science Policy Course | 3 |
| POL SCI elective | | 3 Elective or minor | 9 |
| Elective or minor | 6 | | |
| | 15 | | 15 |

Total Hours: 121

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

² Public Policy Concentration courses taken outside of Political Science do not count toward the minimum of 33 credit hours in Political Science.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Nonprofit Track

In addition to the core curriculum requirements for all BSPPA majors, students in the nonprofit academic track are required to complete the following courses:

| | | |
|--------------------|--|-----------|
| POL SCI 3420 | Public and Nonprofit Personnel Management | 3 |
| POL SCI 3440 | Public and Nonprofit Budgeting | 3 |
| POL SCI 3700 | Nonprofit Organizations and Social Equity | 3 |
| POL SCI 3710 | Nonprofits, Civil Society and Volunteerism | 3 |
| Total Hours | | 12 |

In addition, the Public Affairs Internship (POL SCI 3940) required for the BSPPA must be conducted through a nonprofit organization.

Note: Students considering the B.S. in public policy and administration should see a political science adviser as early as possible to plan their program.

Public Policy Administration BSPPA, Nonprofit Emphasis

The BSPPA degree has two emphasis areas and a track. The first is a public administration emphasis, which emphasizes management in both the public and nonprofit sectors; it may produce a terminal degree or be a precursor to graduate training. The second is a public policy emphasis in which a student may focus on a particular policy area and also acquire specialized analytic training and research skills, in preparation for relevant entry-level jobs in the public or the voluntary sector as well as in certain parts of the private sector. The track area focuses explicitly on the administrative and leadership concerns of organizations in the nonprofit sector, which constitutes a growing field of research and employment opportunities.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). Political science courses may be used to satisfy the social sciences requirement.

Degree Requirements

All BSPPA majors must complete at least 33 but no more than 51, hours in political science. The following core curriculum is required of all BSPPA majors:

| Political Science | | |
|--------------------------|--|--------------|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 2400 | Public Administration | 3 |
| POL SCI 2420 | Introduction to Public Policy | 3 |
| POL SCI 3940 | Public Affairs Internship | 1-6 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| Total Hours | | 25-30 |

In addition, students must provide a demonstration of computer proficiency through one of the following:

- INFSYS 1800 Computers and Information Systems, extension courses, or other study approved by the BSPPA coordinator.
- BSPPA students may take a maximum of 3 hours of political science on a satisfactory/ unsatisfactory basis, except for the following (which may not be taken on a satisfactory/unsatisfactory basis):

| | | |
|--------------|--|-----|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 2400 | Public Administration | 3 |
| POL SCI 2420 | Introduction to Public Policy | 3 |
| POL SCI 3940 | Public Affairs Internship | 1-6 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |

In addition to the core curriculum requirements for all BSPPA majors, students in the nonprofit academic track are required to complete the following courses:

| | | |
|--------------------|--|-----------|
| POL SCI 3420 | Public and Nonprofit Personnel Management | 3 |
| POL SCI 3440 | Public and Nonprofit Budgeting | 3 |
| POL SCI 3700 | Nonprofit Organizations and Social Equity | 3 |
| POL SCI 3710 | Nonprofits, Civil Society and Volunteerism | 3 |
| Total Hours | | 12 |

In addition, the Public Affairs Internship (POL SCI 3940) required for the BSPPA must be conducted through a nonprofit organization.

Note: Students considering the B.S. in public policy and administration should see a political science adviser as early as possible to plan their program.

| First Year | | | |
|---|--------------|---|--------------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 POL SCI 1500 | 3 |
| POL SCI 1100 | 3 | ECON 1001 | 3 |
| ENGL 1100 | 3 | GEN ED CORE: Communication Proficiency | 3 |
| GEN ED CORE: Mathematics Proficiency | | 3 GEN ED EXPLORE: Mathematics and Life/Natural Sciences | 3 |
| GEN ED EXPLORE: Mathematics and Life/Natural Sciences | | 3 Elective or minor | 3 |
| GEN ED EXPLORE: Humanities and Fine Arts | | 3 | |
| | | 16 | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| POL SCI 2400 | | 3 POL SCI 2420 | 3 |
| ECON 1002 | | 3 INFSYS 1800 | 3 |
| GEN ED EXPLORE: Humanities and Fine Arts | | 3 GEN ED EXPLORE: Humanities and Fine Arts | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | 15 | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|-------------------|-------|---------------------|-------|
| POL SCI 3420 | | 3 POL SCI 3440 | 3 |
| POL SCI 3000 | | 3 ENGL 3100 | 3 |
| POL SCI 3700 | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|-------------------|-------|---------------------|-------|
| POL SCI 3940 | | 3 POL SCI 4950 | 3 |
| POL SCI 3710 | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 2 |
| | 15 | | 14 |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Public Policy Administration BSPPA, Public Administration Emphasis

The BSPPA degree is designed for students who are interested in working in government or nonprofit organizations, and who have a passion for making a positive impact on society. In this program, students gain understanding of public and nonprofit administration and policymaking in the United States. Students will develop skills for leading in public and nonprofit organizations, and will have the chance to utilize those skills through an internship. The public administration emphasis area focuses explicitly on the administrative and leadership concerns of government organizations and prepares students to work and manage in the public sector.

The BSPPA degree has two emphasis areas and a track. The first is a public administration emphasis, which emphasizes management in both the public and nonprofit sectors; it may produce a terminal degree or be a precursor to graduate training. The second is a public policy emphasis in which a student may focus on a particular policy area and also acquire specialized analytic training and research skills, in preparation for relevant entry-level jobs in the public or the voluntary sector as well as in certain parts of the private sector. The track area focuses explicitly on the administrative and leadership concerns of organizations in the nonprofit sector, which constitutes a growing field of research and employment opportunities.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). Political science courses may be used to satisfy the social sciences requirement.

Degree Requirements

All BSPPA majors must complete at least 33 but no more than 51, hours in political science. The following core curriculum is required of all BSPPA majors:

Political Science

| | | |
|--------------|--|-----|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 2400 | Public Administration | 3 |
| POL SCI 2420 | Introduction to Public Policy | 3 |
| POL SCI 3940 | Public Affairs Internship | 1-6 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |

Total Hours 25-30

In addition, students must provide a demonstration of computer proficiency through one of the following:

- INFSYS 1800 Computers and Information Systems, extension courses, or other study approved by the BSPPA coordinator.
- BSPPA students may take a maximum of 3 hours of political science on a satisfactory/ unsatisfactory basis, except for the following (which may not be taken on a satisfactory/unsatisfactory basis):

| | | |
|--------------|--|-----|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 2400 | Public Administration | 3 |
| POL SCI 2420 | Introduction to Public Policy | 3 |
| POL SCI 3940 | Public Affairs Internship | 1-6 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |

Public Administration Emphasis Area

In addition to the core curriculum requirements for all BSPPA majors, students in the public administration emphasis area are required to complete the following courses:

| | | |
|---|--|-----------|
| POL SCI 2430 | Public and Nonprofit Organizational Behavior | 3 |
| POL SCI 3420 | Public and Nonprofit Personnel Management | 3 |
| POL SCI 3440 | Public and Nonprofit Budgeting | 3 |
| POL SCI 3450 | Urban Administration | 3 |
| Select at least one additional Political Science Course | | 3 |
| Total Hours | | 15 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Explain the characteristics and impact of policy-making institutions and systems, including national, state, and local governments.
- Demonstrate an understanding of administrative systems and processes.
- Apply various methods, tools, and sources to answer important management and policy questions.
- Analyze policies, programs, and relevant issues, formulate evidence-based recommendations, and communicate them with clarity and coherence.
- Apply public policy administration knowledge and engage in real-world problem solving through an internship.
- Plan, execute, and defend a major research project.
- Demonstrate an understanding of theories, concepts and practices relevant to public administration.
- Apply critical skills for working in public administration such as interpreting budget documents and making budget choices, creating communications plans, and developing recruitment and hiring policies.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|---|-------|---|-------|
| INTDSC 1003 ¹ | | 1 POL SCI 1500 | 3 |
| POL SCI 1100 | | 3 ECON 1001 | 3 |
| ENGL 1100 | | 3 CORE - Communication Proficiency | 3 |
| CORE - Mathematics Proficiency | | 3 EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 Elective or minor | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 | |
| | 16 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|--------------------------------------|-------|
| POL SCI 2400 | | 3 POL SCI 2420 | 3 |
| POL SCI 2430 | | 3 INFSYS 1800 | 3 |
| ECON 1002 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|-------------------|-------|---------------------|-------|
| POL SCI 3000 | | 3 POL SCI 3440 | 3 |
| POL SCI 3420 | | 3 POL SCI 3450 | 3 |
| Elective or minor | | 3 ENGL 3100 | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--|-------|---------------------|-------|
| POL SCI 3940 | | 3 POL SCI 4950 | 3 |
| POL SCI XXXX Policy and Institutions Course | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 2 |
| | 15 | | 14 |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Public Policy Administration BSPPA, Public Policy Emphasis

The BSPPA degree is designed for students who are interested in understanding and influencing public policy and administration, and who have a passion for making a positive impact on society. Students will gain understanding of developing, implementing, and evaluating public policy, and leading in public and nonprofit organizations. Students will have the chance to utilize those skills through an internship. In the public policy track, students work with a faculty advisor to develop a focus on a particular policy area in preparation for relevant jobs in the public, nonprofit or private sector.

The BSPPA degree has two emphasis areas and a track. The first is a public administration emphasis, which emphasizes management in both the public and nonprofit sectors; it may produce a terminal degree or be a precursor to graduate training. The second is a public policy emphasis in which a student may focus on a particular policy area and also acquire specialized analytic training and research skills, in preparation for relevant entry-level jobs in the public or the voluntary sector as well as in certain parts of the private sector. The track area focuses explicitly on the administrative and leadership concerns of organizations in the nonprofit sector, which constitutes a growing field of research and employment opportunities.

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). Political science courses may be used to satisfy the social sciences requirement.

Degree Requirements

All BSPPA majors must complete at least 33 but no more than 51, hours in political science. The following core curriculum is required of all BSPPA majors:

Political Science

| | | |
|--------------|--|-----|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 2400 | Public Administration | 3 |
| POL SCI 2420 | Introduction to Public Policy | 3 |
| POL SCI 3940 | Public Affairs Internship | 1-6 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |

| | | |
|--------------------|--|--------------|
| ECON 1002 | Principles of Macroeconomics (MOTR ECON 101) | 3 |
| Total Hours | | 25-30 |

In addition, students must provide a demonstration of computer proficiency through one of the following:

- INFSYS 1800 Computers and Information Systems, extension courses, or other study approved by the BSPPA coordinator.
- BSPPA students may take a maximum of 3 hours of political science on a satisfactory/ unsatisfactory basis, except for the following (which may not be taken on a satisfactory/unsatisfactory basis):

| | | |
|--------------|--|-----|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| POL SCI 1500 | Introduction to Comparative Politics (MOTR POSC 202) | 3 |
| POL SCI 3000 | Political Analysis | 3 |
| POL SCI 2400 | Public Administration | 3 |
| POL SCI 2420 | Introduction to Public Policy | 3 |
| POL SCI 3940 | Public Affairs Internship | 1-6 |
| POL SCI 4950 | Senior Seminar in Political Science | 3 |

Public Policy Emphasis Area

Students will adopt a policy concentration of at least 15 credit hours with approval from the BSPPA coordinator. Possible areas of specialization include, but are not limited to, environmental policy, government and business, society and the legal system, urban policy, labor studies, health care, human services, and nonprofit service provision. In fulfilling the concentration requirement, students, in consultation with the BSPPA coordinator, will select courses from related disciplines including at least two political science courses related to the policy area.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Explain the characteristics and impact of policy-making institutions and systems, including national, state, and local governments.
- Demonstrate an understanding of administrative systems and processes.
- Apply various methods, tools, and sources to answer important management and policy questions.
- Analyze policies, programs, and relevant issues, formulate evidence-based recommendations, and communicate them with clarity and coherence.
- Apply public policy administration knowledge and engage in real-world problem solving through an internship.
- Plan, execute, and defend a major research project.
- Demonstrate an understanding of theories, concepts and practices relevant to the student's chosen policy area.
- Compare and contrast different approaches and frameworks relevant to the student's chosen policy area.

| | | | |
|--------------------------|--------------|----------------------------------|--------------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | 1 | POL SCI 1500 | 3 |
| POL SCI 1100 | 3 | ECON 1001 | 3 |
| ENGL 1100 | 3 | CORE - Communication Proficiency | 3 |

| | | | |
|--|-----------|--|-----------|
| CORE - Mathematics Proficiency | 3 | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | 3 | Elective or minor | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | | |
| | 16 | | 15 |

Second Year

| | | | |
|------------------------------------|--------------|--|--------------|
| Fall | Hours | Spring | Hours |
| POL SCI 2400 | 3 | POL SCI 2420 | 3 |
| ECON 1002 | 3 | INFSYS 1800 | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | POL SCI XXXX Policy Concentration Course | 3 |
| Elective or minor | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |

Third Year

| | | | |
|--|--------------|--|--------------|
| Fall | Hours | Spring | Hours |
| POL SCI 3000 | 3 | ENGL 3100 | 3 |
| POL SCI XXXX Policy Concentration Course | 3 | POL SCI XXXX Policy Concentration Course | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| | 15 | | 15 |

Fourth Year

| | | | |
|--|--------------|--|--------------|
| Fall | Hours | Spring | Hours |
| POL SCI 3940 | 3 | POL SCI 4950 | 3 |
| POL SCI XXXX Policy Concentration Course | 3 | POL SCI XXXX Policy Concentration Course | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 2 |
| | 15 | | 14 |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Public Policy Administration BSPPA/MPPA Dual Degree Program

The BSPPA / MPPA 2+3 program is an accelerated program that allows outstanding BSPPA students to complete a baccalaureate degree and Master of Public Policy Administration (MPPA) degree in five years. The program allows students to apply 12 of the MPPA credit hours towards the BSPPA at UMSL, reducing the overall required hours for the two degrees from the standard 160 – 120 for the BS plus 40 for the MPPA – to 148 hours.

Core Curriculum

All candidates for the MPPA degree must complete 25 hours in the core curriculum sequence composed of the following public policy administration courses:

Policy Analysis and Economics

| | | |
|--------------|---------------------------------------|---|
| P P ADM 6000 | Introduction to Policy Analysis | 3 |
| ECON 5550 | Economics for Public Policy Analysis | 3 |
| P P ADM 6900 | Cases in Public Policy Administration | 3 |

Public Administration and Budgeting

| | | |
|--------------|--|---|
| P P ADM 6400 | Public Administration: Theory & Practice | 3 |
| P P ADM 6490 | Human Resources in the Public Sector | 3 |
| P P ADM 6180 | Governmental Budgeting and Financial Control | 3 |

Statistics, Research Methods, and Information Technology

| | | |
|--------------|-----------------------------------|---|
| P P ADM 6010 | Introduction to Policy Research | 3 |
| P P ADM 6750 | Applied Research Design | 3 |
| P P ADM 6850 | E-Governance in the Public Sector | 1 |

Total Hours **25**

A thesis is not required to complete the program. However, writing is an important component of the degree, and students will complete written analyses as part of their coursework and/or internships.

Electives

Twelve credit hours are taken as electives based on a student's interest. The electives are organized into emphasis areas, listed above in the MPPA program.

For each student in this program, the MPPA Director and the BSPPA advisor in the Department of Political Science at UMSL, will jointly identify and approve four MPPA courses (totaling 12 credits) that cover, at a more advanced level, undergraduate courses that would otherwise be taken for the BSPPA degree. These courses will substitute for (and should not duplicate) BSPPA courses, and will count toward completion of both BSPPA and MPPA requirements.

Degree requirements remain the same for the two degrees, but students admitted into this accelerated program will be able to earn 12 graduate credits prior to completing their undergraduate degrees. Upon completion of the required coursework for the MPPA, the BSPPA and MPPA degrees will be awarded.

Admission Requirements

BSPPA majors must have completed between 60 and 108 credit hours before applying for admission into this dual degree program. It is recommended that applicants apply after completing 90 credit hours. Applicants must have a minimum 3.0 overall GPA as well as a minimum 3.0 GPA in the major. Applications will be submitted to the Master of Public Policy Administration program and decisions will be made by the director in consultation with the BSPPA advisor in the Department of Political Science. Applicants must demonstrate proficiency in college algebra or equivalent. The application must be accompanied by three letters of recommendation, including at least one from a current, full-time faculty member, and a two- to three-page statement explaining how

the BSPPA/MPPA program fits in with the applicant's educational and professional goals.

Public Policy Administration MPPA

Admissions Requirements

Applicants must meet the following program admission requirements in addition to the general requirements of the Graduate School.

The MPPA admissions committee carefully evaluates each applicant record using the five following criteria:

- **Bachelor's Degree** by the time of enrollment, prospective students must have obtained a baccalaureate degree or the equivalent from an accredited college or university. Applicants must submit official transcripts documenting the baccalaureate degree and all other prior college and graduate-level coursework completed.
- **Grade Point Average:** A minimum GPA of 3.0 on a 4.0 scale is required to be considered for regular admission. This GPA is higher than the minimum for the Graduate School. An undergraduate GPA below 3.0 will be considered on an individual basis for restricted admission.
- **Demonstrated proficiency in college algebra or the equivalent.** Applicants must demonstrate proficiency in college algebra or the equivalent. Graduate coursework also will be taken into consideration. Applicants who do not meet these criteria may be admitted on a restricted basis and asked to satisfactorily complete a math proficiency test.
- **Letters of Recommendation.** Applicants must obtain three letters of recommendation. The letters should be from those who are familiar with your professional and/or academic skills. At least one of the letters must be from a current or former college-level instructor.
- **Personal Statement.** Applicants are required to submit a 2-3 page personal statement to demonstrate competence in writing. The statement should explain how the MPPA program fits in with the applicant's educational and professional goals. This personal statement may be sent directly to the MPPA program; a short statement of purpose in the web-based admission application is not sufficient.

Degree Requirements

The MPPA degree consists of 40 credit hours, 25 of which are taken as part of the core curriculum and 15 that are electives. Students who complete the degree must demonstrate the following:

- Design, research, write, and defend analyses of substantive public policy problems and/or potential solutions
- Use data and sophisticated analytic tools (qualitative and quantitative) to conduct research in public policy and administration
- Understand the policy and internal/external environments of public and nonprofit organizations
- Develop expertise in a substantive area of public policy administration

Curriculum

All candidates for the MPPA degree must complete 25 hours in the core curriculum sequence composed of the following public policy administration courses:

Policy Analysis and Economics

| | | |
|--------------|---------------------------------------|---|
| P P ADM 6000 | Introduction to Policy Analysis | 3 |
| ECON 5550 | Economics for Public Policy Analysis | 3 |
| P P ADM 6900 | Cases in Public Policy Administration | 3 |

Public Administration and Budgeting

| | | |
|--------------|--|---|
| P P ADM 6400 | Public Administration: Theory & Practice | 3 |
| P P ADM 6490 | Human Resources in the Public Sector | 3 |
| P P ADM 6180 | Governmental Budgeting and Financial Control | 3 |

Statistics, Research Methods, and Information Technology

| | | |
|--------------|-----------------------------------|---|
| P P ADM 6010 | Introduction to Policy Research | 3 |
| P P ADM 6750 | Applied Research Design | 3 |
| P P ADM 6850 | E-Governance in the Public Sector | 1 |

Total Hours **25**

A thesis is not required to complete the program. However, writing is an important component of the degree, and students will complete written analyses as part of their coursework and/or internship.

P P ADM 6000 should be taken at the beginning of the program. It is strongly recommended that P P ADM 6010 and ECON 5550 be taken early in a student's course plan. P P ADM 6900 is a capstone course and must be taken toward the end of the program.

Students may select one of three emphasis areas in which to concentrate their advanced studies:

- Policy Research and Analysis,
- Local Government Management,
- Nonprofit Organization Management.

Students may also select an individualized emphasis area in consultation with their advisor and with approval of the Director.

Prior to the completion of 15 hours in the MPPA program, students should identify an emphasis area. In each of the emphasis areas students may be able to substitute another course for a specified elective, with the MPPA Director's approval. Specific requirements for each emphasis area are as follows:

Internships

An internship is required for students without substantial experience in the public or nonprofit sectors. Interns may be placed in planning agencies, city managers' offices, administrative departments, or nonprofit agencies. Credit is granted after successful completion of the internship and a written paper at the end of the semester.

MPPA students currently employed in public agencies or nonprofit organizations can receive 3 hours of credit for internships with their employer. To do so, students must develop, in consultation with the internship coordinator, special research projects outside the scope of their regular employment duties.

Students who have significant relevant experience in the public or nonprofit sector may request the internship requirement be waived. To request a waiver, students must submit a written request outlining the student's professional or managerial field experience with appropriate documentation. Any request for a waiver from the internship requirement

must be approved by the program director. Students who receive a waiver must take an additional 3 hours of electives in lieu of the internship.

Prior to the completion of 15 hours in the MPPA program, the student must present a proposal for 15 hours of specific coursework for approval by the student's advisor and the MPPA program director. The 15 hours must include P P ADM 6950, Internship (in an assignment relevant to the emphasis area). Students with significant public or nonprofit sector experience may request permission to waive the internship and replace it with an additional three-credit hour elective.

Public Policy Administration MPPA Accelerated Master's Degree

The Department of Political Science offers an Accelerated MA degree program that allows students to simultaneously earn their undergraduate degree in Political Science, International Relations, Public Policy Administration, or Sociology, and their Master of Public Policy Administration (MPPA) in as few as 10 semesters of full-time study.

The combined program requires a minimum of 148 credit hours.

For each student in this program, the MPPA director and the undergraduate advisor will jointly identify and approve four MPPA courses totaling 12 credit hours that cover, at a more advanced level, undergraduate courses that would otherwise be taken for the undergraduate degree. These courses will replace (but should not duplicate) undergraduate courses, and will count toward the completion of both the undergraduate degree and MPPA requirements.

Any 4000-level course taken before admission to the Accelerated MA program will apply to the undergraduate requirements only. Students are encouraged to work closely with the Undergraduate and Graduate Directors to ensure that required courses are timed appropriately. It is strongly recommended that students meet with the MPPA Director as soon as possible and ideally before their junior year.

Eligibility

Students must have completed the 1000-level courses required for the undergraduate major prior to applying for the Accelerated MPPA program.

Admission Requirements**Provisional Admission**

Applicants are considered for provisional admission if they meet the following criteria.

- Completed 60 undergraduate credit hours
- Achieved a cumulative grade point average of 3.0 or higher
- Submitted two letters of recommendation from faculty
- A personal statement explaining how the MPPA program fits with the applicant's professional and educational goals.

The MPPA Director, in consultation with the undergraduate director of the relevant major, will determine whether the student can apply for provisional status. Graduate courses completed by undergraduate students who have been provisionally admitted to Accelerated Master's program will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. These courses must be approved before the semester starts. Therefore, it is recommended to

apply for provisional status as a junior, preferably in the first semester of junior year.

Graduate Admission

Students are considered for admission to graduate school in their final semester as an undergraduate student. Students should meet with the MPPA Director each semester. Applicants are considered for graduate admission if they meet the following criteria.

- Are in their final semester as an undergraduate
- Have a minimum GPA of 3.0 since being granted provisional status

Final decisions concerning graduate admission are made by the Graduate School in consultation with the MPPA Director. Students admitted to the graduate program must take graduate courses until the completion of the MPPA degree.

Program Requirements

Junior/Senior Year Courses

| | | |
|---|---------------------------------------|---|
| P P ADM 6600 | Managing and Leading in Organizations | 3 |
| P P ADM 6010 | Introduction to Policy Research | 3 |
| Two additional P P ADM graduate courses | | 6 |

Final Year Courses

Core MPPA Curriculum

| | | |
|--|--|-----------|
| Policy Analysis and Economics | | |
| P P ADM 6000 | Introduction to Policy Analysis | 3 |
| ECON 5550 | Economics for Public Policy Analysis | 3 |
| P P ADM 6900 | Cases in Public Policy Administration | 3 |
| Public Administration and Budgeting | | |
| P P ADM 6180 | Governmental Budgeting and Financial Control | 3 |
| P P ADM 6400 | Public Administration: Theory & Practice | 3 |
| P P ADM 6490 | Human Resources in the Public Sector | 3 |
| Statistics, Research Methods, and Information Technology | | |
| P P ADM 6010 | Introduction to Policy Research | 3 |
| P P ADM 6750 | Applied Research Design | 3 |
| P P ADM 6850 | E-Governance in the Public Sector | 1 |
| Total Hours | | 25 |

Electives

Fifteen credit hours are taken as electives, which includes an internship. The electives are organized into three emphasis areas: Policy Research and Analysis, Local Government Management, and Nonprofit Leadership and Management. An individualized emphasis area is also available with the approval of the MPPA Director.

A thesis is not required to complete the program. However, writing is an important component of the degree, and students will complete written analyses as part of their coursework and or internships.

Internship Requirement

Students need to complete a 300-hour internship at the graduate level (P P ADM 6950). Students can appeal to waive the internship requirement; however, only students with significant work experience are successful. The PPA Director evaluates waivers on a case-by-case basis.

Awarding Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Public Policy Administration MPPA, Individualized Emphasis

Admissions Requirements

Applicants must meet the following program admission requirements in addition to the general requirements of the Graduate School.

The MPPA admissions committee carefully evaluates each applicant record using the five following criteria:

- **Bachelor's Degree** by the time of enrollment, prospective students must have obtained a baccalaureate degree or the equivalent from an accredited college or university. Applicants must submit official transcripts documenting the baccalaureate degree and all other prior college and graduate-level coursework completed.
- **Grade Point Average:** A minimum GPA of 3.0 on a 4.0 scale is required to be considered for regular admission. This GPA is higher than the minimum for the Graduate School. An undergraduate GPA below 3.0 will be considered on an individual basis for restricted admission.
- **Demonstrated proficiency in college algebra or the equivalent.** Applicants must demonstrate proficiency in college algebra or the equivalent. Graduate coursework also will be taken into consideration. Applicants who do not meet these criteria may be admitted on a restricted basis and asked to satisfactorily complete a math proficiency test.
- **Letters of Recommendation.** Applicants must obtain three letters of recommendation. The letters should be from those who are familiar with your professional and/or academic skills. At least one of the letters must be from a current or former college-level instructor.
- **Personal Statement.** Applicants are required to submit a 2-3 page personal statement to demonstrate competence in writing. The statement should explain how the MPPA program fits in with the applicant's educational and professional goals. This personal statement may be sent directly to the MPPA program; a short statement of purpose in the web-based admission application is not sufficient.

Degree Requirements

The MPPA degree consists of 40 credit hours, 25 of which are taken as part of the core curriculum and 15 that are electives. Students who complete the degree must demonstrate the following:

- Design, research, write, and defend analyses of substantive public policy problems and/or potential solutions
- Use data and sophisticated analytic tools (qualitative and quantitative) to conduct research in public policy and administration
- Understand the policy and internal/external environments of public and nonprofit organizations
- Develop expertise in a substantive area of public policy administration

Curriculum

All candidates for the MPPA degree must complete 25 hours in the core curriculum sequence composed of the following public policy administration courses:

Policy Analysis and Economics

| | | |
|--------------|---------------------------------------|---|
| P P ADM 6000 | Introduction to Policy Analysis | 3 |
| ECON 5550 | Economics for Public Policy Analysis | 3 |
| P P ADM 6900 | Cases in Public Policy Administration | 3 |

Public Administration and Budgeting

| | | |
|--------------|--|---|
| P P ADM 6400 | Public Administration: Theory & Practice | 3 |
| P P ADM 6490 | Human Resources in the Public Sector | 3 |
| P P ADM 6180 | Governmental Budgeting and Financial Control | 3 |

Statistics, Research Methods, and Information Technology

| | | |
|--------------|-----------------------------------|---|
| P P ADM 6010 | Introduction to Policy Research | 3 |
| P P ADM 6750 | Applied Research Design | 3 |
| P P ADM 6850 | E-Governance in the Public Sector | 1 |

Total Hours 25

A thesis is not required to complete the program. However, writing is an important component of the degree, and students will complete written analyses as part of their coursework and/or internship.

P P ADM 6000 should be taken at the beginning of the program. It is strongly recommended that P P ADM 6010 and ECON 5550 be taken early in a student's course plan. P P ADM 6900 is a capstone course and must be taken toward the end of the program.

Students may select one of three emphasis areas in which to concentrate their advanced studies:

- Policy Research and Analysis,
- Local Government Management,
- Nonprofit Organization Management.

Students may also select an individualized emphasis area in consultation with their advisor and with approval of the Director.

Prior to the completion of 15 hours in the MPPA program, students should identify an emphasis area. In each of the emphasis areas students may be able to substitute another course for a specified elective, with the MPPA

Director's approval. Specific requirements for each emphasis area are as follows:

Internships

An internship is required for students without substantial experience in the public or nonprofit sectors. Interns may be placed in planning agencies, city managers' offices, administrative departments, or nonprofit agencies. Credit is granted after successful completion of the internship and a written paper at the end of the semester.

MPPA students currently employed in public agencies or nonprofit organizations can receive 3 hours of credit for internships with their employer. To do so, students must develop, in consultation with the internship coordinator, special research projects outside the scope of their regular employment duties.

Students who have significant relevant experience in the public or nonprofit sector may request the internship requirement be waived. To request a waiver, students must submit a written request outlining the student's professional or managerial field experience with appropriate documentation. Any request for a waiver from the internship requirement must be approved by the program director. Students who receive a waiver must take an additional 3 hours of electives in lieu of the internship.

Emphasis Area Requirements

Prior to the completion of 15 hours in the MPPA program, the student must present a proposal for 15 hours of specific coursework for approval by the student's advisor and the MPPA program director. The 15 hours must include P P ADM 6950, Internship (in an assignment relevant to the emphasis area). Students with significant public or nonprofit sector experience may request permission to waive the internship and replace it with an additional three-credit hour elective.

Public Policy Administration MPPA, Local Government Management Emphasis

Admissions Requirements

Applicants must meet the following program admission requirements in addition to the general requirements of the Graduate School.

The MPPA admissions committee carefully evaluates each applicant record using the five following criteria:

- **Bachelor's Degree** by the time of enrollment, prospective students must have obtained a baccalaureate degree or the equivalent from an accredited college or university. Applicants must submit official transcripts documenting the baccalaureate degree and all other prior college and graduate-level coursework completed.
- **Grade Point Average:** A minimum GPA of 3.0 on a 4.0 scale is required to be considered for regular admission. This GPA is higher than the minimum for the Graduate School. An undergraduate GPA below 3.0 will be considered on an individual basis for restricted admission.
- **Demonstrated proficiency in college algebra or the equivalent.** Applicants must demonstrate proficiency in college algebra or the equivalent. Graduate coursework also will be taken into consideration. Applicants who do not meet these criteria may be

admitted on a restricted basis and asked to satisfactorily complete a math proficiency test.

- **Letters of Recommendation.** Applicants must obtain three letters of recommendation. The letters should be from those who are familiar with your professional and/or academic skills. At least one of the letters must be from a current or former college-level instructor.
- **Personal Statement.** Applicants are required to submit a 2-3 page personal statement to demonstrate competence in writing. The statement should explain how the MPPA program fits in with the applicant's educational and professional goals. This personal statement may be sent directly to the MPPA program; a short statement of purpose in the web-based admission application is not sufficient.

Degree Requirements

The MPPA degree consists of 40 credit hours, 25 of which are taken as part of the core curriculum and 15 that are electives. Students who complete the degree must demonstrate the following:

- Design, research, write, and defend analyses of substantive public policy problems and/or potential solutions
- Use data and sophisticated analytic tools (qualitative and quantitative) to conduct research in public policy and administration
- Understand the policy and internal/external environments of public and nonprofit organizations
- Develop expertise in a substantive area of public policy administration

Curriculum

All candidates for the MPPA degree must complete 25 hours in the core curriculum sequence composed of the following public policy administration courses:

Policy Analysis and Economics

| | | |
|--------------|---------------------------------------|---|
| P P ADM 6000 | Introduction to Policy Analysis | 3 |
| ECON 5550 | Economics for Public Policy Analysis | 3 |
| P P ADM 6900 | Cases in Public Policy Administration | 3 |

Public Administration and Budgeting

| | | |
|--------------|--|---|
| P P ADM 6400 | Public Administration: Theory & Practice | 3 |
| P P ADM 6490 | Human Resources in the Public Sector | 3 |
| P P ADM 6180 | Governmental Budgeting and Financial Control | 3 |

Statistics, Research Methods, and Information Technology

| | | |
|--------------|-----------------------------------|---|
| P P ADM 6010 | Introduction to Policy Research | 3 |
| P P ADM 6750 | Applied Research Design | 3 |
| P P ADM 6850 | E-Governance in the Public Sector | 1 |

Total Hours **25**

A thesis is not required to complete the program. However, writing is an important component of the degree, and students will complete written analyses as part of their coursework and/or internship.

P P ADM 6000 should be taken at the beginning of the program. It is strongly recommended that P P ADM 6010 and ECON 5550 be taken early in a student's course plan. P P ADM 6900 is a capstone course and must be taken toward the end of the program.

Students may select one of three emphasis areas in which to concentrate their advanced studies:

- Policy Research and Analysis,
- Local Government Management,
- Nonprofit Organization Management.

Students may also select an individualized emphasis area in consultation with their advisor and with approval of the Director.

Prior to the completion of 15 hours in the MPPA program, students should identify an emphasis area. In each of the emphasis areas students may be able to substitute another course for a specified elective, with the MPPA Director's approval. Specific requirements for each emphasis area are as follows:

Internships

An internship is required for students without substantial experience in the public or nonprofit sectors. Interns may be placed in planning agencies, city managers' offices, administrative departments, or nonprofit agencies. Credit is granted after successful completion of the internship and a written paper at the end of the semester.

MPPA students currently employed in public agencies or nonprofit organizations can receive 3 hours of credit for internships with their employer. To do so, students must develop, in consultation with the internship coordinator, special research projects outside the scope of their regular employment duties.

Students who have significant relevant experience in the public or nonprofit sector may request the internship requirement be waived. To request a waiver, students must submit a written request outlining the student's professional or managerial field experience with appropriate documentation. Any request for a waiver from the internship requirement must be approved by the program director. Students who receive a waiver must take an additional 3 hours of electives in lieu of the internship.

Emphasis Area Requirements

Required ¹

| | | |
|-----------------|--------------------------------|---|
| P P ADM 6340 | Seminar in City Administration | 3 |
| or P P ADM 6350 | Issues in Urban Management | |
| P P ADM 6470 | Proseminar in Urban Politics | 3 |
| or P P ADM 6471 | Seminar In Urban Politics | |

Electives

Select three of the following: 9

| | | |
|--------------|--|--|
| P P ADM 6600 | Managing and Leading in Organizations | |
| P P ADM 6300 | Leadership and Management in Nonprofit Organizations | |
| P P ADM 6340 | Seminar in City Administration | |
| P P ADM 6350 | Issues in Urban Management | |
| P P ADM 6470 | Proseminar in Urban Politics | |
| P P ADM 6471 | Seminar In Urban Politics | |
| P P ADM 6510 | Urban and Regional Planning and Public Policy | |
| P P ADM 6800 | Management Information Systems | |
| P P ADM 6950 | Internship (in assignment relevant to emphasis area) | |

ECON 4160 Geospatial Analysis in the Social Sciences

Total Hours 15

¹ For Local Government Management specialization, a course not taken to fulfill the “required six hours” may be taken as an elective.

Public Policy Administration MPPA, Nonprofit Organization Management Emphasis

Admissions Requirements

Applicants must meet the following program admission requirements in addition to the general requirements of the Graduate School.

The MPPA admissions committee carefully evaluates each applicant record using the five following criteria:

- **Bachelor’s Degree** by the time of enrollment, prospective students must have obtained a baccalaureate degree or the equivalent from an accredited college or university. Applicants must submit official transcripts documenting the baccalaureate degree and all other prior college and graduate-level coursework completed.
- **Grade Point Average:** A minimum GPA of 3.0 on a 4.0 scale is required to be considered for regular admission. This GPA is higher than the minimum for the Graduate School. An undergraduate GPA below 3.0 will be considered on an individual basis for restricted admission.
- **Demonstrated proficiency in college algebra or the equivalent.** Applicants must demonstrate proficiency in college algebra or the equivalent. Graduate coursework also will be taken into consideration. Applicants who do not meet these criteria may be admitted on a restricted basis and asked to satisfactorily complete a math proficiency test.
- **Letters of Recommendation.** Applicants must obtain three letters of recommendation. The letters should be from those who are familiar with your professional and/or academic skills. At least one of the letters must be from a current or former college-level instructor.
- **Personal Statement.** Applicants are required to submit a 2-3 page personal statement to demonstrate competence in writing. The statement should explain how the MPPA program fits in with the applicant’s educational and professional goals. This personal statement may be sent directly to the MPPA program; a short statement of purpose in the web-based admission application is not sufficient.

Degree Requirements

The MPPA degree consists of 40 credit hours, 25 of which are taken as part of the core curriculum and 15 that are electives. Students who complete the degree must demonstrate the following:

- Design, research, write, and defend analyses of substantive public policy problems and/or potential solutions
- Use data and sophisticated analytic tools (qualitative and quantitative) to conduct research in public policy and administration

- Understand the policy and internal/external environments of public and nonprofit organizations
- Develop expertise in a substantive area of public policy administration

Curriculum

All candidates for the MPPA degree must complete 25 hours in the core curriculum sequence composed of the following public policy administration courses:

| Policy Analysis and Economics | | |
|--|--|----|
| P P ADM 6000 | Introduction to Policy Analysis | 3 |
| ECON 5550 | Economics for Public Policy Analysis | 3 |
| P P ADM 6900 | Cases in Public Policy Administration | 3 |
| Public Administration and Budgeting | | |
| P P ADM 6400 | Public Administration: Theory & Practice | 3 |
| P P ADM 6490 | Human Resources in the Public Sector | 3 |
| P P ADM 6180 | Governmental Budgeting and Financial Control | 3 |
| Statistics, Research Methods, and Information Technology | | |
| P P ADM 6010 | Introduction to Policy Research | 3 |
| P P ADM 6750 | Applied Research Design | 3 |
| P P ADM 6850 | E-Governance in the Public Sector | 1 |
| Total Hours | | 25 |

A thesis is not required to complete the program. However, writing is an important component of the degree, and students will complete written analyses as part of their coursework and/or internship.

P P ADM 6000 should be taken at the beginning of the program. It is strongly recommended that P P ADM 6010 and ECON 5550 be taken early in a student’s course plan. P P ADM 6900 is a capstone course and must be taken toward the end of the program.

Students may select one of three emphasis areas in which to concentrate their advanced studies:

- Policy Research and Analysis,
- Local Government Management,
- Nonprofit Organization Management.

Students may also select an individualized emphasis area in consultation with their advisor and with approval of the Director.

Prior to the completion of 15 hours in the MPPA program, students should identify an emphasis area. In each of the emphasis areas students may be able to substitute another course for a specified elective, with the MPPA Director’s approval. Specific requirements for each emphasis area are as follows:

Internships

An internship is required for students without substantial experience in the public or nonprofit sectors. Interns may be placed in planning agencies, city managers’ offices, administrative departments, or nonprofit agencies. Credit is granted after successful completion of the internship and a written paper at the end of the semester.

MPPA students currently employed in public agencies or nonprofit organizations can receive 3 hours of credit for internships with their employer. To do so, students must develop, in consultation with the internship coordinator, special research projects outside the scope of their regular employment duties.

Students who have significant relevant experience in the public or nonprofit sector may request the internship requirement be waived. To request a waiver, students must submit a written request outlining the student's professional or managerial field experience with appropriate documentation. Any request for a waiver from the internship requirement must be approved by the program director. Students who receive a waiver must take an additional 3 hours of electives in lieu of the internship.

Emphasis Area Requirements

Required

| | | |
|--------------|---|---|
| P P ADM 6300 | Leadership and Management in Nonprofit Organizations | 3 |
| P P ADM 6310 | American Philanthropy and Nonprofit Resources Development | 3 |
| P P ADM 6311 | Staff Management Issues in Nonprofit Organizations | 1 |
| P P ADM 6312 | Legal Issues in Managing Nonprofit Organizations | 1 |
| P P ADM 6313 | Financial Issues in Managing Nonprofit Organizations | 1 |

Electives

| | | |
|------------------------------|--|---|
| Select two of the following: | | 6 |
| ACCTNG 3451 | Accounting for Governmental and Not-For-Profit Entities | |
| BUS AD 5100 | Managerial Communication | |
| BUS AD 5900 | Law, Ethics and Business | |
| MKTG 5700 | Integrated Marketing Strategies | |
| P P ADM 6501 | Selected Topics in Nonprofit Management and Leadership | |
| P P ADM 6550 | Strategic and Program Planning for Nonprofit Organizations | |
| P P ADM 6600 | Managing and Leading in Organizations | |
| P P ADM 6800 | Management Information Systems | |
| P P ADM 6950 | Internship (in assignment relevant to the emphasis area) | |
| PSYCH 7412 | Social Psychology | |

Total Hours **15**

Public Policy Administration MPPA, Policy Research and Analysis Emphasis

Admissions Requirements

Applicants must meet the following program admission requirements in addition to the general requirements of the Graduate School.

The MPPA admissions committee carefully evaluates each applicant record using the five following criteria:

- **Bachelor's Degree** by the time of enrollment, prospective students must have obtained a baccalaureate degree or the equivalent from an accredited college or university. Applicants must submit official transcripts documenting the baccalaureate degree and all other prior college and graduate-level coursework completed.
- **Grade Point Average:** A minimum GPA of 3.0 on a 4.0 scale is required to be considered for regular admission. This GPA is higher than the minimum for the Graduate School. An undergraduate GPA below 3.0 will be considered on an individual basis for restricted admission.
- **Demonstrated proficiency in college algebra or the equivalent.** Applicants must demonstrate proficiency in college algebra or the equivalent. Graduate coursework also will be taken into consideration. Applicants who do not meet these criteria may be admitted on a restricted basis and asked to satisfactorily complete a math proficiency test.
- **Letters of Recommendation.** Applicants must obtain three letters of recommendation. The letters should be from those who are familiar with your professional and/or academic skills. At least one of the letters must be from a current or former college-level instructor.
- **Personal Statement.** Applicants are required to submit a 2-3 page personal statement to demonstrate competence in writing. The statement should explain how the MPPA program fits in with the applicant's educational and professional goals. This personal statement may be sent directly to the MPPA program; a short statement of purpose in the web-based admission application is not sufficient.

Degree Requirements

The MPPA degree consists of 40 credit hours, 25 of which are taken as part of the core curriculum and 15 that are electives. Students who complete the degree must demonstrate the following:

- Design, research, write, and defend analyses of substantive public policy problems and/or potential solutions
- Use data and sophisticated analytic tools (qualitative and quantitative) to conduct research in public policy and administration
- Understand the policy and internal/external environments of public and nonprofit organizations
- Develop expertise in a substantive area of public policy administration

Curriculum

All candidates for the MPPA degree must complete 25 hours in the core curriculum sequence composed of the following public policy administration courses:

Policy Analysis and Economics

| | | |
|--------------|---------------------------------------|---|
| P P ADM 6000 | Introduction to Policy Analysis | 3 |
| ECON 5550 | Economics for Public Policy Analysis | 3 |
| P P ADM 6900 | Cases in Public Policy Administration | 3 |

Public Administration and Budgeting

| | | |
|--------------|--|---|
| P P ADM 6400 | Public Administration: Theory & Practice | 3 |
| P P ADM 6490 | Human Resources in the Public Sector | 3 |
| P P ADM 6180 | Governmental Budgeting and Financial Control | 3 |

Statistics, Research Methods, and Information Technology

| | | |
|--------------------|-----------------------------------|-----------|
| P P ADM 6010 | Introduction to Policy Research | 3 |
| P P ADM 6750 | Applied Research Design | 3 |
| P P ADM 6850 | E-Governance in the Public Sector | 1 |
| Total Hours | | 25 |

A thesis is not required to complete the program. However, writing is an important component of the degree, and students will complete written analyses as part of their coursework and/or internship.

P P ADM 6000 should be taken at the beginning of the program. It is strongly recommended that P P ADM 6010 and ECON 5550 be taken early in a student's course plan. P P ADM 6900 is a capstone course and must be taken toward the end of the program.

Students may select one of three emphasis areas in which to concentrate their advanced studies:

- Policy Research and Analysis,
- Local Government Management,
- Nonprofit Organization Management.

Students may also select an individualized emphasis area in consultation with their advisor and with approval of the Director.

Prior to the completion of 15 hours in the MPPA program, students should identify an emphasis area. In each of the emphasis areas students may be able to substitute another course for a specified elective, with the MPPA Director's approval. Specific requirements for each emphasis area are as follows:

Internships

An internship is required for students without substantial experience in the public or nonprofit sectors. Interns may be placed in planning agencies, city managers' offices, administrative departments, or nonprofit agencies. Credit is granted after successful completion of the internship and a written paper at the end of the semester.

MPPA students currently employed in public agencies or nonprofit organizations can receive 3 hours of credit for internships with their employer. To do so, students must develop, in consultation with the internship coordinator, special research projects outside the scope of their regular employment duties.

Students who have significant relevant experience in the public or nonprofit sector may request the internship requirement be waived. To request a waiver, students must submit a written request outlining the student's professional or managerial field experience with appropriate documentation. Any request for a waiver from the internship requirement must be approved by the program director. Students who receive a waiver must take an additional 3 hours of electives in lieu of the internship.

Emphasis Area Requirements**Required**

| | | |
|--------------|--|---|
| POL SCI 6402 | Intermediate Techniques in Policy Research | 3 |
| or ECON 4100 | Introduction to Econometrics | |

Electives

| | | |
|-------------------------------|------------------------------|----|
| Select four of the following: | | 12 |
| BUS AD 5001 | Managerial Economic Analysis | |

| | | |
|----------------------|---|-----------|
| POL SCI 6403 | Advanced Techniques in Policy Research | |
| or ECON 4110 | Applied Econometrics | |
| or ECON 5110 | Topics in Applied Econometrics | |
| ECON 4160 | Geospatial Analysis in the Social Sciences | |
| ECON 4170 | Fundamentals of Cost-Benefit Analysis | |
| ECON 4550 | Natural Resource Economics | |
| POL SCI 6404 | Multi-Method Research Design | |
| POL SCI 6422 | | |
| POL SCI/P P ADM 6444 | | |
| POL SCI 6452 | Public Policy of Conservation and Sustainable Development | |
| SOC WK 6443 | Health Care Policy | |
| or POL SCI 6443 | Health Care Policy | |
| P P ADM 6950 | Internship (in assignment relevant to the emphasis area) | |
| HIGHERED 6422 | | |
| Total Hours | | 15 |

Public Policy Minor**Requirements for Political Science Minors**

A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor. Students may count no more than 3 hours in political science taken on a satisfactory/unsatisfactory basis toward the minor. Students taking an internship POL SCI 3940 may count no more than three hours of the internship toward the minor.

Public Policy Minor Requirements

| | | |
|-------------------------------|--|-----------|
| POL SCI 2420 | Introduction to Public Policy | 3 |
| Select four of the following: | | 12 |
| POL SCI 2300 | State Politics | |
| POL SCI 2330 | The American Presidency | |
| POL SCI 2350 | Introduction to Urban Politics | |
| POL SCI 2400 | Public Administration | |
| POL SCI 2430 | Public and Nonprofit Organizational Behavior | |
| POL SCI 3440 | Public and Nonprofit Budgeting | |
| POL SCI 3450 | Urban Administration | |
| POL SCI 3460 | The Politics of Poverty and Welfare | |
| POL SCI 3480 | Environmental Policy | |
| POL SCI 3900 | Special Readings (when appropriate) | |
| POL SCI 3940 | Public Affairs Internship (when appropriate) | |
| Total Hours | | 15 |

Learning Outcomes

- Demonstrate understanding of theories, concepts and practices relevant to public policy.
- Describe and apply the models used to analyze and create public policy.
- Assess public policy issues, formulate evidence-based recommendations, and communicate them with clarity and coherence.

Public Relations Undergraduate Certificate

The Certificate in Public Relations offers a sequence of courses that will prepare students for a successful career in public relations. This writing-intensive certificate program includes a selection of required and elective courses that integrate practical knowledge of the public relations industry with communication planning and research tactics needed in today's ever-changing world. The sequence of courses is based upon the latest report from the Commission on Public Relations Education and the certification requirements of the Public Relations Society of America. To earn the certificate, student must complete a minimum of 21 credits in the designated courses with a grade of "C" or better.

Required Courses

| | | |
|---|--|---|
| COMM 1150 | Introduction to Public Relations | 3 |
| COMM 2180 | Public Relations Writing | 3 |
| COMM 3330 | Research Methods in Communication I | 3 |
| COMM 4100 | Communication Campaigns | 3 |
| COMM 4199 | Applied Strategic Communication ¹ | 3 |
| Elective Coursework (minimum of 6 credit hours required): | | 6 |
| COMM 1369 | Introduction to Health Communication | |
| COMM 3150 | Crisis, Disaster, and Risk Communication | |
| COMM 3370 | Social Media in Public Relations | |
| MEDIA ST 3355 | Media Law and Regulation | |
| MKTG 3700 | Principles of Marketing | |
| MKTG 3721 | Introduction to Digital Marketing Strategies | |

Total Hours **21**

¹ COMM 4199 may count toward internship credit for the BA Communication degree.

For more information on this certificate, please contact the Department of Communication and Media's Public Relations Coordinator.

Learning Outcomes

Students will be able to:

- Interpret and apply basic public relations principles to design, research and plan public relations campaigns.
- Compose written public relations materials that are written in a clear, brief, concise format following the appropriate format and style.

- Make use of broad knowledge combined with principles of public relations in order to evaluate and create effective public relations campaigns.
- Plan and implement research projects; read and interpret research data as applied to public relations campaigns and message strategy.
- Create and conduct ethically sound and socially responsible public relations strategies and campaigns.

School Counseling (Post-Master's) Graduate Certificate

This graduate certificate is designed for students who want to become professional school counselors and have already earned a Master's degree in another counseling specialty. The goals of the Post-Graduate Certificate in School Counseling are: (a) to provide an academic program to help counselors increase their competency to design, implement, and assess comprehensive school counseling programs in K-12 settings and (b) to provide an academic pathway for counselors to pursue state school counseling certification.

The school counseling degree coordinator will act as the program director for this graduate certificate.

Admission Requirements

Requirements for admission to the Post-Graduate School Counseling Certificate program include:

1. Cumulative GPA (undergraduate and graduate) of 2.75 or better on 4.0 scale and graduate GPA of 3.0 or better;
2. Successful completion of a master's degree in Counseling (e.g., Clinical Mental Health Counseling; Community Counseling; Marriage, Couple, and Family Counseling; Career Counseling) from an accredited university with a minimum of 48 semester credit hours completed;
3. Two letters of recommendation with at least one from a current or former college-level instructor or counseling supervisor who has observed their clinical work;
4. Supplemental application with coursework review;
5. Two-page personal statement explaining the applicant's personal and professional goals.
6. Video role play of counseling skills with mock-client.

Certificate Requirements

Certificate students should have completed the following courses or their equivalencies from their previous counseling graduate program:

- Theories of Counseling
- Helping Relationship Skills
- Ethical and Professional Issues in Counseling
- Foundations for Multicultural Counseling
- Group Procedures in Counseling
- Career Information and Development
- Assessment and Testing
- Psychopathology or Diagnosis
- Lifespan Development
- Education Research Methods

If any of these courses were not completed, the required course will need to be completed as part of the post-graduate certificate plan of study. The prerequisite courses do not have to be completed at UMSL.

Fifteen semester credit hours of graduate course work are required for the graduate certificate. Twelve of these semester credit hours must consist of the core courses. A minimum of three additional hours are to be chosen from the list of electives. All 15 credits must be completed at UMSL.

CORE

| | | |
|--------------------------------|---|---|
| CNS ED 6200 | Foundations of School Counseling | 3 |
| CNS ED 6680 | School Counseling in the Classroom | 3 |
| CNS ED 6280 | School Counseling Internship ¹ | 3 |
| SPEC ED 6412 or ED PSY 6532 | Foundations of Inclusive Education Psychoeducational Differences | 3 |

Electives

| | | |
|--|---|---|
| Choose three hours from the list of courses: | | 3 |
| CNS ED 6600 | Counseling Children and Adolescents | |
| CNS ED 6610 | Introduction to Play Therapy | |
| CNS ED 6630 | Career Development in K-12 Schools | |
| CNS ED 6730 | Counseling for Loss, Crisis, and Trauma | |

Total Hours **15**

¹ A 300 hour internship must be accomplished in K-12 school sites. Course-embedded Department of Elementary and Secondary Education performance assessment occurs in CNS ED 6280. Students pursuing school counseling certification in Missouri will complete field experience placements at two different school levels, with 250 hours at a major placement level and 50 hours at a minor placement level. At least 50 hours must occur in K-5 settings.

Beyond completion of graduate course requirements, students will need to pass the Praxis in School Counseling and apply to the state department of education before they can be recommended by the university for school counseling certification in Missouri.

School Psychology EdS

The Educational Specialist in School Psychology (Ed.S.) degree program at the University of Missouri-St. Louis is a National Association of School Psychologists-approved program whose primary goal is to prepare future school psychologists to assume a wide array of professional roles in schools. Built upon a foundation of data-based decision making and problem solving methodology, the program highlights the critical importance of providing timely prevention, early intervention, and intensive research-based interventions to address academic and mental/behavioral health difficulties within a framework of multitiered systems of support.

Degree Requirements

The Ed.S. in School Psychology degree program consists of 60 graduate semester hours that includes coursework in psychological and educational foundations, psychoeducational assessment, and direct and indirect service delivery. Prevention and early intervention of academic, behavioral, and social-emotional problems through consultation, interdisciplinary collaboration, and systems-level interventions are highlighted throughout the program. The Ed.S. degree is a small-cohort

program consisting of 10-12 candidates per cohort that maximizes close relationships with faculty and field-based practitioners to develop professional skills and competencies.

Admission requirements include a 3.0 undergraduate GPA, three letters of recommendation, a personal statement describing personal goals (not to exceed five double-spaced typed pages) and a curriculum vitae detailing relevant experience with children, adolescents, and families. Prerequisite coursework in the areas of Developmental Psychology, and Psychological Statistics is required for admission. Following initial screening, finalists will be invited for an on-campus interview with the School Psychology Program faculty and current Ed.S. candidates. All required application materials will be considered equally when making admission decisions. Applications are reviewed annually with a **January 15** deadline. The program may review additional applications until all spaces in the cohort are filled.

Transfer credit may be granted for graduate coursework completed prior to entering the program, but strict limitations apply. The Ed.S. in School Psychology degree program involves a minimum of three years of intensive study. Though it is possible to complete the first year of the curriculum on a part-time basis, please note that practicum during the second year involves two days per week working in a school with a school psychologist, and internship is a yearlong full-time supervised experience. Consequently, full-time study is recommended and preferred. Graduates of the program are immediately eligible for School Psychologist Certification from the Missouri Department of Elementary and Secondary Education and the Nationally Certified School Psychologist credential from the National Association of School Psychologists. As such, graduates from the program will meet or exceed certification requirements in the majority if not all states in the country.

Requirements

Fall Year 1

| | | |
|-------------|---|---|
| ED PSY 6530 | Foundations Of School Psychology | 3 |
| ED PSY 6545 | Consultation in Schools and Related Settings | 3 |
| ED REM 6710 | Educational Research Methods and Design | 3 |
| ED REM 6718 | Psychoeducational Assessment and Intervention | 3 |

Spring Year 1

| | | |
|-------------|--|---|
| ED PSY 6111 | Educational Psychology | 3 |
| ED PSY 6226 | Mental Health and Development of Children and Youth | 3 |
| ED PSY 6550 | Professional Issues In School Psychology | 3 |
| ED REM 6719 | Advanced Psychoeducational Assessment and Intervention | 3 |

Summer Year 1

| | | |
|-------------|------------------------------------|---|
| ED PSY 6115 | Personality And Social Development | 3 |
| ED PSY 6532 | Psychoeducational Differences | 3 |

Fall Year 2

| | | |
|-------------|--|---|
| CNS ED 6220 | Counseling Individuals with Disabilities | 3 |
| ED PSY 6540 | Psychoeducational Interventions | 3 |
| ED PSY 6590 | School Psychology Practicum I | 3 |
| ED REM 6730 | Educational Program Development and Evaluation | 3 |

Spring Year 2

| | | |
|---------------------|---|---|
| CNS ED/SPEC ED XXXX | Mental/Behavioral Health Elective ¹ | 3 |
| ED PSY 6542 | Social-Emotional and Behavior Interventions | 3 |
| ED PSY 6591 | School Psychology Practicum II | 3 |
| ED REM 6732 | Advanced Educational Program Development and Evaluation | 3 |

Fall Year 3

| | | |
|-------------|--------------------------------|---|
| ED PSY 6598 | School Psychology Internship I | 3 |
|-------------|--------------------------------|---|

Spring Year 3

| | | |
|-------------|---------------------------------|---|
| ED PSY 6599 | School Psychology Internship II | 3 |
|-------------|---------------------------------|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 60 |
|--------------------|--|-----------|

¹ Check with advisor about courses that qualify.

Learning Outcomes

The UMSL School Psychology Program promotes development of advanced student- and systems-level knowledge and skills to support all students via the following learning outcomes:

A. Improved Academic and Mental/Behavioral Health Outcomes

Candidates will develop advanced skills in the areas of multifaceted assessment and data collection techniques, treatment planning and implementation, and evaluation of student responses to academic and mental/behavioral health prevention and intervention efforts.

B. Culturally-Responsive Practice and Social Justice

Candidates will understand identity development and develop the skills necessary to work with and advocate for culturally- and linguistically-diverse students and families in a competent and socially-just manner.

C. Program Development and Evaluation

Candidates will learn qualitative, quantitative, and mixed methods data collection and research methodologies that will enable them to develop, implement, and evaluate a wide array of school-based interventions and programs for students, educators, and parents.

D. Facilitation of Organizational/Systems Change

Candidates will acquire a systems-level perspective of the educational, social, and political influences on development and will use this knowledge to promote systemic and policy changes that will improve educational and psychological outcomes for all students.

Secondary Education BSEd English Emphasis

The Bachelor's of Science in Secondary Education degree prepares students to teach in secondary school settings, grades 9-12. This program requires the selection and completion of required coursework in a specific content area.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education (p. 30) requirements (p. 30) and Graduation requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

Core Areas:

| First Year Writing | | |
|--|---|-----------|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| Communication Proficiency | | |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |
| Math Proficiency | | |
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |
| Information Literacy | | |
| ED TECH 2230 | Information Literacy | 3 |
| American History or Government | | |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |
| Humanities and Fine Arts | | |
| Choose any 9 hours from approved fields. | | 9 |
| Social Science | | |
| Choose any 9 hours. At least one course must meet the cultural diversity requirement | | 9 |
| Math and Life/Natural Sciences | | |
| Choose any 9 hours. | | 9 |
| Junior Level Writing | | |
| ENGL 3100 | Junior-Level Writing | 3 |
| Total Hours | | 45 |

Program Requirements

All students in the B.S.Ed. in Secondary Education program are required to take the following Teacher Education courses. Each student must also select a content area and complete the required courses and certification assessments for that area as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (courses completed with a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary

and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| Total Hours | | 9 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| ED PSY 3312 | | |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| SEC ED 4880 | Writing for Teachers ¹ | 3 |
| Total Hours | | 13 |

¹ SEC ED 4880 is not required for foreign language emphasis areas.

In addition to the above courses, students must complete 30-50 hours of required coursework in one specific content area (English, French K-12, Spanish K-12, mathematics, biology, chemistry, physics, or social studies), as well as the appropriate methods course:

| | | |
|-------------|---|---|
| SEC ED 4011 | The Curriculum And Methods Of Teaching History And Social Studies | 3 |
| SEC ED 4240 | Curriculum and Methods of Teaching Physical Sciences | 3 |
| SEC ED 4589 | Curriculum and Methods of Teaching Foreign Languages | 3 |
| SEC ED 4646 | The Curriculum And Methods Of Teaching Math | 3 |
| SEC ED 4885 | The Curriculum And Methods Of Teaching English | 3 |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|-------------------------------------|----|
| SEC ED 4989 | Practicum I: Site-Based Experience | 3 |
| SEC ED 4990 | Practicum II: Site-Based Experience | 12 |

Total Credit Hours: 120 Minimum

B.S. Ed. in Secondary Education with Emphasis in English

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in English with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plan

| First Year | | | | |
|-------------------|-------|--------------------------------------|--|-------|
| Fall | Hours | Spring | | Hours |
| ENGL 1100 | | 3 COMM 1040 | | 3 |
| MATH 1020 or 1030 | | 3 TCH ED 1001 | | 1 |
| HIST 1001 or 1002 | | 3 TCH ED 2000 | | 1 |
| TCH ED 1000 | | 1 EXPLORE - Humanities and Fine Arts | | 3 |

| | | | |
|--|-------|-----------------------------|-------|
| EXPLORE - Humanities and Fine Arts | 3 | EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | 3 | EXPLORE - Math and Sciences | 3 |
| 16 | | 14 | |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ED TECH 2230 | 3 | ED PSY 2212 | 3 |
| TCH ED 2001 | 1 | ENGL 2810 | 3 |
| TCH ED 2209 | 2 | ENGL 3310 or 3510 | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | TCH ED 3310 | 3 |
| EXPLORE - Social Sciences ¹ | 3 | EXPLORE - Math and Sciences | 3 |
| EXPLORE - Math and Sciences | 3 | | |
| 15 | | 15 | |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ENGL 3320 or 3520 | 3 | ENGL 3710 or 3720 | 3 |
| ENGL 3090 | 3 | SEC ED 4885 | 3 |
| ENGL 4810 | 3 | SPEC ED 3318 | 3 |
| TCH ED 3001 | 1 | TCH ED 3212 | 3 |
| TCH ED 3312 | 3 | English Elective | 3 |
| English Writing Eleceive | 3 | English Elective | 3 |
| 16 | | 18 | |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ENGL 4060 | 3 | SEC ED 4990 | 12 |
| SEC ED 4880 | 3 | | |
| SEC ED 4989 | 3 | | |
| TCH ED 4391 | 3 | | |
| English Elective | 3 | | |
| 15 | | 12 | |
| Total Hours: 121 | | | |

1 This course should also fulfill the University's Cultural Diversity Requirement.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Secondary Education BSEd Mathematics Emphasis

The Bachelor's of Science in Secondary Education degree prepares students to teach in secondary school settings, grades 9-12. This program requires the selection and completion of required coursework in a specific content area.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education (p. 30) requirements (p. 30) and Graduation requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

Core Areas:

| | | |
|--|---|-----------|
| First Year Writing | | |
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| Communication Proficiency | | |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |
| Math Proficiency | | |
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |
| Information Literacy | | |
| ED TECH 2230 | Information Literacy | 3 |
| American History or Government | | |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |
| Humanities and Fine Arts | | |
| Choose any 9 hours from approved fields. | | 9 |
| Social Science | | |
| Choose any 9 hours. At least one course must meet the cultural diversity requirement | | 9 |
| Math and Life/Natural Sciences | | |
| Choose any 9 hours. | | 9 |
| Junior Level Writing | | |
| ENGL 3100 | Junior-Level Writing | 3 |
| Total Hours | | 45 |

Program Requirements

All students in the B.S.Ed. in Secondary Education program are required to take the following Teacher Education courses. Each student must also select a content area and complete the required courses and certification assessments for that area as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (courses completed with a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| Total Hours | | 9 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| ED PSY 3312 | | |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| SEC ED 4880 | Writing for Teachers ¹ | 3 |
| Total Hours | | 13 |

¹ SEC ED 4880 is not required for foreign language emphasis areas.

In addition to the above courses, students must complete 30-50 hours of required coursework in one specific content area (English, French K-12, Spanish K-12, mathematics, biology, chemistry, physics, or social studies), as well as the appropriate methods course:

| | | |
|-------------|---|---|
| SEC ED 4011 | The Curriculum And Methods Of Teaching History And Social Studies | 3 |
| SEC ED 4240 | Curriculum and Methods of Teaching Physical Sciences | 3 |
| SEC ED 4589 | Curriculum and Methods of Teaching Foreign Languages | 3 |
| SEC ED 4646 | The Curriculum And Methods Of Teaching Math | 3 |
| SEC ED 4885 | The Curriculum And Methods Of Teaching English | 3 |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|-------------------------------------|----|
| SEC ED 4989 | Practicum I: Site-Based Experience | 3 |
| SEC ED 4990 | Practicum II: Site-Based Experience | 12 |

Total Credit Hours: 120 Minimum

B.S. Ed. in Secondary Education with Emphasis in Mathematics

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and

Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Mathematics with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-----------|------------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| ENGL 1100 | 3 | COMM 1040 | 3 |
| HIST 1001 or 1002 | 3 | MATH 1800 | 5 |
| MATH 1030 | 3 | TCH ED 1001 | 1 |
| MATH 1035 | 2 | TCH ED 2000 | 1 |
| TCH ED 1000 | 1 | EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | EXPLORE - Social Sciences | 3 |
| | 15 | | 16 |

| Second Year | | | |
|-----------------------------|-------|--|-------|
| Fall | Hours | Spring | Hours |
| ED TECH 2230 | 3 | ED PSY 2212 | 3 |
| MATH 1900 | 5 | MATH 1320 | 3 |
| TCH ED 2001 | 1 | MATH 2000 | 5 |
| TCH ED 2209 | 2 | EXPLORE - Humanities and Fine Arts | 3 |
| TCH ED 3310 | 3 | EXPLORE - Social Sciences ¹ | 3 |
| EXPLORE - Math and Sciences | 3 | | |

| | | | |
|---------------------------|--------------|---------------|--------------|
| EXPLORE - Social Sciences | 3 | | |
| | 20 | | 17 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| CMP SCI 1250 | 3 | MATH 3250 | 3 |
| ENGL 3100 | 3 | SEC ED 4646 | 3 |
| MATH 2020 | 3 | SEC ED 4880 | 3 |
| MATH 2450 | 3 | SPEC ED 3318 | 3 |
| TCH ED 3001 | 1 | | |
| TCH ED 3312 | 3 | | |
| | 16 | | 12 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| MATH 4100 | 3 | SEC ED 4990 | 12 |
| MATH 4400 | 3 | MATH 4660 | 3 |
| SEC ED 4989 | 3 | | |
| TCH ED 4391 | 3 | | |
| | 12 | | 15 |
| Total Hours: 123 | | | |

1 The course should also fulfill the University's Cultural Diversity Requirement.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Secondary Education BSEd Modern Foreign Language-French Emphasis

The Bachelor's of Science in Secondary Education degree prepares students to teach in secondary school settings, grades 9-12. This program requires the selection and completion of required coursework in a specific content area.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education (p. 30) requirements (p. 30) and Graduation requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

Core Areas:

| | | | |
|----------------------------------|--|---|--|
| First Year Writing | | | |
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 | |
| Communication Proficiency | | | |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 | |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | | |

| | | | |
|--|---|---|-----------|
| Math Proficiency | | | |
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 | |
| or MATH 1030 | College Algebra (MOTR MATH 130) | | |
| Information Literacy | | | |
| ED TECH 2230 | Information Literacy | 3 | |
| American History or Government | | | |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 | |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | | |
| Humanities and Fine Arts | | | |
| Choose any 9 hours from approved fields. | | | 9 |
| Social Science | | | |
| Choose any 9 hours. At least one course must meet the cultural diversity requirement | | | 9 |
| Math and Life/Natural Sciences | | | |
| Choose any 9 hours. | | | 9 |
| Junior Level Writing | | | |
| ENGL 3100 | Junior-Level Writing | 3 | |
| Total Hours | | | 45 |

Program Requirements

All students in the B.S.Ed. in Secondary Education program are required to take the following Teacher Education courses. Each student must also select a content area and complete the required courses and certification assessments for that area as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (courses completed with a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | | |
|-------------|--|---|--|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 | |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 | |
| TCH ED 2000 | Becoming a Professional Educator | 1 | |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 | |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 | |

| | | |
|--------------------|----------------------------------|----------|
| ED PSY 2212 | Child and Adolescent Development | 3 |
| Total Hours | | 9 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| ED PSY 3312 | | |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| SEC ED 4880 | Writing for Teachers ¹ | 3 |
| Total Hours | | 13 |

¹ SEC ED 4880 is not required for foreign language emphasis areas.

In addition to the above courses, students must complete 30-50 hours of required coursework in one specific content area (English, French K-12, Spanish K-12, mathematics, biology, chemistry, physics, or social studies), as well as the appropriate methods course:

| | | |
|-------------|---|---|
| SEC ED 4011 | The Curriculum And Methods Of Teaching History And Social Studies | 3 |
| SEC ED 4240 | Curriculum and Methods of Teaching Physical Sciences | 3 |
| SEC ED 4589 | Curriculum and Methods of Teaching Foreign Languages | 3 |
| SEC ED 4646 | The Curriculum And Methods Of Teaching Math | 3 |
| SEC ED 4885 | The Curriculum And Methods Of Teaching English | 3 |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|-------------------------------------|----|
| SEC ED 4989 | Practicum I: Site-Based Experience | 3 |
| SEC ED 4990 | Practicum II: Site-Based Experience | 12 |

Total Credit Hours: 120 Minimum

B.S. Ed. in Secondary Education with Emphasis in a Foreign Language

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. degree in the language; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in a Foreign Language with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plan

| First Year | | | |
|-------------------|-------|-------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| ENGL 1100 | | 3 COMM 1040 | 3 |
| MATH 1020 | | 3 FRENCH 1002 | 5 |
| FRENCH 1001 | | 5 TCH ED 1001 | 1 |
| HIST 1001 or 1002 | | 3 TCH ED 2000 | 1 |
| TCH ED 1000 | | 1 EXPLORE - Math and Sciences | 3 |
| | | EXPLORE - Social Sciences | 3 |
| | | 15 | 16 |

| Second Year | | | |
|------------------------------------|-------|--|-----------|
| Fall | Hours | Spring | Hours |
| ED TECH 2230 | | 3 ED PSY 2212 | 3 |
| FRENCH 2101 | | 3 FRENCH 2180 | 3 |
| TCH ED 2001 | | 1 TCH ED 3310 | 3 |
| TCH ED 2209 | | 2 EXPLORE - Social Sciences ¹ | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Math and Sciences | 3 |
| EXPLORE - Social Sciences | | 3 | |
| | | 15 | 15 |

| Third Year | | | |
|-------------|-------|-----------------------------------|-------|
| Fall | Hours | Spring | Hours |
| ENGL 3100 | | 3 FRENCH 3200 | 3 |
| FRENCH 2170 | | 3 SEC ED 4589 | 3 |
| TCH ED 3001 | | 1 SPEC ED 3318 | 3 |
| TCH ED 3312 | | 3 FRENCH 3000-4000 Level Elective | 3 |

| | | | |
|---------------------------------|-------|---------------------------------|-------|
| EXPLORE - Math and Sciences | 3 | FRENCH 3000-4000 Level Elective | 3 |
| FRENCH Elective | 3 | FRENCH 3000-4000 Level Elective | 3 |
| 16 | | 18 | |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| SEC ED 4989 | 3 | SEC ED 4990 | 12 |
| TCH ED 4391 | 3 | | |
| FRENCH 3000-4000 Level Elective | 3 | | |
| FRENCH 3000-4000 Level Elective | 3 | | |
| FRENCH 3000-4000 Level Elective | 3 | | |
| 15 | | 12 | |
| Total Hours: 122 | | | |

1 Course should also satisfy the Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Secondary Education BSEd Modern Foreign Language- Spanish Emphasis

The Bachelor's of Science in Secondary Education degree prepares students to teach in secondary school settings, grades 9-12. This program requires the selection and completion of required coursework in a specific content area.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education (p. 30) requirements (p. 30) and Graduation requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

Core Areas:

First Year Writing

| | | |
|-----------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
|-----------|------------------------------------|---|

Communication Proficiency

| | | |
|--------------|--|---|
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |

Math Proficiency

| | | |
|--------------|--|---|
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |

Information Literacy

| | | |
|--------------|----------------------|---|
| ED TECH 2230 | Information Literacy | 3 |
|--------------|----------------------|---|

American History or Government

| | | |
|--------------|---|---|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |

Humanities and Fine Arts

| | |
|--|---|
| Choose any 9 hours from approved fields. | 9 |
|--|---|

Social Science

| | |
|--|---|
| Choose any 9 hours. At least one course must meet the cultural diversity requirement | 9 |
|--|---|

Math and Life/Natural Sciences

| | |
|---------------------|---|
| Choose any 9 hours. | 9 |
|---------------------|---|

Junior Level Writing

| | | |
|-----------|----------------------|---|
| ENGL 3100 | Junior-Level Writing | 3 |
|-----------|----------------------|---|

| | |
|--------------------|-----------|
| Total Hours | 45 |
|--------------------|-----------|

Program Requirements

All students in the B.S.Ed. in Secondary Education program are required to take the following Teacher Education courses. Each student must also select a content area and complete the required courses and certification assessments for that area as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (courses completed with a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| Total Hours | | 9 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|-------------|---|---|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
|-------------|---|---|

| | | |
|--------------------|---|-----------|
| ED PSY 3312 | | |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| SEC ED 4880 | Writing for Teachers ¹ | 3 |
| Total Hours | | 13 |

¹ SEC ED 4880 is not required for foreign language emphasis areas.

In addition to the above courses, students must complete 30-50 hours of required coursework in one specific content area (English, French K-12, Spanish K-12, mathematics, biology, chemistry, physics, or social studies), as well as the appropriate methods course:

| | | |
|-------------|---|---|
| SEC ED 4011 | The Curriculum And Methods Of Teaching History And Social Studies | 3 |
| SEC ED 4240 | Curriculum and Methods of Teaching Physical Sciences | 3 |
| SEC ED 4589 | Curriculum and Methods of Teaching Foreign Languages | 3 |
| SEC ED 4646 | The Curriculum And Methods Of Teaching Math | 3 |
| SEC ED 4885 | The Curriculum And Methods Of Teaching English | 3 |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|-------------------------------------|----|
| SEC ED 4989 | Practicum I: Site-Based Experience | 3 |
| SEC ED 4990 | Practicum II: Site-Based Experience | 12 |

Total Credit Hours: 120 Minimum

B.S. Ed. in Secondary Education with Emphasis in a Foreign Language

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. degree in the language; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. in a Foreign Language with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework.

Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education.

Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plan

| First Year | | | |
|-------------------|-----------|-----------------------------|-----------|
| Fall | Hours | Spring | Hours |
| ENGL 1100 | 3 | COMM 1040 | 3 |
| HIST 1001 or 1002 | 3 | SPANISH 1002 | 5 |
| MATH 1020 | 3 | TCH ED 1001 | 1 |
| SPANISH 1001 | 5 | TCH ED 2000 | 1 |
| TCH ED 1000 | 1 | EXPLORE - Math and Sciences | 3 |
| | | EXPLORE - Social Sciences | 3 |
| | 15 | | 16 |

| Second Year | | | |
|---------------------------|-----------|--|-----------|
| Fall | Hours | Spring | Hours |
| ED TECH 2230 | 3 | ED PSY 2212 | 3 |
| SPANISH 2101 | 3 | SPANISH 2180 | 4 |
| TCH ED 2001 | 1 | EXPLORE - Social Sciences ¹ | 3 |
| TCH ED 2209 | 2 | EXPLORE - Math and Sciences | 3 |
| TCH ED 3310 | 3 | EXPLORE - Math and Sciences | 3 |
| EXPLORE - Social Sciences | 3 | | |
| | 15 | | 16 |

| Third Year | | | |
|-------------------------|-----------|----------------------------------|-----------|
| Fall | Hours | Spring | Hours |
| ENGL 3100 | 3 | SEC ED 4589 | 3 |
| SPANISH 2172 | 4 | SPANISH 3282 | 3 |
| SPEC ED 3318 | 3 | SPANISH 3326 | 3 |
| TCH ED 3001 | 1 | Spanish 3000-4000 Level Elective | 3 |
| TCH ED 3310 | 3 | Spanish 3000-4000 Level Elective | 3 |
| Spanish Elective Course | 3 | | |
| | 17 | | 15 |

| Fourth Year | | | |
|----------------------------------|-------|-------------|-------|
| Fall | Hours | Spring | Hours |
| SEC ED 4989 | 3 | SEC ED 4990 | 12 |
| SPANISH 3212 | 3 | | |
| TCH ED 4391 | 3 | | |
| Spanish 3000-4000 Level Elective | 3 | | |

| | | |
|----------------------------------|----|----|
| Spanish 3000-4000 Level Elective | 3 | |
| | 15 | 12 |
| Total Hours: 121 | | |

1 This course should also fulfill the University's Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Secondary Education BSEd Science-Biology Emphasis

The Bachelor's of Science in Secondary Education degree prepares students to teach in secondary school settings, grades 9-12. This program requires the selection and completion of required coursework in a specific content area.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education (p. 30) requirements (p. 30) and Graduation requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

Core Areas:

| First Year Writing | | |
|--|---|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| Communication Proficiency | | |
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |
| Math Proficiency | | |
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |
| Information Literacy | | |
| ED TECH 2230 | Information Literacy | 3 |
| American History or Government | | |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |
| Humanities and Fine Arts | | |
| Choose any 9 hours from approved fields. | | 9 |
| Social Science | | |
| Choose any 9 hours. At least one course must meet the cultural diversity requirement | | 9 |

| Math and Life/Natural Sciences | | |
|---------------------------------------|----------------------|-----------|
| Choose any 9 hours. | | 9 |
| Junior Level Writing | | |
| ENGL 3100 | Junior-Level Writing | 3 |
| Total Hours | | 45 |

Program Requirements

All students in the B.S.Ed. in Secondary Education program are required to take the following Teacher Education courses. Each student must also select a content area and complete the required courses and certification assessments for that area as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (courses completed with a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| Total Hours | | 9 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| ED PSY 3312 | | |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| SEC ED 4880 | Writing for Teachers ¹ | 3 |
| Total Hours | | 13 |

¹ SEC ED 4880 is not required for foreign language emphasis areas.

In addition to the above courses, students must complete 30-50 hours of required coursework in one specific content area (English, French K-12, Spanish K-12, mathematics, biology, chemistry, physics, or social studies), as well as the appropriate methods course:

| | | |
|-------------|---|---|
| SEC ED 4011 | The Curriculum And Methods Of Teaching History And Social Studies | 3 |
| SEC ED 4240 | Curriculum and Methods of Teaching Physical Sciences | 3 |
| SEC ED 4589 | Curriculum and Methods of Teaching Foreign Languages | 3 |
| SEC ED 4646 | The Curriculum And Methods Of Teaching Math | 3 |
| SEC ED 4885 | The Curriculum And Methods Of Teaching English | 3 |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|-------------------------------------|----|
| SEC ED 4989 | Practicum I: Site-Based Experience | 3 |
| SEC ED 4990 | Practicum II: Site-Based Experience | 12 |

Total Credit Hours: 120 Minimum

B.S. Ed. in Secondary Education with Emphasis in Biology

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Biology with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|------------------------------------|-------|
| BIOL 1012 | 3 | CHEM 1111 | 5 |
| ENGL 1100 | 3 | COMM 1040 | 3 |
| HIST 1001 or 1002 | 3 | MATH 1035 | 2 |
| MATH 1030 | 3 | TCH ED 1001 | 1 |
| TCH ED 1000 | 1 | TCH ED 2000 | 1 |
| EXPLORE - Humanities and Fine Arts | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| 16 | | 15 | |

Second Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|--------------|-------|--|-------|---------------------------|-------|
| BIOL 1821 | 5 | BIOL 1831 | 5 | TCH ED 3001 | 1 |
| CHEM 1121 | 5 | ED PSY 2212 | 3 | EXPLORE - Social Sciences | 3 |
| TCH ED 2001 | 1 | TCH ED 3310 | 3 | | |
| ED TECH 2230 | 3 | EXPLORE - Humanities and Fine Arts | 3 | | |
| TCH ED 2209 | 2 | EXPLORE - Social Sciences ¹ | 3 | | |
| 16 | | 17 | | 4 | |

Third Year

| Fall | Hours | Spring | Hours |
|-------------------|-------|----------------------|-------|
| BIOL 2012 | 3 | BIOL 2402 or 3802 | 3 |
| BIOL 2102 | 3 | BIOL 3302 | 3 |
| ENGL 3100 or 3160 | 3 | BIOL 3622 | 3 |
| GEOG 1001 | 3 | PHYSICS 1011 & 1011L | 4 |
| TCH ED 3312 | 3 | SEC ED 4985 | 3 |
| 15 | | 16 | |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------|-------|-------------|-------|
| PHIL 3380 | 3 | SEC ED 4990 | 12 |
| SEC ED 4880 | 3 | | |
| SEC ED 4989 | 3 | | |
| SPEC ED 3318 | 3 | | |
| TCH ED 4391 | 3 | | |
| 15 | | 12 | |

Total Hours: 126

1 Course should also satisfy the Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Secondary Education BSEd Science-Chemistry Emphasis

The Bachelor's of Science in Secondary Education degree prepares students to teach in secondary school settings, grades 9-12. This program requires the selection and completion of required coursework in a specific content area.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education (p. 30) requirements (p. 30) and Graduation requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

Core Areas:

First Year Writing

| | | |
|-----------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
|-----------|------------------------------------|---|

Communication Proficiency

| | | |
|--------------|--|---|
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |

Math Proficiency

| | | |
|--------------|--|---|
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |

Information Literacy

| | | |
|--------------|----------------------|---|
| ED TECH 2230 | Information Literacy | 3 |
|--------------|----------------------|---|

American History or Government

| | | |
|--------------|---|---|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |

Humanities and Fine Arts

| | | |
|--|--|---|
| Choose any 9 hours from approved fields. | | 9 |
|--|--|---|

Social Science

| | | |
|--|--|---|
| Choose any 9 hours. At least one course must meet the cultural diversity requirement | | 9 |
|--|--|---|

Math and Life/Natural Sciences

| | | |
|---------------------|--|---|
| Choose any 9 hours. | | 9 |
|---------------------|--|---|

Junior Level Writing

| | | |
|--------------------|----------------------|-----------|
| ENGL 3100 | Junior-Level Writing | 3 |
| Total Hours | | 45 |

Program Requirements

All students in the B.S.Ed. in Secondary Education program are required to take the following Teacher Education courses. Each student must also select a content area and complete the required courses and certification assessments for that area as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (courses completed with a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| Total Hours | | 9 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| ED PSY 3312 | | |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| SEC ED 4880 | Writing for Teachers ¹ | 3 |
| Total Hours | | 13 |

¹ SEC ED 4880 is not required for foreign language emphasis areas.

In addition to the above courses, students must complete 30-50 hours of required coursework in one specific content area (English, French K-12,

Spanish K-12, mathematics, biology, chemistry, physics, or social studies), as well as the appropriate methods course:

| | | |
|-------------|---|---|
| SEC ED 4011 | The Curriculum And Methods Of Teaching History And Social Studies | 3 |
| SEC ED 4240 | Curriculum and Methods of Teaching Physical Sciences | 3 |
| SEC ED 4589 | Curriculum and Methods of Teaching Foreign Languages | 3 |
| SEC ED 4646 | The Curriculum And Methods Of Teaching Math | 3 |
| SEC ED 4885 | The Curriculum And Methods Of Teaching English | 3 |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|-------------------------------------|----|
| SEC ED 4989 | Practicum I: Site-Based Experience | 3 |
| SEC ED 4990 | Practicum II: Site-Based Experience | 12 |

Total Credit Hours: 120 Minimum

B.S. Ed. in Secondary Education with Emphasis in Chemistry

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Chemistry with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and

pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.

- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plan

| First Year | | | | | |
|--|-------|--|-------|------------------------------|-------|
| Fall | Hours | Spring | Hours | | |
| BIOL 1012 | | 3 CHEM 1111 | 5 | | |
| ENGL 1100 | | 3 COMM 1040 | 3 | | |
| HIST 1001 or 1002 | | 3 MATH 1035 | 2 | | |
| MATH 1030 | | 3 TCH ED 1001 | 1 | | |
| TCH ED 1000 | | 1 TCH ED 2000 | 1 | | |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Humanities and Fine Arts | 3 | | |
| | | 16 | 15 | | |
| Second Year | | | | | |
| Fall | Hours | Spring | Hours | Summer | Hours |
| BIOL 1821 | | 5 BIOL 1831 | 5 | TCH ED 3001 | 1 |
| ED TECH 2230 | | 3 CHEM 1121 | 5 | SPEC ED 3318 | 3 |
| GEOL 1001 | | 3 ED PSY 2212 | 3 | EXPLORE - Social Sciences | 3 |
| TCH ED 2001 | | 1 TCH ED 3310 | 3 | | |
| TCH ED 2209 | | 2 | | | |
| EXPLORE - Social Sciences | | 3 | | | |
| | | 17 | 16 | | 7 |
| Third Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| ENGL 3100 or 3160 | | 3 CHEM 2622 | 3 | | |
| CHEM 2612 | | 3 MATH 1100 | 3 | | |
| PHYSICS 1011 & 1011L | | 4 PHIL 3380 | 3 | | |
| EXPLORE - Humanities and Fine Arts | | 3 PHYSICS 1012 | 3 | | |
| EXPLORE - Social Sciences | | 3 SEC ED 4985 | 3 | | |
| | | TCH ED 3312 | 3 | | |
| | | 16 | 18 | | |
| Fourth Year | | | | | |
| Fall | Hours | Spring | Hours | | |
| CHEM 3302 | | 3 SEC ED 4990 | 12 | | |
| CHEM 4712 | | 3 | | | |
| SEC ED 4880 | | 3 | | | |
| TCH ED 4391 | | 3 | | | |
| SEC ED 4989 | | 3 | | | |
| | | 15 | 12 | | |
| Total Hours: 132 | | | | | |

¹ Course should also satisfy the Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are

encouraged to meet with their advisor. All requirements are subject to change.

Secondary Education BSed Science-Physics Emphasis

The Bachelor's of Science in Secondary Education degree prepares students to teach in secondary school settings, grades 9-12. This program requires the selection and completion of required coursework in a specific content area.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education (p. 30) requirements (p. 30) and Graduation requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

Core Areas:

First Year Writing

| | | |
|-----------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
|-----------|------------------------------------|---|

Communication Proficiency

| | | |
|--------------|--|---|
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |

Math Proficiency

| | | |
|--------------|--|---|
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |

Information Literacy

| | | |
|--------------|----------------------|---|
| ED TECH 2230 | Information Literacy | 3 |
|--------------|----------------------|---|

American History or Government

| | | |
|--------------|---|---|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |

Humanities and Fine Arts

| | | |
|--|--|---|
| Choose any 9 hours from approved fields. | | 9 |
|--|--|---|

Social Science

| | | |
|--|--|---|
| Choose any 9 hours. At least one course must meet the cultural diversity requirement | | 9 |
|--|--|---|

Math and Life/Natural Sciences

| | | |
|---------------------|--|---|
| Choose any 9 hours. | | 9 |
|---------------------|--|---|

Junior Level Writing

| | | |
|-----------|----------------------|---|
| ENGL 3100 | Junior-Level Writing | 3 |
|-----------|----------------------|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 45 |
|--------------------|--|-----------|

Program Requirements

All students in the B.S.Ed. in Secondary Education program are required to take the following Teacher Education courses. Each student must also select a content area and complete the required courses and certification

assessments for that area as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (courses completed with a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| Total Hours | | 9 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| ED PSY 3312 | | |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| SEC ED 4880 | Writing for Teachers ¹ | 3 |
| Total Hours | | 13 |

¹ SEC ED 4880 is not required for foreign language emphasis areas.

In addition to the above courses, students must complete 30-50 hours of required coursework in one specific content area (English, French K-12, Spanish K-12, mathematics, biology, chemistry, physics, or social studies), as well as the appropriate methods course:

| | | |
|-------------|---|---|
| SEC ED 4011 | The Curriculum And Methods Of Teaching History And Social Studies | 3 |
| SEC ED 4240 | Curriculum and Methods of Teaching Physical Sciences | 3 |

| | | |
|-------------|--|---|
| SEC ED 4589 | Curriculum and Methods of Teaching Foreign Languages | 3 |
| SEC ED 4646 | The Curriculum And Methods Of Teaching Math | 3 |
| SEC ED 4885 | The Curriculum And Methods Of Teaching English | 3 |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|-------------------------------------|----|
| SEC ED 4989 | Practicum I: Site-Based Experience | 3 |
| SEC ED 4990 | Practicum II: Site-Based Experience | 12 |

Total Credit Hours: 120 Minimum

B.S. Ed. in Secondary Education with Emphasis in Physics

The B.S. Ed. is a professional education degree designed for students who wish to pursue a teaching career in secondary schools. Much of the discipline-specific coursework parallels the B.A. or B.S. degree in the discipline; however, the Missouri Department of Elementary and Secondary Education (DESE) requires specific coursework for teacher certification. Therefore, students interested in the B.S. Ed. should contact the advising office (OASIS) 314-516-5937 in the College of Education for discipline-specific requirements. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

B.A. or B.S. in Physics with Master's Level Coursework for Secondary Teacher Certification

In addition to the B.S. Ed., students may opt to complete a B.A. or B.S. degree in their discipline as an undergraduate, followed by admission to the Graduate School for Master's level teaching certification. The College of Education has a one-year accelerated program for post-graduate certification called Teach in 12, or students can choose a traditional path to certification. Graduate coursework for certification can apply towards a Master's Degree in Secondary Education, with additional coursework. Students interested in Master's Level teacher certification should contact the advising office (OASIS) 314-516-5937 in the College of Education. *Note: To obtain teaching certification, DESE requires a 3.0 GPA in the discipline and professional education coursework, as well as a 2.75 GPA overall.*

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of (a) digital and (b) global society.

- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|------------------------------------|-------|----------------|-------|--------------------------------------|-------|
| ENGL 1100 | | 3 CHEM 1111 | | 5 EXPLORE - Humanities and Fine Arts | 3 |
| MATH 1800 | | 5 COMM 1040 | | 3 | |
| TCH ED 1000 | | 1 ED TECH 2230 | | 3 | |
| EXPLORE - Humanities and Fine Arts | | 3 HIST 1001 | | 3 | |
| EXPLORE - Social Sciences | | 3 TCH ED 1001 | | 1 | |
| | | TCH ED 2000 | | 1 | |
| | 15 | | 16 | | 3 |

Second Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|--------------|-------|----------------|-------|---------------|-------|
| BIOL 1821 | | 5 BIOL 1831 | | 5 TCH ED 3310 | 3 |
| MATH 1900 | | 5 ED PSY 2212 | | 3 | |
| PHYSICS 2111 | | 4 MATH 2000 | | 5 | |
| TCH ED 2001 | | 1 PHYSICS 2112 | | 4 | |
| TCH ED 2209 | | 2 | | | |
| | 17 | | 17 | | 3 |

Third Year

| Fall | Hours | Spring | Hours |
|---------------------------|-------|----------------|-------|
| MATH 2020 | | 3 ENGL 3100 | 3 |
| PHYSICS 3200 | | 3 GEOL 1001 | 3 |
| PHYSICS 3231 | | 3 PHYSICS 4347 | 3 |
| TCH ED 3312 | | 3 SEC ED 4985 | 3 |
| EXPLORE - Social Sciences | | 3 SPEC ED 3318 | 3 |
| | | TCH ED 3001 | 1 |
| | 15 | | 16 |

Fourth Year

| Fall | Hours | Spring | Hours |
|-------------|-------|---------------|-------|
| PHIL 3380 | | 3 SEC ED 4990 | 12 |
| SEC ED 4880 | | 3 | |
| SEC ED 4989 | | 3 | |
| TCH ED 4391 | | 3 | |
| | 12 | | 12 |

Total Hours: 126

¹ Course should also satisfy the Cultural Diversity Requirement

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Secondary Education BSEd Social Studies Emphasis

The Bachelor's of Science in Secondary Education degree prepares students to teach in secondary school settings, grades 9-12. This program requires the selection and completion of required coursework in a specific content area.

University General Education and Graduation Requirements

B.S.Ed. degree candidates must complete the following General Education (p. 30) requirements (p. 30) and Graduation requirements (p. 16) of the University as outlined in this Bulletin.

The courses listed below fulfill General Education requirements and best prepare students for advanced education coursework and licensure exams.

Core Areas:

First Year Writing

| | | |
|-----------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
|-----------|------------------------------------|---|

Communication Proficiency

| | | |
|--------------|--|---|
| EDUC 2222 | Interpretation: Connecting Audiences and Meaning | 3 |
| or COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | |

Math Proficiency

| | | |
|--------------|--|---|
| MATH 1020 | Contemporary Mathematics (MOTR MATH 120) | 3 |
| or MATH 1030 | College Algebra (MOTR MATH 130) | |

Information Literacy

| | | |
|--------------|----------------------|---|
| ED TECH 2230 | Information Literacy | 3 |
|--------------|----------------------|---|

American History or Government

| | | |
|--------------|---|---|
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| or HIST 1001 | American Civilization to 1865 (MOTR HIST 101) | |

Humanities and Fine Arts

| | | |
|--|--|---|
| Choose any 9 hours from approved fields. | | 9 |
|--|--|---|

Social Science

| | | |
|--|--|---|
| Choose any 9 hours. At least one course must meet the cultural diversity requirement | | 9 |
|--|--|---|

Math and Life/Natural Sciences

| | | |
|---------------------|--|---|
| Choose any 9 hours. | | 9 |
|---------------------|--|---|

Junior Level Writing

| | | |
|-----------|----------------------|---|
| ENGL 3100 | Junior-Level Writing | 3 |
|-----------|----------------------|---|

| | | |
|--------------------|--|-----------|
| Total Hours | | 45 |
|--------------------|--|-----------|

Program Requirements

All students in the B.S.Ed. in Secondary Education program are required to take the following Teacher Education courses. Each student must also select a content area and complete the required courses and certification assessments for that area as specified by the Missouri Department of Elementary and Secondary Education.

Grade Requirement

Professional Education courses must be completed with a grade of C or better (courses completed with a grade of C- or below must be retaken).

GPA Requirement

Beginning with those students graduating in May 2017 who will also receive teaching certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Assessment Requirement

Students must pass the required DESE certification assessments to receive the B.S.Ed. degree.

Preparing for the Teacher Education Program

The following courses must be completed prior to applying for admission to the teacher education program:

| | | |
|--------------------|--|----------|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |
| ED PSY 2212 | Child and Adolescent Development | 3 |
| Total Hours | | 9 |

Teacher Education Program

The following courses are completed after acceptance into the teacher education program:

| | | |
|--------------------|---|-----------|
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| ED PSY 3312 | | |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |
| SEC ED 4880 | Writing for Teachers ¹ | 3 |
| Total Hours | | 13 |

¹ SEC ED 4880 is not required for foreign language emphasis areas.

In addition to the above courses, students must complete 30-50 hours of required coursework in one specific content area (English, French K-12, Spanish K-12, mathematics, biology, chemistry, physics, or social studies), as well as the appropriate methods course:

| | | |
|-------------|---|---|
| SEC ED 4011 | The Curriculum And Methods Of Teaching History And Social Studies | 3 |
| SEC ED 4240 | Curriculum and Methods of Teaching Physical Sciences | 3 |
| SEC ED 4589 | Curriculum and Methods of Teaching Foreign Languages | 3 |
| SEC ED 4646 | The Curriculum And Methods Of Teaching Math | 3 |

| | | |
|-------------|--|---|
| SEC ED 4885 | The Curriculum And Methods Of Teaching English | 3 |
| SEC ED 4985 | Curriculum and Methods of Teaching Life Sciences | 3 |

The program will culminate in the following practicum courses:

| | | |
|-------------|-------------------------------------|----|
| SEC ED 4989 | Practicum I: Site-Based Experience | 3 |
| SEC ED 4990 | Practicum II: Site-Based Experience | 12 |

Total Credit Hours: 120 Minimum

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Sample Four Year Plan

| First Year | | | |
|------------------------------------|-------|--|-------|
| Fall | Hours | Spring | Hours |
| ENGL 1100 | 3 | COMM 1040 | 3 |
| HIST 1001 | 3 | POL SCI 1100 | 3 |
| MATH 1020 or 1030 | 3 | TCH ED 1001 | 1 |
| TCH ED 1000 | 1 | TCH ED 2000 | 1 |
| EXPLORE - Humanities and Fine Arts | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Social Sciences | 3 | EXPLORE - Math and Sciences | 3 |
| | 16 | | 14 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ED TECH 2230 | 3 | ED PSY 2212 | 3 |
| HIST 1002 | 3 | HIST 1030, 1031, or 1032 | 3 |
| TCH ED 2001 | 1 | TCH ED 3310 | 3 |
| TCH ED 2209 | 2 | EXPLORE - Math and Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | EXPLORE - Social Sciences ¹ | 3 |
| EXPLORE - Math and Sciences | 3 | US History Elective | 3 |
| | 15 | | 18 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ENGL 3100 | 3 | GEOG 1001 or 1002 | 3 |
| HIST 1041 | 3 | GEOG 1002 | 3 |
| SPEC ED 3318 | 3 | SEC ED 4011 | 3 |
| TCH ED 3001 | 1 | SEC ED 4880 | 3 |
| TCH ED 3312 | 3 | Selected History Course (see your advisor) | 3 |
| US History Elective | 3 | Selected Economics Course (see your advisor) | 3 |
| | 16 | | 18 |

| Fourth Year | | | |
|--|-------|-------------|-------|
| Fall | Hours | Spring | Hours |
| ANTHRO 1011 | 3 | SEC ED 4990 | 12 |
| SOC 1010 | 3 | | |
| SEC ED 4989 | 3 | | |
| TCH ED 4391 | 3 | | |
| Selected Political Science Course (see your advisor) | 3 | | |
| | 15 | | 12 |
| Total Hours: 124 | | | |

1 This course should also fulfill the University's Cultural Diversity Requirement.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Secondary School Teaching Graduate Certificate

The Graduate Certificate in Secondary School Teaching prepares those with at least a bachelor's degree for teaching in high school. Normally this Graduate Certificate is taken by students who are not simultaneously pursuing the M.Ed. and teacher certification.

This program of study is for individuals with a bachelor's degree who would like to prepare for teacher certification in Secondary School Teaching. This graduate certificate program option leads to Missouri Initial Professional Teacher Certification in the specified discipline.

Admission Requirements for the Graduate Certificate in Secondary School Teaching:

1. A passing score on the designated Missouri Content Examination or an approved program of study
2. A 2.75 or higher overall GPA
3. Approved results of the Family Care Safety Registry
4. A clear TB test or chest X-ray, if appropriate

Applicants must meet the application deadlines set by the Graduate School

Required Certification Courses

| | | |
|-------------|--|---|
| TCH ED 5000 | Advanced Early Clinical Experience | 1 |
| TCH ED 5001 | Advanced Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 5310 | Instructional Design | 3 |
| TCH ED 5311 | Foundations of Education | 3 |
| TCH ED 5312 | Teaching Reading in the Content Areas | 3 |
| TCH ED 5880 | Writing in the Content Areas | 3 |
| SEC ED 4XXX | Curriculum and Methods of Teaching [Subject area] | 3 |
| ED PSY 6030 | | |

| | | |
|--------------------|--|-----------|
| ED PSY 6222 | Advanced Studies in Child and Adolescent Development | 3 |
| SPEC ED 6412 | Foundations of Inclusive Education | 3 |
| SEC ED 5989 | Practicum I: Site-Based Experience | 3 |
| SEC ED 5990 | Practicum II: Site-Based Experience | 8 |
| Total Hours | | 34 |

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Demonstrate professionalism through (a) reflective practice for professional growth, (b) effective communication and collaboration, and (c) commitment to upholding ethical and professional standards.
- Evaluate, design, and implement curriculum, instruction, and assessment that apply advanced understanding of (a) content and pedagogical knowledge, (b) learning science principles, and (c) equitable frameworks and inclusive practices.
- Integrate technologies to create meaningful student learning in the context of a (a) digital and (b) global society.
- Design and implement a supportive, inclusive, and culturally responsive classroom environment that nurtures the intellectual, social, and emotional development of all students.
- Partner with families and communities to develop relationships and build networks of support to enhance student learning and well-being.

Social Justice in Education Graduate Certificate

The Graduate Certificate in Social Justice in Education supports the understanding, knowledge, and skills needed to create a just and equitable society. The curriculum focuses on institutional and personal processes, values, attitudes, and behaviors that sustain injustice while encouraging the development of positive educational, familial, community-centric, and social group advocacy and action.

The Graduate Certificate in Social Justice is a 12 credit hour program. The following courses are required:

| | | |
|--------------------|---------------------------------------|-----------|
| EDUC 6408 | Graduate Seminar ¹ | 3 |
| EDUC 6408 | Graduate Seminar ² | 3 |
| ED FND 6200 | Demographic Contexts of Education | 3 |
| ED FND 6431 | History of African American Education | 3 |
| Total Hours | | 12 |

¹ Topic must be Race, Trauma, and Education

² Topic must be Intersectional Justice in Education

Social Work BSW

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30), although proficiency in a foreign language is recommended but not required.

Courses required for the BSW degree may not be taken on a satisfactory/unsatisfactory basis except SOC WK 4800 and SOC WK 4850.

Admission Requirements

Students entering UMSL as freshman and as transfer students should indicate a pre-social work major. Students must apply to the program concurrently with SOC WK 3100. Admission to the program is conditional upon the successful completion of all necessary requirements.

Requirements for Admission to the Social Work program:

- Junior standing
- GPA of 2.75 or higher in social work related areas and an overall GPA of 2.5 or higher.
- Submission of:
 - Application for admission to the social work program.
 - Two letters of reference: one from a college or university professor and one other from a work or volunteer experience supervisor.
- Completion of SOC WK 2000, SOC WK 2001, and SOC WK 2200 or their equivalents or completion of an A.A. in Human Services,
- Completion of PSYCH 1003 and SOC 1010 with a C- or better.
- Attendance at Professional Development Workshop held in the School of Social Work.

Applicants may be asked to meet with the Social Work Admissions Committee.

Degree Requirements

Students must have a minimum GPA of 2.5 in social work and related-area requirement courses to enter field practicum. Candidates for this degree program must complete the core requirements including the following social work courses:

| | | |
|---------------------------|--|-----------|
| SOC WK 2000 | Social Work and Social Issues | 3 |
| SOC WK 2001 | Social Work and Social Issues Lab | 1 |
| SOC WK 2200 | Social Welfare as a Social Institution | 3 |
| SOC WK 3100 | Social Work Practice with Individuals | 3 |
| SOC WK 3210 | Social Issues and Social Policy Development | 3 |
| SOC WK 3410 | Research Design in Social Work | 3 |
| SOC WK 3510 | Human Behavior in the Social Environment | 3 |
| SOC WK 3700 | Diversity and Social Justice | 3 |
| SOC WK 4110 | Social Work Practice with Families and Groups | 3 |
| SOC WK 4300 | Social Work Practice with Communities | 3 |
| SOC WK 4350 | Human Service Organizations | 3 |
| SOC WK 4800 & SOC WK 4850 | Supervised Field Experience in Social Work I and Supervised Field Experience in Social Work II | 8 |
| SOC WK 4801 & SOC WK 4851 | Integrative Field Experience Seminar I and Integrative Field Seminar II | 4 |
| Total Hours | | 43 |

A minimum of 43 hours or a maximum of 50 hours must be taken in social work. A minimum of 30 hours is required in related area departments.

Evaluation of social work transfer credits will be done by a social work adviser on an individual basis.

Related Area Requirements

The following courses, or their alternatives, are required:

| | | |
|--------------|---|---|
| ECON 1000 | Economics in Everyday Life (MOTR ECON 100) | 3 |
| or ECON 1005 | | |
| POL SCI 1100 | Introduction to American Politics (MOTR POSC 101) | 3 |
| PSYCH 1003 | General Psychology (MOTR PSYC 100) | 3 |

Biology

Select one of the following: 3-4

| | | |
|-----------|--|--|
| BIOL 1012 | General Biology: The Science of Life (MOTR BIOL 100) | |
| BIOL 1102 | Human Biology (MOTR LIFS 150) | |
| BIOL 1131 | Human Physiology and Anatomy I | |
| BIOL 1141 | Human Physiology and Anatomy II | |

Sociology

| | | |
|----------|---|---|
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| SOC 2160 | Sociological Social Psychology | 3 |

Select one of the following: 3-4

| | | |
|-------------|--|--|
| SOC 3220 | Quantitative Data Analysis in Social Science Research | |
| PSYCH 2201 | Psychological Statistics | |
| CRIMIN 2220 | Statistical Analysis in Criminology and Criminal Justice | |

At least 9 additional hours must be taken in social work, sociology, political science, psychology, gender studies, anthropology, criminology and criminal justice, economics, gerontology, or child advocacy studies at the 2000 level or above. 9

Total Hours 30-32

Hours taken in social work will apply toward the maximum of 50 hours that may be taken in social work courses. The Social Work program may require students to pass a placement test to enroll in the next level course, provided this test or its equivalent is administered to all students seeking to enroll in that course.

Social work majors must have a grade of C- or better and maintain a cumulative grade point average of 2.5 or better in all course work specifically required for the major, with satisfactory grades in practicum.

Note: Anthropology, biological sciences, economics, and Spanish courses are strongly recommended by graduate schools of social work.

Latin Honors Requirements

In accordance with the University's Latin Honors policy (p. 23), candidates graduating from the School of Social Work in the 2023-2024 Academic Year must meet the following GPA qualifications:

| | |
|-----------------|-------|
| Summa Cum Laude | 3.969 |
| Magna Cum Laude | 3.919 |
| Cum Laude | 3.77 |

Objectives of the BSW Program

The BSW program has the following educational outcomes. Students who graduate with a BSW will be generalist practitioners who:

- Identify as professional social workers and conduct themselves accordingly.
- Understand the values and ethics of the social work profession and the relationship between personal beliefs and values, professional values and ethics, and professional social work practice.
- Utilize critical thinking, capacity building, and analytical and communication skills to synthesize and analyze information to inform social work practice.
- Understand the importance of diversity, difference, power, and privilege in shaping life experiences for diversity-competent practice.
- Possess the knowledge and skills to fight effectively against human oppression, discrimination, and social inequity and to formulate and foster social change initiatives to advance social and economic justice.
- Engage in research-informed practice and practice-informed research to evaluate professional practice and /or the professional practice of others.
- Apply knowledge of human behavior and the social environment to guide assessment and intervention.
- Understand major social and welfare policies and analyze and formulate policies to advocate for social and economic justice.
- Use leadership skills to respond to the changing context of social work practice.
- Utilize skills of engagement, assessment, intervention and evaluation, including theory and practice skills, across all levels of practice.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|--|-------|--|-------|
| ENGL 1100 | 3 | BIOL 1012 | 3 |
| MATH 1020 | 3 | ECON 1000 | 3 |
| PSYCH 1003 | 3 | GEN ED CORE: Communication Proficiency | 3 |
| SOC 1010 | 3 | EXPLORE - Humanities and Fine Arts | 3 |
| SOC WK 1000 | 1 | Cultural Diversity | 3 |
| GEN ED EXPLORE: Humanities & Fine Arts | 3 | | |
| | 16 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|------------------------------------|-------|------------------------------------|-------|
| SOC WK 2000 | 3 | PSYCH 2250 | 3 |
| SOC WK 2001 | 1 | SOC WK 2200 | 3 |
| POL SCI 1100 | 3 | EXPLORE - Math & Sciences | 3 |
| EXPLORE - Humanities and Fine Arts | 3 | 2000-level Social Science Elective | 3 |
| EXPLORE - Math and Sciences | 3 | Elective or minor | 3 |
| 2000-level Social Science Elective | 3 | | |
| | 16 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|--------------------------------------|-------|-------------|-------|
| SOC WK 3100 | 3 | SOC WK 3210 | 3 |
| PSYCH 2201, CRIMIN 2220, or SOC 3220 | 3-4 | SOC WK 3410 | 3 |
| SOC WK 3100 | 3 | SOC WK 3700 | 3 |

| | | | |
|------------------------------------|-------|----------------------|-------|
| SOC WK 3510 | 3 | SOC WK 4110 | 3 |
| 2000-level Social Science Elective | 3 | Elective or minor | 3 |
| 15-16 | | | 15 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| SOC WK 4300 | 3 | SOC WK 4350 | 3 |
| SOC WK 4800 | 4 | SOC WK 4850 | 4 |
| SOC WK 4801 | 2 | SOC WK 4851 | 2 |
| Elective or minor | 3 | Elective or Minor | 3 |
| Elective or minor | 3 | Elective (if needed) | 1 |
| 15 | | | 13 |
| Total Hours: 120-121 | | | |

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are required to meet with their advisor each semester. All requirements are subject to change.

Social Work Minor

Requirements for the Minor

Candidates must complete the following social work courses:

| | | |
|--|--|-----------|
| SOC WK 2000 | Social Work and Social Issues | 3 |
| SOC WK 2200 | Social Welfare as a Social Institution | 3 |
| SOC WK 3100 | Social Work Practice with Individuals | 3 |
| SOC WK 3700 | Diversity and Social Justice | 3 |
| Select one additional social work course at the 3000 level or above. | | 3 |
| Total Hours | | 15 |

Social Work MSW

Admission Requirements

Admission to the MSW Program requires admission to the University of Missouri-St. Louis Graduate School and acceptance by the School of Social Work. Applicants to the program must meet the following requirements to be considered for admission:

- Completion of a bachelor's degree from a college or university accredited by a recognized regional accrediting organization.
- Completion of a liberal arts education including courses in the humanities, the social and behavioral sciences, and the physical sciences. These courses must include a college level statistics course with a grade of C or better. Students may be admitted provisionally without statistics, but they cannot proceed in the MSW program past the first semester until this requirement is met.
- Attainment of a cumulative grade point average of at least 2.75 on a 4.0 scale (3.0 preferred) for all undergraduate course work. Students may be admitted provisionally if their undergraduate GPA is between 2.5 and 2.75. Students with a cumulative undergraduate GPA below 2.5 will not be admitted.
- Submission of the following documents by the admission deadline:
 - A completed application to the UMSL Graduate School and a completed MSW supplemental application.
 - Two written essays.

- Three letters of reference. – One from a professor in your major field of study if you have graduated within the past five years, and two others from work or volunteer supervisors or other professional references. Letters from employees/supervisees, friends, and family may not be used.
- Official transcripts from all colleges and university attended.
- Applicable fees.

Application Deadline

The deadline for application to the MSW program is March 1 for admission in the following fall semester and October 15 for admission in the following Spring semester. See School of Social Work's website for more details.

Admissions to the Program with Advanced Standing

Applicants with a BSW, BASW, or BSSW, from an accredited social work program may be given up to 24 credit hours of advanced standing for foundation social work courses. Admission to the advanced standing program is available to applicants who meet the general admission requirements and who:

1. Have earned a bachelor's degree in social work from a program accredited by the Council on Social Work Education within five years of applying to the MSW Program, and
2. Have earned a grade point average of at least 3.0 on a 4.0 scale in the social work foundation curriculum, and no less than a B in all courses that are applicable.

See School of Social Work's website for more details.

Course Waivers

A student who does not have a bachelor's degree in social work but who can document successful completion (with at least a B) of foundation courses from an accredited BSW program within the last five years will be given course waivers and be allowed to replace these courses with electives.

Students from non-accredited BSW programs or students who have taken comparable course work in other undergraduate programs, may take test-out examinations for select foundation courses; waivers will be given if students successfully pass test-out examinations. The waiver does not provide graduate credit; it is a mechanism for allowing elective courses to be substituted for required foundation courses.

Academic credit cannot be given for life experience and/or previous work experience, in whole or in part, in lieu of field practicum or other courses.

Degree Requirements

The MSW is a two-year program comprising a foundation year and a concentration year. All students are required to take the foundation year courses or to have advanced standing credit for them. These provide a common base of knowledge across all practice settings and populations. Beyond the general requirements of the Graduate School, the department requires a minimum of 60 semester hours of course work, of which 48 must be at the 5000 or 6000 level and 48 must be in social work or cross-listed with social work, including the following foundation courses:

| | | |
|-------------|-----------------------------------|---|
| SOC WK 5100 | Generalist Social Work Practice | 3 |
| SOC WK 5200 | Social Policy and Social Services | 3 |

| | | |
|--------------------|--|-----------|
| SOC WK 5300 | Community Practice and Social Change | 3 |
| SOC WK 5350 | Social Work and Human Service Organizations | 3 |
| SOC WK 5410 | Critical Thinking and Analysis | 3 |
| SOC WK 5450 | Social Work Research Methods and Analysis | 3 |
| SOC WK 5500 | Human Behavior in the Social Environment | 3 |
| SOC WK 5700 | Diversity and Social Justice for Social Work | 3 |
| SOC WK 5800 | Graduate Field Practicum I | 4 |
| SOC WK 5801 | Foundation Field Practicum Seminar | 2 |
| Total Hours | | 30 |

Upon completion of the 30 credits of foundation year requirements, students move into a year of advanced study, called the concentration. The concentration year requires 30 hours of course work that includes up to 12 hours of elective graduate-level courses approved by the adviser. Students plan their degree program to reflect their career interests in the following concentration areas:

- Family Practice
- Leadership and Social Change

Additionally, if students choose, they may elect to participate in one of the following areas of emphasis:

- Health & Behavioral Health
- School Social Work
- Social Work with the Military

To remain in good standing, students must maintain a cumulative GPA of 3.0 or better.

The field practicum is an integral part of the concentration year. Students will complete 300 hours (approximately 20 hours per week) of MSW supervised practice in an agency during the second semester of the foundation year, and they will complete 600 hours total hours (approximately 20 hours per week) in the concentration year. A student must receive a grade of B or better in the foundation field practicum seminar course and receive a satisfactory grade in the foundation practicum to be eligible to enter the concentration field practicum. S/U grades are given for both the foundation practicum and the concentration practicum.

Part Time Status

Students who enter the program as part-time students complete the foundation year in two years and the concentration course work in an additional two years.

All students must complete the MSW in four years.

Goals of the Master of Social Work

The goals of the MSW program of the University of Missouri- St. Louis are consistent with the land-grant public service mission of the University, the MSW feasibility study, and the educational policy statement of CSWE and are to:

- Prepare students with the professional knowledge, skills, values and ethics for effective social work practice.

- Prepare students to utilize critical thinking and capacity building skills at all levels of social work practice.
- Prepare students to analyze and address dynamic issues and challenges facing diverse populations and to promote social justice and positive social change.
- Prepare students to conduct and utilize research to respond effectively to dynamic social contexts, issues and problems found in social work practice.
- Assist and support faculty in the advancement of social work knowledge, teaching, and service.
- Develop and participate in collaborative activities with social agencies, communities, organizations, and governments that will enhance student learning, enrich faculty research and teaching, and promote human and societal well-being.

Sociology BA

Sociology will enable you to see the world in a new light; it is the scientific study of human social relationships, interactions, and institutions. Whether they be friendships, families, church groups, socioeconomic classes, complex organizations, or nations, much of our lives are socially constructed. And in a society where individualism is celebrated, it is easy to forget that the way we behave and feel is socially produced. This is the basic premise of sociology. After your core courses, a BA in Sociology will focus on qualitative tools like interviews, stories, and community engagement to answer that critical question "What is this all about?"

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). Any foreign language may be used to meet the language requirement for the B.A. degree.

All required courses for the major must be completed with a grade of C- or better. Courses counting toward the major requirements may not be taken on a satisfactory/unsatisfactory basis. All sociology majors must take the major field exam as a graduation requirement. This exam is usually taken in conjunction with the capstone course (SOC 4200).

The minimum number of Sociology hours required for the B.A. degree is 33.

Core Courses: 15 hours
Elective Courses: 18 hours

Core Courses (15 hours)

| | | |
|--------------------|---|-----------|
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| SOC 2160 | Sociological Social Psychology | 3 |
| SOC 3210 | Sociological Theory | 3 |
| SOC 3230 | Social Research Methods | 3 |
| SOC 4200 | Applied Social Research | 3 |
| Total Hours | | 15 |

Electives (18 hours)

Students must complete at least 18 elective hours of Sociology Courses including 12 hours of SOC at the 3000-level or above. GERON, GS, MVS or courses relevant to sociology that are offered by other departments may be included as electives when approved in advance by the faculty.

Alignment with Minors

Students are strongly encouraged to focus their elective choices with the goal of achieving one or more minors that are closely associated with sociology. Those minors are: Gender Studies, Gerontology, Urban Studies, or Veterans Studies. Please meet with an advisor to discuss strategies to achieve these minors while pursuing a Sociology degree.

Learning Outcomes

Upon Completion of the Bachelor of Arts in Sociology, a student will be able to:

- Identify and apply sociological theories to understand social phenomena by:

 - Recognizing the differences between “folk” explanations of social phenomena and sociological theories of those phenomena
 - Distinguishing modes of sociological inquiry from other disciplinary modes of inquiry
 - Applying key concepts and key themes in sociological theory to analyze social phenomena
 - Discerning the role of social structures in creating and reproducing social inequality and examining how social structures change
 - Distinguishing among micro, meso, and macro levels of observation, inquiry, and analysis
- Apply scientific principles to understand the social world by:

 - Effectively utilizing evidence-based knowledge and sociological theories and concepts to generate research questions and/or hypotheses
 - Identifying the strengths and weaknesses of scientific methodology and methods for analyzing social phenomena in different contexts
 - Explaining disciplinary standards for the qualitative and quantitative analysis of data
- Critically evaluate explanations of human behavior and social phenomena by:

 - Identifying and appraising major theoretical perspectives, including their assumptions, key concepts, and main arguments in terms of historical context and interpretive and explanatory capacities
 - Employing the sociological imagination to analyze social problems in context and evaluate solutions to social problems

- Use sociological knowledge to inform social change by:

 - Engaging with the world around them, including everyday life, work, policy debates, stakeholders, and the public
 - Constructing and proposing real world solutions to social issues;
 - Expressing sociological ideas in a clear and coherent manner in written and oral communication
 - Demonstrating informal, technological, qualitative, and quantitative literacy

Sample Four Year Plan

| First Year | | | |
|--|-------|--|-------|
| Fall | Hours | Spring | Hours |
| INTDSC 1003 ¹ | | 1 SOC 2160 | 3 |
| SOC 1010 | | 3 SOC 1040 or 1241 | 3 |
| ENGL 1100 | | 3 Foreign Language 1002 | 5 |
| CORE: Mathematics Proficiency | | 3 EXPLORE - Humanites and Fine Arts | 3 |
| Foreign Language 1001 | | 5 | |
| | 15 | | 14 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| SOC 2XXX+ Sociology Elective | | 3 SOC 2XXX+ level course | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 SOC 3210 | 3 |
| EXPLORE - Math and Life/Natural Sciences | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| Foreign Language 2101 | | 3 CORE - US History and Government | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| SOC 3230 | | 3 SOC 3XXX+ Sociology Elective | 3 |
| SOC 3XXX+ Elective | | 3 SOC 3XXX+ Sociology Elective | 3 |
| ENGL 3100 | | 3 EXPLORE - Mathematica and Life/ Natural Sciences | 3 |
| EXPLORE - Math and Sciences | | 3 Cultural Diversity | 3 |
| CORE - Communication Proficiency | | 3 Elective or minor | 3 |
| | | Elective or minor | 1 |
| | 15 | | 16 |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| SOC 4221 | | 3 SOC 4200 | 3 |
| SOC 4385 | | 3 SOC 4XXX: Sociology Course | 3 |
| SOC 4XXX: Sociology Course | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |
| Total Hours: 120 | | | |

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Sociology BS

Sociology will enable you to see the world in a new light; it is the scientific study of human social relationships, interactions, and institutions. Whether they be friendships, families, church groups, socioeconomic classes, complex organizations, or nations, much of our lives are socially constructed. And in a society where individualism is celebrated, it is easy to forget that the way we behave and feel is socially produced. This is the basic premise of sociology. After your core courses, a BS in Sociology will focus on quantitative research tools like surveys, statistics, and data analysis to answer that critical question “What is this all about?”

General Education Requirements

Majors must satisfy the university and college general education requirements (p. 30). Foreign language proficiency is not required, although students are encouraged to take foreign language courses.

All required courses for the major must be completed with a grade of C- or better. Courses counting toward the major requirements may not be taken on a satisfactory/unsatisfactory basis. All sociology majors must take the major field exam as a graduation requirement. This exam is usually taken in conjunction with the capstone course (SOC 4200).

The minimum number of Sociology hours required for the B.S. degree is 33.

Core Courses: 18 hours
Elective Courses: 15 hours

Core Courses (18 hours)

| | | |
|--------------------|--|-----------|
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| SOC 2160 | Sociological Social Psychology | 3 |
| SOC 3210 | Sociological Theory | 3 |
| SOC 3220 | Quantitative Data Analysis in Social Science Research ¹ | 3 |
| SOC 3230 | Social Research Methods | 3 |
| SOC 4200 | Applied Social Research | 3 |
| Total Hours | | 18 |

¹ A statistics class from another social science department may be substituted with approval of the faculty advisor.

Electives (15 hours)

Students must complete at least 15 elective hours of Sociology Courses including 9 hours of SOC at the 3000-level or above. GERON, GS, MVS or courses relevant to sociology that are offered by other departments may be included as electives when approved in advance by the faculty.

Alignment with Minors

Students are strongly encouraged to focus their elective choices with the goal of achieving one or more minors that are closely associated with sociology. Those minors are: Gender Studies, Gerontology, Urban Studies, or Veterans Studies. Please meet with an advisor to discuss strategies to achieve these minors while pursuing a Sociology degree.

Learning Outcomes

Upon completion of the program, graduates will be able to:

Identify and apply sociological theories to understand social phenomena by:

- Recognizing the differences between “folk” explanations of social phenomena and sociological theories of those phenomena
- Distinguishing modes of sociological inquiry from other disciplinary modes of inquiry
- Applying key concepts and key themes in sociological theory to analyze social phenomena

- Discerning the role of social structures in creating and reproducing social inequality and examining how social structures change
- Distinguishing among micro, meso, and macro levels of observation, inquiry, and analysis

Apply scientific principles to understand the social world by:

- Effectively utilizing evidence-based knowledge and sociological theories and concepts to generate research questions and/or hypotheses
- Identifying the strengths and weaknesses of scientific methodology and methods for analyzing social phenomena in different contexts
- Explaining disciplinary standards for the qualitative and quantitative analysis of data

Critically evaluate explanations of human behavior and social phenomena by:

- Identifying and appraising major theoretical perspectives, including their assumptions, key concepts, and main arguments in terms of historical context and interpretive and explanatory capacities
- Employing the sociological imagination to analyze social problems in context and evaluate solutions to social problems

Use sociological knowledge to inform social change by:

- Engaging with the world around them, including everyday life, work, policy debates, stakeholders, and the public
- Constructing and proposing real world solutions to social issues;
- Expressing sociological ideas in a clear and coherent manner in written and oral communication
- Demonstrating informal, technological, qualitative, and quantitative literacy

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|----------------------------------|-------|---|-----------|
| INTDSC 1003 ¹ | | 1 SOC 1040 or 1241 | 3 |
| SOC 1010 | 3 | SOC 2160 | 3 |
| ENGL 1100 | | 3 EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| CORE - Mathematics Proficiency | | 3 EXPLORE: Humanities and Fine Arts | 3 |
| CORE - US History and Government | | 3 Elective or minor | 3 |
| Elective or minor | | 3 | |
| | | 16 | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|---|-------|--------------------------------------|-----------|
| SOC 2XXX+ Sociology Elective | | 3 SOC 2XXX+ Sociology Elective | 3 |
| CORE - Information Literacy | | 3 SOC 3210 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | | 15 | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|-----------|-------|--------------------------------|-------|
| ENGL 3100 | | 3 SOC 3XXX+ Sociology Elective | 3 |

| | | | |
|---|---|--------------------------------|---|
| SOC 3XXX+ Elective | 3 | SOC 4XXX+ Sociology Elective | 3 |
| SOC 3230 | 3 | Cultural Diversity Requirement | 3 |
| CORE - Communication Proficiency | 3 | Elective or minor | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | 3 | Elective or minor | 3 |
| 15 | | 15 | |

Fourth Year

| Fall | Hours | Spring | Hours |
|------------------------------|-------|-------------------|-------|
| SOC 3220 | 3 | SOC 4200 | 3 |
| SOC 4040 | 3 | SOC 4385 | 3 |
| SOC 4XXX+ Sociology Elective | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 3 |
| Elective or minor | 3 | Elective or minor | 2 |
| 15 | | 14 | |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Sociology Minor

Requirements for the Minor

A minor in sociology requires 15 hours of course work: 9 hours of required courses and 6 hours of electives.

Candidates must have a cumulative grade point average of 2.0 or better in the minor. Courses taken on a satisfactory/ unsatisfactory basis may not be applied to the minor.

Required Courses

| | | |
|----------|---|---|
| SOC 1010 | Introduction to Sociology (MOTR SOCI 101) | 3 |
| SOC 2160 | Sociological Social Psychology | 3 |
| SOC 3210 | Sociological Theory | 3 |

Elective Course(s):

Select six additional sociology hours with three of those hours at the 3000 level or above. Special topics courses or courses relevant to sociology that are offered by other departments may be included as electives when approved in advance by the faculty advisor.

Students in the Bachelor of Liberal Studies program must take one additional 4000 level course in Sociology not used in the minor, excluding SOC 4350 (Special Study) or SOC 4385 (Internship) for the capstone course requirement.

Learning Outcomes

Upon completion of the Minor in Sociology, a student will be able to:

- Identify and apply sociological theories to understand social phenomena by: Recognizing the differences between “folk” explanations of social phenomena and sociological theories of those phenomena

- Applying key concepts and key themes in sociological theory to analyze social phenomena
- Discerning the role of social structures in creating and reproducing social inequality and examining how social structures change
- Employing the sociological imagination to analyze social problems in context and evaluate solutions to social problems

Spanish Minor

A minor in French, German, Japanese or Spanish requires the completion of four courses in the language beyond the basic foundation sequence (Language 1001, Language 1002, and Language 2101). Transfer students must complete at least two courses for the minor at UMSL. All courses must be passed with a grade of C- or better.

Specific Requirements for the Spanish Minor

Select two of the following: 7-8

| | |
|--------------|---|
| SPANISH 2172 | Spanish Composition |
| SPANISH 2180 | Readings in Spanish |
| SPANISH 2199 | Special Topics: Language Immersion: Spanish |

Plus two Spanish courses on the 3000-level or above 6

Total Hours 13-14

Minimum total hours required for the minor in Spanish is 12 beyond SPANISH 2101.

Learning Outcomes

Graduates with a minor in French, German, Spanish, or Modern Languages from the University of Missouri-St. Louis can use the language to interact with native speakers on familiar topics related to their daily lives. They have an emerging understanding of the target cultures fostered through engaging courses and opportunities such as study abroad. They can apply their linguistic and cultural competencies in real-life situations such as travel and work.

Skills and Knowledge Areas

Upon completion of the minor, students should be able to:

Linguistic Goals:

- In listening/speaking:
 - identify the main ideas and supporting details of texts about familiar and concrete topics, such as those on radio, television, and podcasts;
 - take part in basic conversations on topics related to work, school, home, leisure activities, and culture and;
 - produce uncomplicated descriptions and narrations on familiar topics.
- In reading/writing:
 - identify the main idea and supporting details in a variety of non-complex authentic texts of various genres;
 - apply reading strategies to glean key information from more challenging texts;
 - compose simple practical texts, such as messages and letters, requests for information, and notes on topics of personal and professional interest and;

- assess language reference resources and use them effectively.

Cultural Goals:

- recognize some of the key historical, social, economic, and political forces in the target cultures;
- demonstrate awareness of some of the linguistic, ethnic, racial, religious, cultural, and social diversity of the target cultures and;
- discuss film, media, literature, art, etc. in their socio-historical contexts.

The specific language minor goals are based on the National Standards for Foreign Language Learning and the American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines. Minors are expected to reach the Intermediate-Mid level proficiency in speaking, listening, reading and writing, according to the ACTFL Proficiency Guidelines.

Special Education MEd, Behavior Principles and Interventions Emphasis

The Master's Degree in Special Education is a program appropriate for K-12 teachers, specialists, and disability stakeholders. Candidates choose one of three emphasis areas (Behavioral Principles & Interventions, Inclusive Education, or Transition Studies) that will support their personal growth and development as a leader to impact the communities with which they work.

Candidates explore important core knowledge in special education and disability in a learner-centered environment that is committed to the success of historically marginalized and diverse students, research, and community engagement. The program develops professionals as thoughtful educators and stakeholders who use best practices when assisting and empowering students with disabilities. Research and data-based decision-making are emphasized throughout the program. Graduate students learn how to evaluate research and data and translate best practices to their own practice and classrooms. The M.Ed. Program in Special Education consists of required core courses, and three courses in the chosen emphasis area.

Required Foundation Courses

| | | |
|-------------|--|---|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment | 3 |
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |

Special Education Foundation Courses

| | | |
|--------------|--|---|
| SPEC ED 5303 | Instructional Practices | 3 |
| SPEC ED 6325 | Positive Behavior Interventions for Individual, Classroom, and School-wide Systems | 3 |
| SPEC ED 6415 | Disability Law and Policy | 3 |

Total Hours 21

Specific Requirements for the Emphasis Area

| | | |
|--------------|---|---|
| SPEC ED 6641 | Basic Principles and Concepts of Behavior Analysis | 3 |
| SPEC ED 6642 | Behavior Assessment | 3 |
| SPEC ED 6644 | Behavior Interventions in Applied Behavior Analysis | 3 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Interpret and apply historic and current special education laws and policies related to student identification, rights and responsibilities, access, support, and transition.
- Design student-centered programming that facilitates the active involvement and empowerment of individuals with disabilities and their families in the educational planning process.
- Describe how abilities/disabilities may interact with development and learning and apply this knowledge to provide meaningful and challenging learning experiences for individuals with disabilities across curricular content areas.
- Identify a variety of formal and informal assessments, data sources, and practices to implement and guide educational decisions for individuals with disabilities.
- Select, adapt, and implement a repertoire of evidence-based practices to advance learning and quality of life of individuals with disabilities.
- Collaborate with families as well as partners in the school system, service system, and community to improve student and post-school outcomes.
- Develop essential skills and dispositions (e.g., attitudes, perceptions, values, and beliefs) to guide professional practice, engage in lifelong learning, and advance positive change as leaders in classrooms and communities.
- Identify and explain how behavioral concepts and principles can be used to inform intervention strategies in educational settings
- Conduct behavior assessments to guide the design and implementation of behavior-change procedures to address the behavioral and educational needs of students with disabilities

Special Education MEd, Inclusive Education Emphasis

The Master's Degree in Special Education is a program appropriate for K-12 teachers, specialists, and disability stakeholders. Candidates choose one of three emphasis areas (Behavioral Principles & Interventions, Inclusive Education, or Transition Studies) that will support their personal growth and development as a leader to impact the communities with which they work.

Candidates explore important core knowledge in special education and disability in a learner-centered environment that is committed to the success of historically marginalized and diverse students, research, and community engagement. The program develops professionals as thoughtful educators and stakeholders who use best practices when assisting and empowering students with disabilities. Research and data-based decision-making are emphasized throughout the program. Graduate students learn how to evaluate research and data and translate best practices to their own practice and classrooms. The M.Ed. Program in

Special Education consists of required core courses, and three courses in the chosen emphasis area.

Required Foundation Courses

| | | |
|-------------|--|---|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment | 3 |
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |

Special Education Foundation Courses

| | | |
|--------------|--|---|
| SPEC ED 5303 | Instructional Practices | 3 |
| SPEC ED 6325 | Positive Behavior Interventions for Individual, Classroom, and School-wide Systems | 3 |
| SPEC ED 6415 | Disability Law and Policy | 3 |

Total Hours 21

Specific Requirements for the Emphasis Area

| | | |
|--------------|--|---|
| SPEC ED 6410 | Collaboration for Families and Schools in Inclusive Communities | 3 |
| SPEC ED 6413 | Organizational Foundations and Practices for Inclusive Education | 3 |
| SPEC ED 6440 | Research in Inclusive Education: Disability, School, & Culture | 3 |

Total Hours 9

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Interpret and apply historic and current special education laws and policies related to student identification, rights and responsibilities, access, support, and transition.
- Design student-centered programming that facilitates the active involvement and empowerment of individuals with disabilities and their families in the educational planning process.
- Describe how abilities/disabilities may interact with development and learning and apply this knowledge to provide meaningful and challenging learning experiences for individuals with disabilities across curricular content areas.
- Identify a variety of formal and informal assessments, data sources, and practices to implement and guide educational decisions for individuals with disabilities.
- Select, adapt, and implement a repertoire of evidence-based practices to advance learning and quality of life of individuals with disabilities.
- Collaborate with families as well as partners in the school system, service system, and community to improve student and post-school outcomes.
- Develop essential skills and dispositions (e.g., attitudes, perceptions, values, and beliefs) to guide professional practice, engage in lifelong learning, and advance positive change as leaders in classrooms and communities.
- Utilize inclusive frameworks, strategies, and practices, including alignment of individualized education program goals, in grade level curriculum/standards and assessments within an inclusive educational environment;

- Analyze policies and research to guide the use of inclusive education evidence-based practices as well as to support advocacy skills as a leader in the field;
- Develop collaborative partnerships with families, educators, related service providers, and paraprofessionals to support academic and social inclusion for individuals with disabilities.
-

Special Education MEd, Transition Studies Emphasis

The Master's Degree in Special Education is a program appropriate for K-12 teachers, specialists, and disability stakeholders. Candidates choose one of three emphasis areas (Behavioral Principles & Interventions, Inclusive Education, or Transition Studies) that will support their personal growth and development as a leader to impact the communities with which they work.

Candidates explore important core knowledge in special education and disability in a learner-centered environment that is committed to the success of historically marginalized and diverse students, research, and community engagement. The program develops professionals as thoughtful educators and stakeholders who use best practices when assisting and empowering students with disabilities. Research and data-based decision-making are emphasized throughout the program. Graduate students learn how to evaluate research and data and translate best practices to their own practice and classrooms. The M.Ed. Program in Special Education consists of required core courses, and three courses in the chosen emphasis area.

Required Foundation Courses

| | | |
|-------------|--|---|
| TCH ED 6010 | Examining History, Community and Social Justice in Education | 3 |
| TCH ED 6030 | Instruction, Learning, and Assessment | 3 |
| TCH ED 6909 | Teacher Action Research I | 3 |
| TCH ED 6910 | Teacher Action Research Capstone | 3 |

Special Education Foundation Courses

| | | |
|--------------|--|---|
| SPEC ED 5303 | Instructional Practices | 3 |
| SPEC ED 6325 | Positive Behavior Interventions for Individual, Classroom, and School-wide Systems | 3 |
| SPEC ED 6415 | Disability Law and Policy | 3 |

Total Hours 21

Specific Requirements for the Emphasis Area

| | | |
|--------------|--|---|
| SPEC ED 6342 | Advanced Transition Issues and Planning | 3 |
| SPEC ED 6343 | Advocacy and Leadership in Transition | 3 |
| SPEC ED 6344 | Research in Transition: Practices for Postschool Success | 3 |

Total Hours 9

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Interpret and apply historic and current special education laws and policies related to student identification, rights and responsibilities, access, support, and transition.
- Design student-centered programming that facilitates the active involvement and empowerment of individuals with disabilities and their families in the educational planning process.
- Describe how abilities/disabilities may interact with development and learning and apply this knowledge to provide meaningful and challenging learning experiences for individuals with disabilities across curricular content areas.
- Identify a variety of formal and informal assessments, data sources, and practices to implement and guide educational decisions for individuals with disabilities.
- Select, adapt, and implement a repertoire of evidence-based practices to advance learning and quality of life of individuals with disabilities.
- Collaborate with families as well as partners in the school system, service system, and community to improve student and post-school outcomes.
- Develop essential skills and dispositions (e.g., attitudes, perceptions, values, and beliefs) to guide professional practice, engage in lifelong learning, and advance positive change as leaders in classrooms and communities.
- Develop person-centered plans informed by age-appropriate transition assessments; data-based decisions; and the preferences, interests, needs, and strengths of individuals with disabilities and their families
- Apply evidence-based secondary transition practices that connect individuals with disabilities and their families with the individualized services, supports, skills, and experiences needed to achieve their post-school goals
- Evaluate the range of post-school options and the educational, cultural-ethnic, and socioeconomic factors that influence (positively and negatively) post-school success

Sport Management BS

UMSL's Bachelor of Science in Sport Management is an interdisciplinary, professional degree program that prepares students for a wide array of sport-related careers. The curriculum is balanced between educational-community athletics and the business aspects of sport. The coursework provides the knowledge, skills, and practical experiences needed to coordinate school, community, and non-profit sport programs as well as to work with collegiate and professional minor and major league sports teams in a variety of capacities. This foundation provides a springboard to further specialization within the student's area of interest via a variety of electives, minors, field experiences and internships.

General Education Requirements

Students must satisfy the university general education requirements (p. 30).

As part of meeting the university's general education requirements, the following courses prerequisite courses must be completed:

| | | |
|--------------|--|---|
| COMM 1040 | Introduction to Public Speaking (MOTR COMM 110) | 3 |
| or EDUC 2222 | Interpretation: Connecting Audiences and Meaning | |
| ECON 1001 | Principles of Microeconomics (MOTR ECON 102) | 3 |

| | | |
|------------|------------------------------------|---|
| ENGL 1100 | First-Year Writing (MOTR ENGL 200) | 3 |
| MATH 1030 | College Algebra (MOTR MATH 130) | 3 |
| PSYCH 1003 | General Psychology (MOTR PSYC 100) | 3 |

There is no foreign language requirement for the degree.

Degree Requirements

Required Courses

| | | |
|------------|---|---|
| MGMT 3600 | Management and Organizational Behavior | 3 |
| MKTG 3700 | Principles of Marketing | 3 |
| SPMGT 1113 | Introduction to Sport Management and Administration | 3 |
| SPMGT 2200 | Legal Issues in Sports | 3 |
| SPMGT 3100 | Ethics in Sports | 3 |
| SPMGT 4113 | Educational and Community Athletics | 3 |
| SPMGT 4999 | Sport Management Internship | 6 |

Electives

Choose five of the following courses: ¹ 15

| | | |
|---------------|---|--|
| CNS ED 3200 | Interpersonal Skills in Helping Relationships | |
| COMM 1150 | Introduction to Public Relations | |
| COMM 2231 | Communication in the Organization | |
| COMM 3370 | Social Media in Public Relations | |
| ECON 3610 | Economics of Sports, Gaming, and Gambling | |
| MEDIA ST 2210 | Video Production I | |
| MEDIA ST 2211 | Introduction to Digital Multimedia Production | |
| MEDIA ST 2225 | | |
| MGMT 3611 | Advanced Management and Organizational Behavior | |
| MKTG 3720 | Advertising and Promotion | |
| MKTG 3721 | Introduction to Digital Marketing Strategies | |
| MKTG 3722 | Introduction to Social Media Marketing | |
| MKTG 3765 | Sports Marketing | |
| PHY ED 2134 | Personal Physical Fitness | |
| PHY ED 2136 | Facilities Management | |
| PSYCH 2400 | Sports Psychology | |
| SPMGT 3731 | Sports Media and Technology | |
| SPMGT 4100 | | |
| SPMGT 4990 | Sport Management Field Experience | |

Total Hours

39

¹ Students may take up to six hours from any area as pre-approved by advisor.

² Students may take up to nine hours of SPMGT 4990.

Learning Outcomes

This program is planning for accreditation by the Commission on Sport Management Accreditation (COSMA). Upon completion of the program, graduates will be able to:

- Apply an interdisciplinary foundation of management, sports, and marketing theories to a variety of sports management settings.
- Develop a marketing toolbox that integrates theories with the fundamental aspects of sports, sports products, consumer and market research, sponsorship, promotion and media.
- Examine and explore the legal environments of amateur, collegiate, and professional sports programs with respect to state and federal legislation, liability, risk management, contracts, and collective bargaining.
- Demonstrate the ability to manage sports facilities to apply key concepts of planning, design, and evaluation of a sports program or sports-related event.
- Develop and refine leadership and communication skills necessary within a sports organization and team-oriented sports institutions.
- Recognize and evaluate ethical decision-making, balancing economic priorities and social responsibilities of sports organizations.
- Demonstrate socio-cultural commitment and responsibility in any given sports management environment.

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours |
|-------------------|-------|--------------------------------------|-------|
| COMM 1040 | | 3 ECON 1001 | 3 |
| ENGL 1100 | | 3 PSYCH 1003 | 3 |
| HIST 1001 or 1002 | | 3 CORE - Information Literacy | 3 |
| INTDSC 1003 | | 1 EXPLORE - Math and Sciences | 3 |
| MATH 1030 | | 3 EXPLORE - Humanities and Fine Arts | 3 |
| SPMGT 1113 | | 3 | |
| | 16 | | 15 |

Second Year

| Fall | Hours | Spring | Hours |
|--|-------|-------------------------------------|-------|
| SPMGT 2200 | | 3 SPMGT 3100 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 MGMT 3600 | 3 |
| EXPLORE - Humanities and Fine Arts | | 3 MKTG 3700 | 3 |
| EXPLORE - Math and Sciences | | 3 Sport Management Program Elective | 3 |
| EXPLORE - Math and Sciences ¹ | | 3 Sport Management Program Elective | 3 |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|-----------------------------------|-------|-------------------------------------|-------|
| ENGL 3100 | | 3 SPMGT 4113 | 3 |
| MGMT 3600 | | 3 SPMGT 4999 | 3 |
| MKTG 3700 | | 3 Sport Management Program Elective | 3 |
| Sport Management Program Elective | | 3 Elective or minor | 3 |
| Sport Management Program Elective | | 3 Elective or minor | 3 |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------------------------|-------|---------------------|-------|
| SPMGT 4999 (Elective or minor) | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| Elective or minor | | 3 Elective or minor | 3 |
| | 15 | | 15 |

Total Hours: 121

¹ Course should also satisfy the Cultural Diversity Requirement.

PLEASE NOTE: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor. All requirements are subject to change.

Sport Management Minor

The Sport Management Minor is designed to give students majoring in other disciplines an opportunity to learn about the sport industry. Students will be exposed to such areas as athletic compliance, legal and ethical issues, media and technology, and marketing as they relate to the sport industry.

Required Courses

| | | |
|------------|---|---|
| SPMGT 1113 | Introduction to Sport Management and Administration | 3 |
| SPMGT 2200 | Legal Issues in Sports | 3 |
| SPMGT 4113 | Educational and Community Athletics | 3 |

Electives 6

Choose two of the following:

| | |
|-------------|-----------------------------------|
| PHY ED 2136 | Facilities Management |
| PSYCH 2400 | Sports Psychology |
| MKTG 3765 | Sports Marketing |
| SPMGT 3731 | Sports Media and Technology |
| SPMGT 4213 | Athletic Compliance |
| SPMGT 4990 | Sport Management Field Experience |

Total Hours 15

Statistics Minor

Minor Requirements

The requirements for the minor are

| | | |
|-----------|----------------------------|---|
| MATH 4200 | Mathematical Statistics I | 3 |
| MATH 4210 | Mathematical Statistics II | 3 |

Choose two of the following courses. 6

| | |
|-----------|--|
| MATH 3320 | Applied Statistics |
| MATH 4005 | Exploratory Data Analysis with R |
| MATH 4090 | Introduction to High-dimensional Data Analysis |
| MATH 4220 | Bayesian Statistical Methods |
| MATH 4225 | Introduction to Statistical Computing |
| MATH 4250 | Introduction to Statistical Methods in Learning and Modeling |
| MATH 4260 | Introduction to Stochastic Processes |
| MATH 4390 | Topics in Probability and Statistics |
| MATH 4750 | Introduction to Mathematics of Artificial Neural Networks |

Total Hours 12

All courses must be completed with a grade of C- or higher. A minimum of two courses must be taken in residence in the Department of Mathematics and Statistics at UMSL.

Learning Outcomes

A successful undergraduate should, upon completion, be able to:

- Reformulate problems or questions in relevant statistical terms.
- Solve problems which involve probability or statistical concepts and procedures.

STEM Teaching Graduate Certificate

The Graduate Certificate in STEM Teaching offers K-12 educators the opportunity to advance their knowledge and skills in the high-demand field of STEM content and pedagogy. This program will focus on STEM-related research and strategies for digital technology integration into curricula to improve learning outcomes. This graduate certificate is for educators who have the prerequisites to enter graduate study and who wish to advance their knowledge and skills in the field of STEM education, such as certified teachers, informal STEM educators, science specialists, curriculum writers, and supervisors.

Required Courses

| | | |
|--------------|--|---|
| TCH ED 6423 | Learning Through Inquiry | 3 |
| TCH ED 6241 | Science Content, Inquiry-Based Instruction, and Assessment: STEM-Integrated Pedagogy | 2 |
| ED TECH 5301 | Introduction to Computers and the Internet in Education | 3 |
| EDUC 6491 | Staff Development and Professional Growth | 4 |

Electives

Choose two of the following.

| | | |
|--------------|---|--|
| ELE ED 6431 | STEM Instruction in Elementary Education | |
| ED TECH 5420 | Advanced Computer Programming and Pedagogy | |
| TCH ED 6445 | Integration of Geospatial Resources into K-12 STEM Teaching | |

Total Hours 18

Upon completion of the program, certificate earners will be able to:

- Demonstrate teaching strategies aligned with 3-Dimensional learning and assessment
- Demonstrate lesson design that integrates STEM into non-STEM disciplines
- Demonstrate lesson design that adapts and enacts learning progressions of key STEM content and skills
- Demonstrate developing capacity to navigate computer technology and uses of internet resources in educational settings
- Demonstrate the use of simple coding language sequences (Python) to increasing utility of STEM-based technology
- Demonstrate Knowledge and Tools to Integrate Technology for Teaching Beyond Geographical Boundaries; Global Education

- Develop leadership skills for the integration of STEM teaching into communities

Student Affairs Administration and Leadership Graduate Certificate

The Graduate Certificate in Student Affairs Administration & Leadership (SAAL) would prepare participants to develop the knowledge, skills and abilities necessary to pursue entry-level staff and administrative positions with a concentrated emphasis in student affairs administration and leadership.

Students would develop the requisite knowledge and skills upon completion of a 12-hour curriculum which is outlined below:

| | | |
|--------------------|---|-----------|
| HIGHERED 5402 | Student Affairs Administration (Introductory course) | 3 |
| HIGHERED 6409 | Critical Issues in Student Affairs | 3 |
| HIGHERED 6410 | Ethics in Higher Education Administration | 3 |
| HIGHERED 6476 | Organization and Administration of Higher Education (Exit course) | 3 |
| Total Hours | | 12 |

Studio Art BFA, Art Education Emphasis

This degree prepares students for a career in Art Education; students who successfully complete the program will be eligible for K-12 Art teacher certification in Missouri. Art Education students complete a foundation art program plus additional courses that provide experience with a broad range of studio processes.

Candidates for the B.F.A. degree must complete a Foundation and Core Art Program (which is largely satisfied by the A.F.A. degree) and an emphasis area in one of the following: art education, graphic design, or general fine arts studio practice. Studio Art majors are required to take 69 hours in studio art (this includes 27 hours in the foundation and core art program) and 12 hours in Art History. The final 30 hours must be completed in residence at UMSL. Graduating students must also pass a faculty portfolio review.

Advanced Placement in Studio Art Classes: Studio Art Majors who have professional Graphic Design or other professional studio experience may wish to submit a portfolio to a committee of Studio Art faculty. Depending on the nature and the quality of the student's portfolio, they may be able to obtain exemptions from selected lower level Studio Art courses. Students applying for these exemptions must submit their portfolios prior to the first day of class of their first semester in the BFA Program. Students will be notified in writing if an exemption is granted. Students informed of these waivers will be advised of their requirements in the studio art major. All decisions of the portfolio reviews are final.

General Education

Majors in Studio Art must meet the college and university general education requirements. A foreign language is not required. Studio Art courses required for the degree may not be taken on a satisfactory/unsatisfactory (S/U) basis. A minimum of 120 hours is required for

graduation. Certain Studio Art courses fulfill the humanities and fine arts general education requirement.

An art education emphasis leading toward K-12 Art teacher certification is available. Students choosing this option must complete degree requirements for the B.F.A. Students must complete ENGL 3100 (Advanced Expository Writing) and the general education requirements of the College of Education. A foreign language is not required.

Students will take a specialized program of Foundation Art (30 hours) that includes courses required for certification to teach art. They will also take studio art electives, including a minimum of three courses in one of the studio emphasis areas: drawing, graphic design, painting, photography, or printmaking. A minimum of 50 credit hours must be completed in studio art. In addition, students must complete 15 hours of art history. The final 30 hours of coursework must be completed in residence at UMSL. Major area courses, including studio art, art history, art education, teacher education, and secondary education, must be completed with a minimum grade point average of 2.5; no grade lower than a C is acceptable in major area coursework.

Beginning with those students graduating in May 2017 and receiving teacher certification, the Missouri Department of Elementary and Secondary Education requires a 3.0 GPA in professional education courses, a 3.0 GPA in the teaching content field, and a 2.75 overall GPA.

Foundations

| | | |
|-------------|----------------------------|---|
| ST ART 1020 | Expanded Artforms | 3 |
| ST ART 1140 | Drawing I (MOTR PERF 105D) | 3 |
| ST ART 1150 | 2D Design: Surface | 3 |
| ST ART 1151 | 3D Design: Space | 3 |

Core

| | | |
|-------------------------------|---------------------------------------|---|
| ST ART 2220 or ST ART 2205 | Computer Design I Graphic Design I | 3 |
| ST ART 2230 | Drawing II | 3 |
| ST ART 2245 | Painting I | 3 |
| ST ART 2252 | Printmaking I | 3 |
| ST ART 2260 | Photography I | 3 |
| ST ART 2270 | Ceramics I | 3 |
| ST ART 2278 | Introduction to Fibers and Textiles | 3 |
| ST ART 3332 | Figure Drawing I | 3 |

History of Art and Visual Culture

| | | |
|---------------------------------------|---|---|
| ART HS 1100 | Introduction to Western Art (MOTR ARTS 100) | 3 |
| ART HS 2280 | Modern to Contemporary Art | 3 |
| Choose one course from the following: | | 3 |

| | | |
|-------------|---|--|
| ART HS 1120 | Global Art and Visual Culture (MOTR ARTS 101) | |
| ART HS 1140 | | |
| ART HS 1150 | Introduction to the Art and Visual Cultures of Africa | |
| ART HS 1160 | Introduction to the Art and Visual Cultures of Asia | |

| | | |
|---------------------------------------|--|---|
| Choose one course from the following: | | 3 |
| ART HS 2211 | Art and Archaeology of The Ancient World | |
| ART HS 2212 | Greek Art and Archaeology | |
| ART HS 2225 | Medieval Art | |

| | | |
|-------------|--|--|
| ART HS 2235 | Renaissance and Baroque Art | |
| ART HS 2250 | Rococo to Realism | |
| ART HS 3390 | Special Study | |
| ART HS 3395 | Selected Themes in the History of Art and Visual Culture | |

Electives

| | |
|---|---|
| Two 2000 or 3000-level ST ART or ART HS courses | 6 |
|---|---|

Education Courses (Art Education Emphasis)

| | | |
|-------------|--|---|
| TCH ED 1000 | Building Community, Culture, and Learning in Education | 1 |
| TCH ED 1001 | Early Clinical Experience: Community Agency | 1 |

Level I: Exploring Education as a Profession

| | | |
|-------------|---|---|
| TCH ED 2000 | Becoming a Professional Educator | 1 |
| TCH ED 2001 | Early Clinical Experience: Schools | 1 |
| TCH ED 2209 | Foundations of Teaching in American Schools | 2 |

Level II: Analyzing the Nature and Process of Education

| | | |
|--------------|---|---|
| ART ED 3328 | Art Education: Theory to Practice | 3 |
| ART ED 4260 | Art Museum as Teaching Resource | 3 |
| ED PSY 3312 | | 3 |
| SPEC ED 3318 | Inclusive Classrooms | 3 |
| TCH ED 3001 | Mid-Level Clinical Experience: Diverse Learners | 1 |
| TCH ED 3310 | Introduction to Methods of Teaching | 3 |
| TCH ED 4391 | Literacy for Adolescent Learners in Content Areas | 3 |

Level III: Synthesizing Theory and Practice in Education

| | | |
|-------------|--|----|
| ART ED 4273 | Curriculum and Methods of Teaching Art | 3 |
| SEC ED 4995 | Practicum I: Site-Based Experience in Art | 3 |
| SEC ED 4996 | Practicum II: 16-Week Site-Based Experience in Art | 12 |
| SEC ED 4997 | Practicum II: 4-Week Site-Based Experience in Art | 3 |

| | |
|--------------------|------------|
| Total Hours | 100 |
|--------------------|------------|

Learning Outcomes

Upon completion of the program, graduates will be able to:

- To develop visual and verbal responses to visual phenomena, and organize perceptions and conceptualizations both rationally and intuitively
- To explain the major achievements in the history of art and design, including the works and intentions of leading artists and designers in the past and present
- To develop the capacity to identify and/or solve visual problems within a variety of physical, technological, social, and cultural contexts
- To explain and evaluate contemporary thinking about art or design
- To develop competence in a number of art or design techniques
- To make valid assessments of quality and effectiveness in design projects and works of art, especially their own

Sample Four Year Plan

First Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|-------------|-------|----------------|-------|--|-------|
| ENGL 1100 | | 3 POL SCI 1100 | | 3 PSYCH 1003 | 3 |
| HIST 1001 | | 3 ST ART 1020 | | 3 EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| MATH 1020 | | 3 ST ART 1151 | | 3 | |
| ST ART 1140 | | 3 ST ART 2230 | | 3 | |
| ST ART 1150 | | 3 TCH ED 1001 | | 1 | |
| TCH ED 1000 | | 1 TCH ED 2000 | | 1 | |
| | 16 | | 14 | | 6 |

Second Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|-------------|-------|--------------------------------------|-------|----------------|-------|
| BIOL 1012 | | 3 COMM 1040 | | 3 ED TECH 2230 | 3 |
| ED PSY 2212 | | 3 TCH ED 3312 | | 3 ENGL 3100 | 3 |
| ST ART 2245 | | 3 ST ART 2275 | | 3 | |
| ST ART 2231 | | 3 ST ART XXXX Studio Art Elective | | 3 | |
| TCH ED 2001 | | 1 TCH ED 3310 | | 3 | |
| TCH ED 2209 | | 2 | | | |
| | 15 | | 15 | | 6 |

Third Year

| Fall | Hours | Spring | Hours | Summer | Hours |
|--------------|-------|--------------------------------------|-------|--|-------|
| ART HS 1100 | | 3 ART ED 3328 | | 3 ART HS 1120 | 3 |
| SPEC ED 3318 | | 3 ART ED 4260 | | 3 EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| ST ART 2252 | | 3 ART HS 2280 | | 3 | |
| ST ART 2278 | | 3 ST ART 2220 | | 3 | |
| TCH ED 3001 | | 1 ST ART XXXX Studio Art Elective | | 3 | |
| TCH ED 4391 | | 3 | | | |
| | 16 | | 15 | | 6 |

Fourth Year

| Fall | Hours | Spring | Hours |
|--------------------------------------|-------|---------------|-------|
| ART ED 4273 | | 3 SEC ED 4996 | 12 |
| ART HS 2000+ Art History Elective | | 3 SEC ED 4997 | 3 |
| SEC ED 4995 | | 3 | |
| ST ART 2260 | | 3 | |
| ST ART 2270 | | 3 | |
| | 15 | | 15 |

Total Hours: 139

Studio Art BFA, Graphic Design Emphasis

The Art & Design department at UMSL welcomes students to explore essential cultural and professional systems through creative visual practice. Students encounter both traditional and new technologies as means to study and create the visual world in which we live. Students in the Graphic Design program enjoy the benefits of close relationships with the St. Louis graphic design professional community. Our professors maintain a rigorous program that prepares students for immediate employment as creative design professionals.

Career Outlook

Students with degrees in studio art (Graphic Design emphasis) find careers as graphic designers, art directors, creative directors, marketing

professionals, user experience designers, web designers and other creative professionals.

Candidates for the B.F.A. degree must complete a Foundation and Core Art Program (which is largely satisfied by the A.F.A. degree) and an emphasis area in one of the following: art education, graphic design, or general fine arts studio practice. Studio Art majors are required to take 69 hours in studio art (this includes 27 hours in the foundation and core art program) and 12 hours in Art History. The final 30 hours must be completed in residence at UMSL. Graduating students must also pass a faculty portfolio review.

Advanced Placement in Studio Art Classes: Studio Art Majors who have professional Graphic Design or other professional studio experience may wish to submit a portfolio to a committee of Studio Art faculty. Depending on the nature and the quality of the student's portfolio, they may be able to obtain exemptions from selected lower level Studio Art courses. Students applying for these exemptions must submit their portfolios prior to the first day of class of their first semester in the BFA Program. Students will be notified in writing if an exemption is granted. Students informed of these waivers will be advised of their requirements in the studio art major. All decisions of the portfolio reviews are final.

General Education

Majors in Studio Art must meet the college and university general education requirements. A foreign language is not required. Studio Art courses required for the degree may not be taken on a satisfactory/unsatisfactory (S/U) basis. A minimum of 120 hours is required for graduation. Certain Studio Art courses fulfill the humanities and fine arts general education requirement.

Foundations

| | | |
|-------------|----------------------------|---|
| ST ART 1020 | Expanded Artforms | 3 |
| ST ART 1140 | Drawing I (MOTR PERF 105D) | 3 |
| ST ART 1150 | 2D Design: Surface | 3 |
| ST ART 1151 | 3D Design: Space | 3 |

Core

| | | |
|-------------|-------------------|---|
| ST ART 2205 | Graphic Design I | 3 |
| ST ART 2220 | Computer Design I | 3 |

Select three courses from the following: 9

| | | |
|-------------|--------------------------------------|--|
| ST ART 2230 | Drawing II | |
| ST ART 2245 | Painting I | |
| ST ART 2252 | Printmaking I | |
| ST ART 2260 | Photography I | |
| ST ART 2270 | Ceramics I | |
| ST ART 2275 | Sculpture I | |
| ST ART 2278 | Introduction to Fibers and Textiles | |
| ST ART 2285 | Entrepreneurship for the Visual Arts | |

History of Art and Visual Culture

| | | |
|-------------|---|---|
| ART HS 1100 | Introduction to Western Art (MOTR ARTS 100) | 3 |
| ART HS 2280 | Modern to Contemporary Art | 3 |
| ART HS 2261 | History of Graphic Design | 3 |

Choose one of the following courses: 3

| | | |
|-------------|---|--|
| ART HS 1120 | Global Art and Visual Culture (MOTR ARTS 101) | |
| ART HS 1140 | | |

| | | |
|--|---|-----------|
| ART HS 1150 | Introduction to the Art and Visual Cultures of Africa | |
| ART HS 1160 | Introduction to the Art and Visual Cultures of Asia | |
| Major (Graphic Design Emphasis) | | |
| ST ART 2210 | Typography | 3 |
| ST ART 2221 | Computer Design II | 3 |
| ST ART 3305 | Graphic Design II | 3 |
| ST ART 3310 | Graphic Design III | 3 |
| ST ART 3311 | Graphic Design IV | 3 |
| ST ART 3320 | Advanced Problems in Graphic Design I | 3 |
| ST ART 3321 | Advanced Problems in Graphic Design II | 3 |
| Choose three courses from the following: | | 9 |
| ST ART 3312 | Advanced Topics in Graphic Design | |
| ST ART 3313 | Introduction to Motion | |
| ST ART 3315 | Image Making for Graphic Design | |
| ST ART 3316 | Art of 3D Animation I | |
| Electives | | |
| Two 2000 or 3000-level ST ART or ART HS course | | 6 |
| Capstone | | |
| ST ART 4497 | Senior Seminar in Graphic Design I | 3 |
| ST ART 4498 | Senior Seminar in Graphic Design II | 3 |
| Total Hours | | 81 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Develop visual and verbal responses to visual phenomena, and organize perceptions and conceptualizations both rationally and intuitively
- Explain the major achievements in the history of art and design, including the works and intentions of leading artists and designers in the past and present
- Develop the capacity to identify and/or solve visual problems within a variety of physical, technological, social, and cultural contexts
- Explain and evaluate contemporary thinking about art or design
- Develop competence in a number of art or design techniques
- Make valid assessments of quality and effectiveness in design projects and works of art, especially their own

Sample Four Year Plan

| | | | |
|--------------------|--------------|---------------|--------------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 | 1 | ST ART 1020 | 3 |
| ST ART 2205 | 3 | ST ART 1151 | 3 |
| ST ART 2220 | 3 | ST ART 2221 | 3 |
| ST ART 1140 | 3 | ST ART 3305 | 3 |
| ST ART 1150 | 3 | MATH 1020 | 3 |
| ENGL 1100 | 3 | | |
| | 16 | | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ART HS 1100 | 3 | ST ART 2260 | 3 |
| ST ART 2285 | 3 | ST ART 2230 | 3 |

| | | | |
|----------------------------------|-----------|---------------------------------------|-----------|
| ST ART 2210 | 3 | ST ART 3311 | 3 |
| ST ART 3310 | 3 | ART HS Non-western Art History Course | 3 |
| CORE - US History and Government | 3 | EXPLORE - Math and Sciences | 3 |
| | 15 | | 15 |

| | | | |
|----------------------------------|--------------|---------------------------|--------------|
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ST ART 3315 | 3 | ART HS 2280 | 3 |
| ST ART 3320 | 3 | ST ART 3316 | 3 |
| ART HS 2261 | 3 | ST ART 3321 | 3 |
| ENGL 3100 | 3 | ST ART elective | 3 |
| CORE - Communication Proficiency | 3 | EXPLORE - Social Sciences | 3 |
| | 15 | | 15 |

| | | | |
|-----------------------------|--------------|-----------------------------|--------------|
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ST ART 4497 | 3 | ST ART 4498 | 3 |
| ST ART 2211 | 3 | CORE - Information Literacy | 3 |
| ST ART elective | 3 | EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | 3 | EXPLORE - Math and Sciences | 3 |
| EXPLORE - Math and Sciences | 3 | Elective or minor | 2 |
| | 15 | | 14 |

Total Hours: 120

¹ INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Studio Art BFA, Studio Practice Emphasis

The Art & Design department at UMSL welcomes students to explore essential cultural and professional systems through creative visual practice. Students encounter both traditional and new technologies as means to study and create the visual world in which we live. Students in the Studio Practice program enjoy the benefits of close relationships with the St. Louis visual arts professional community. Our professors maintain a rigorous program that prepares students for immediate employment as creative professionals and enriches lives through creative practice.

Candidates for the B.F.A. degree must complete a Foundation and Core Art Program (which is largely satisfied by the A.F.A. degree) and an emphasis area in one of the following: art education, graphic design, or general fine arts studio practice. Studio Art majors are required to take 69 hours in studio art (this includes 27 hours in the foundation and core art program) and 12 hours in Art History. The final 30 hours must be completed in residence at UMSL. Graduating students must also pass a faculty portfolio review.

Advanced Placement in Studio Art Classes: Studio Art Majors who have professional Graphic Design or other professional studio experience may wish to submit a portfolio to a committee of Studio Art faculty. Depending on the nature and the quality of the student's portfolio, they may be able to obtain exemptions from selected lower level Studio Art courses. Students applying for these exemptions must submit their portfolios prior to the first day of class of their first semester in the BFA

Program. Students will be notified in writing if an exemption is granted. Students informed of these waivers will be advised of their requirements in the studio art major. All decisions of the portfolio reviews are final.

General Education

Majors in Studio Art must meet the college and university general education requirements. A foreign language is not required. Studio Art courses required for the degree may not be taken on a satisfactory/unsatisfactory (S/U) basis. A minimum of 120 hours is required for graduation. Certain Studio Art courses fulfill the humanities and fine arts general education requirement.

| | | |
|-------------|----------------------------|----|
| Foundations | | |
| ST ART 1020 | Expanded Artforms | 3 |
| ST ART 1150 | 2D Design: Surface | 3 |
| ST ART 1151 | 3D Design: Space | 3 |
| ST ART 1140 | Drawing I (MOTR PERF 105D) | 3 |
| Core | | 15 |

Select five 2000-level courses from the following:

| | |
|-------------|--------------------------------------|
| ST ART 2205 | Graphic Design I |
| ST ART 2220 | Computer Design I |
| ST ART 2230 | Drawing II |
| ST ART 2235 | Comics and Cartoon Illustration |
| ST ART 2245 | Painting I |
| ST ART 2252 | Printmaking I |
| ST ART 2260 | Photography I |
| ST ART 2270 | Ceramics I |
| ST ART 2275 | Sculpture I |
| ST ART 2285 | Entrepreneurship for the Visual Arts |
| ST ART 2278 | Introduction to Fibers and Textiles |

| | | |
|---|---|---|
| History of Art and Visual Culture | | |
| ART HS 1100 | Introduction to Western Art (MOTR ARTS 100) | 3 |
| ART HS 2280 | Modern to Contemporary Art | 3 |
| Choose one non-Western History of Art and Visual Culture course from the following: | | 3 |

| | |
|-------------|---|
| ART HS 1120 | Global Art and Visual Culture (MOTR ARTS 101) |
| ART HS 1140 | |
| ART HS 1150 | Introduction to the Art and Visual Cultures of Africa |
| ART HS 1160 | Introduction to the Art and Visual Cultures of Asia |

Choose one course from the following: 3

| | |
|-------------|--|
| ART HS 2211 | Art and Archaeology of The Ancient World |
| ART HS 2212 | Greek Art and Archaeology |
| ART HS 2225 | Medieval Art |
| ART HS 2235 | Renaissance and Baroque Art |
| ART HS 2250 | Rococo to Realism |
| ART HS 2270 | Art of the United States |
| ART HS 2275 | History of Illustration |
| ART HS 3390 | Special Study |
| ART HS 3395 | Selected Themes in the History of Art and Visual Culture |

| | |
|--------------------------------------|--|
| Major (Studio Art Emphasis) | |
| Select ten of the following courses: | |
| ST ART 3330 | Drawing III |
| ST ART 3332 | Figure Drawing I |
| ST ART 3333 | Figure Drawing II |
| ST ART 3342 | Painting II |
| ST ART 3343 | Painting III |
| ST ART 3344 | Watercolor Painting |
| ST ART 3351 | Printmaking II |
| ST ART 3352 | Printmaking: Screenprinting |
| ST ART 3354 | Printmaking: Lithography |
| ST ART 3356 | Printmaking: Etching |
| ST ART 3360 | Photography II |
| ST ART 3362 | |
| ST ART 3364 | |
| ST ART 3366 | Commercial Applications in Photography |
| ST ART 3382 | Advanced 2D Practices |
| ST ART 3385 | Advanced 3D Practices |

| | |
|---|--|
| Electives | |
| Choose two elective courses from any 2000- or 3000-level Studio Practice or History of Art and Visual Culture courses | |
| | |

| | | |
|-------------|-----------------------|---|
| Capstone | | |
| ST ART 4495 | Senior Studio Seminar | 3 |
| ST ART 4496 | Senior Studio Seminar | 3 |

| | |
|-------------|----|
| Total Hours | 81 |
|-------------|----|

Learning Outcomes

Upon completion of the program, graduates will be able to:

- To develop visual and verbal responses to visual phenomena, and organize perceptions and conceptualizations both rationally and intuitively
- Explain the major achievements in the history of art and design, including the works and intentions of leading artists and designers in the past and present
- Develop the capacity to identify and/or solve visual problems within a variety of physical, technological, social, and cultural contexts
- Explain and evaluate contemporary thinking about art or design
- Develop competence in a number of art or design techniques
- Make valid assessments of quality and effectiveness in design projects and works of art, especially their own

Sample Four Year Plan

| | | | |
|-------------|-------|---------------|-------|
| First Year | | | |
| Fall | Hours | Spring | Hours |
| INTDSC 1003 | | 1 ST ART 1020 | 3 |
| ST ART 1140 | | 3 ST ART 1151 | 3 |
| ST ART 1150 | | 3 ST ART 2230 | 3 |
| ST ART 2231 | | 3 ST ART 3333 | 3 |
| ENGL 1100 | | 3 ART HS 1100 | 3 |
| MATH 1020 | | 3 | |
| | | 16 | 15 |
| Second Year | | | |
| Fall | Hours | Spring | Hours |
| ST ART 3330 | | 3 ST ART 2235 | 3 |

| | | | |
|--|-------|--|-------|
| ST ART 2XXX Course in 2D or 3D Practice | 3 | ST ART 2285 | 3 |
| ART HS XXXX Non-western Art History Course | 3 | ART HS 2280 | 3 |
| CORE - US History and Government | 3 | ST ART 3XXX Course in 2D or 3D Practice | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | 3 | EXPLORE - Social Sciences | 3 |
| 15 | | 15 | |
| Third Year | | | |
| Fall | Hours | Spring | Hours |
| ST ART 2245 | 3 | ST ART 3342 | 3 |
| ST ART 3382 | 3 | ST ART 3344 | 3 |
| ART HS 2XXX Art History Course | 3 | ST ART 3385 | 3 |
| ENGL 3100 | 3 | ST ART XXXX Studio Art Elective | 3 |
| CORE - Communication Proficiency | 3 | CORE - Information Literacy | 3 |
| 15 | | 15 | |
| Fourth Year | | | |
| Fall | Hours | Spring | Hours |
| ST ART 3352 | 3 | ST ART 3356 | 3 |
| ST ART 4495 | 3 | ST ART 4496 | 3 |
| ST ART XXXX Studio Art Elective | 3 | EXPLORE - Social Sciences | 3 |
| EXPLORE - Social Sciences | 3 | EXPLORE - Mathematics and Life/ Natural Sciences | 3 |
| EXPLORE - Mathematics and Life/ Natural Sciences | 3 | Elective or minor | 2 |
| 15 | | 14 | |
| Total Hours: 120 | | | |

Studio Art Minor

Students who wish to minor in studio art must take a minimum of 18 hours with a grade point average of 2.0 or better. Six hours must be taken at the 2000 level or above, in residence at UMSL. The requirements for the minor are as follows:

| | | |
|--|----------------------------|-----------|
| ST ART 1020 | Expanded Artforms | 3 |
| ST ART 1140 | Drawing I (MOTR PERF 105D) | 3 |
| ST ART 1150 | 2D Design: Surface | 3 |
| ST ART 1151 | 3D Design: Space | 3 |
| Select two consecutive courses in any single area from the following: ¹ | | 6 |
| Painting | | |
| Printmaking (any one subfield) | | |
| Photography | | |
| Graphic Design | | |
| Advanced Drawing | | |
| Total Hours | | 18 |

Supply Chain Analytics MS

The Master of Science in Supply Chain Analytics is a STEM-designated program that meets the fast growing demands for supply chain and data analytics professionals. It equips students with both the domain knowledge of supply chain management and the skills and toolboxes in business analytics.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are

considered for admission to the graduate program in Supply Chain Analytics only after they have formally applied for admission through the Graduate School.

Degree Requirements

Required Courses

| | | |
|-----------|--|---|
| SCMA 5300 | Business Analytics | 3 |
| SCMA 5310 | Supply Chain Strategies | 3 |
| SCMA 5320 | Supply Chain and Operations Management | 3 |
| SCMA 6321 | Strategic Sourcing | 3 |
| SCMA 6330 | Business Logistics Systems | 3 |
| SCMA 6331 | Supply Chain Modeling | 3 |
| SCMA 6345 | Business Analytics and Data Mining | 3 |
| SCMA 6350 | Management Science Methods | 3 |

Elective Courses

Choose two of the following:

| | |
|--------------|---|
| SCMA 5354 | Simulation for Managerial Decision Making |
| SCMA 5381 | Global Supply Chain Management |
| SCMA 5389 | Supply Chain Management Practicum |
| SCMA 6347 | LOM Project Management |
| SCMA 6395 | Seminar in Logistics and Operations Management |
| INFSYS 6830 | Data Programming for Business Intelligence |
| INFSYS 6860 | Advanced Data Integration |
| INFSYS 6862 | Artificial Intelligence Applications for Business and Cybersecurity |
| FINANCE 6503 | Computer Applications in Finance |
| FINANCE 6523 | Fixed Income Analysis |
| FINANCE 6524 | Portfolio Analysis and Management |
| MKTG 5740 | Marketing and Business Analytics |

Total Hours 30

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Understand and explain a comprehensive scope of supply chain functions, concepts, their connections and roles in business
- Grasp all Three-Pillar of Business Analytics: Descriptive, Predictive and Prescriptive methodologies
- Identify and define supply chain decision questions and problems with business acumen
- Build analytical models and apply analytical methods for real world supply chain decision-support and applications
- Interpret and present analysis results and business insights to management
- Obtain hands-on experience of using state-of -the-art decision-support software for real life supply chain applications

Supply Chain Analytics MS Accelerated Master's Degree

The Department of Supply Chain and Analytics offers an Accelerated MS degree program that allows students to earn their BSBA with an emphasis in Supply Chain Management and their MS in Supply Chain Analytics in as few as 10 semesters. Students in the Accelerated MS program will complete the MS through the required coursework.

A total of 138 credits is required to earn both BSBA/MSSCA, allowing 12 credits to count for both the BSBA and MS degrees.

Students are encouraged to work closely with the Undergraduate and MS Program Directors to ensure that required courses are timed appropriately. They are also encouraged to begin working with the appropriate directors early in their undergraduate studies.

Eligibility

Students will need to have fulfilled the core curriculum requirements prior to applying for the Accelerated MS program.

Admission Requirements

Provisional Admission

Applicants are considered for provisional admission if they meet the following criteria.

- Earned 60 hours as an undergraduate
- Have a minimum GPA of 3.0
- Have met with both the BS and MS academic advisors

Graduate courses completed by undergraduate students who have been provisionally admitted to Accelerated Master's program will be charged at the undergraduate tuition rate; however, these courses will count toward the master's degree. These courses must be approved in advance to count toward both degrees. Therefore, it is recommended to apply for provisional status as a junior, preferably in the first semester of the junior year.

Graduate Admission

Students are considered for graduate admission if they meet the following criteria.

- Are in their final semester in undergraduate status
- Have a minimum GPA of 3.0 since being granted provisional status
- Have met with the Graduate Academic Advisor

The MS Academic Advisor, in consultation with the BS Academic Advisor, will determine whether the student can apply for formal admission. Final decisions concerning formal admission are made by the Graduate School in consultation with the SCA Department Chair and/or the Graduate Program Director. Students admitted to the graduate program must take courses with graduate status until the completion of the MS degree.

Program Requirements

Junior/Senior Year Courses (Complete 4 courses, 12 hours, from below)

| | | |
|-----------|--|---|
| SCMA 5320 | Supply Chain and Operations Management | 3 |
| SCMA 5381 | Global Supply Chain Management | 3 |

| | | |
|--|------------------------------------|---|
| SCMA 6330 | Business Logistics Systems | 3 |
| SCMA 6350 | Management Science Methods | 3 |
| Final Year Courses (Complete 6 courses, 18 hours, from below) | | |
| SCMA 5310 | Supply Chain Strategies | 3 |
| SCMA 6321 | Strategic Sourcing | 3 |
| SCMA 6345 | Business Analytics and Data Mining | 3 |
| SCMA 6331 | Supply Chain Modeling | 3 |
| SCMA 5389 | Supply Chain Management Practicum | 3 |
| SCMA Elective ¹ | | 3 |

¹ Courses that are not in the list of MS in Supply Chain Analytics electives must be approved by the Supply Chain and Analytics Department Chair. SCMA 5399 Independent Study or SCMA 5334 Internship can each be counted no more than once toward the degree requirement.

Awarding of Degrees

The student may apply for and receive the bachelor's degree in the semester when all the undergraduate requirements are completed. In their final semester in undergraduate status, the student must apply and be admitted to the graduate program, to begin the following semester. The student will apply to receive the master's degree in the semester that the requirements for the graduate degree will be completed.

If the student fails to enroll for more than one year after receiving the bachelor's degree, the student can still earn the master's degree, but the graduate-level credits earned as an undergraduate cannot be used for the graduate degree.

Supply Chain Management Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.
- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

Available to all students except those pursuing the Bachelor of Science in Business Administration degree. Students must complete:

| | | |
|---|---|-----------|
| SCMA 3301 | Introduction to Supply Chain Management | 3 |
| Select any four additional 3000 level and higher Supply Chain Management and Analytics courses. | | 12 |
| Total Hours | | 15 |

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Interpret basic concepts in supply chain management such as purchasing, production, operations, logistics, integration and reverse supply chains.
- Describe analytical methods for decision-making in supply chains, such as demand planning, supply chain network design, production planning, inventory control and transportation.
- Describe the role of global supply chains, and principles of effective supply chain management, in the economy to match supply and demand.
- Describe the role of data, analytics and technology in modern supply chains.

Talent Management Graduate Certificate

The Graduate Certificate in Talent Management is designed for both Human Resource professionals at all levels and non-Human Resource professionals who plan on taking on Human Resource positions with an interest in enhancing their Human Resource competencies to meet current workplace challenges and advancing their careers. The certificate will help you to develop a deep understanding of the Human Resource field so that you can effectively lead and manage talent in business, nonprofit, union and government organizations by evaluating HR systems and aligning HR systems with overall business strategies.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs. All 12 credit hours taken as part of this certificate transfer to the MBA degree program.

| | | |
|---------------------------------------|--|-----------|
| Choose four of the following courses. | | 12 |
| MGMT 5621 | Managing Human Resources | |
| MGMT 5624 | Training and Development | |
| MGMT 5622 | Union-Management Relations and Collective Bargaining | |
| MGMT 5629 | Performance Management | |
| MGMT 5625 | Talent Acquisition and Retention | |
| MGMT 5627 | Employment Law | |
| MGMT 5628 | Authentic Leadership | |
| Total Hours | | 12 |

Taxation Graduate Certificate

The Certificate Program in Taxation provides students with the skills and technical knowledge for a career in tax compliance and representation. This program is ideal for accounting and law students interested in careers in taxation, business professionals seeking to enter the tax profession, tax preparers who need additional training to advance their careers, and investment professionals seeking to better serve clients.

Admission Requirements

Applicants must meet general University of Missouri-St. Louis Graduate School admissions requirements.

Certificate Requirements

All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate department chairperson and the Director of Graduate Business Programs. All 12 credit hours taken as part of this certificate transfer to the MBA degree program.

| | | |
|--------------------|--|-----------|
| ACCTNG 4401 | Financial Accounting and Reporting III | 3 |
| ACCTNG 4441 | Advanced Federal Income Tax: Business Taxation | 3 |
| ACCTNG 5441 | Tax Research | 3 |
| ACCTNG 6441 | Graduate Topics in Taxation | 3 |
| Total Hours | | 12 |

Teaching English to Speakers of Other Languages Graduate Certificate

The Graduate Certificate in Secondary School Teaching prepares those with at least a bachelor's degree for teaching in high school. Normally this Graduate Certificate is taken by students who are not simultaneously pursuing the M.Ed. and teacher certification.

Admission

Applicants who wish to earn a Graduate Certificate in TESOL must apply for admission to the certificate program and to the Graduate School at the University of Missouri –St. Louis as a non-degree student or as a Master's or doctoral student. Applicants must have a 2.75 GPA in undergraduate coursework to be admitted. A background in K-12 or adult education is desirable.

Requirements

Students must maintain a minimum GPA of 3.0 to remain in the certificate program. The certificate is awarded after completion of the courses listed below. A program of study, or M-1, should be filed in the first one-third of the program. Students should file an Intent to Complete a Graduate Certificate at the beginning of their last semester. The Graduate Certificate in TESOL requires 18 credit hours of course work, including an entry course (TCH ED 6210):

| | | |
|-------------|---|---|
| TCH ED 6210 | Foundations Of Teaching English To Speakers Of Other Languages | 3 |
| TCH ED 6220 | Principles of Second/Foreign Language Acquisition | 3 |
| TCH ED 6230 | Cross-Cultural Communication in the Classroom | 3 |
| TCH ED 6240 | Assessment for Teaching English to Speakers of Other Languages | 3 |
| TCH ED 6250 | Methods and Materials for Teaching English to Speakers of Other Languages | 3 |

| | | |
|--------------------|--|-----------|
| TCH ED 6260 | Practicum in Teaching English to Speakers of Other Languages | 3 |
| Total Hours | | 18 |

State Certification

For TESOL state certification, the students need to add TCH ED 6224, and ELE ED 6338 for those who have the middle and the secondary school teaching certificates. Those who have the elementary teaching certificates need to add TCH ED 6224 if they are UMSL teacher education graduates. Otherwise, please consult the faculty advisor and/or academic advisor.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Continually reflect on professional growth to improve student learning outcomes/enhance student learning.
- Integrate technology to create meaningful student learning within the context of a global digital society.
- Apply content and pedagogical knowledge to create authentic and deep learning experiences.
- Use learning science principles to design, implement, and evaluate curriculum based on learning standards.
- Foster effective working relationships with students, school colleagues, families, and community members to enhance student learning and well-being.
- Design and establish a safe, inclusive, and respectful learning environment that nurtures the intellectual, social, and personal development of all students.
- Use equitable frameworks and inclusive practices to create a variety of instructional and assessment opportunities adapted to diverse learners to encourage all students' critical thinking, problem solving, and performance skills.

Teaching of Writing Graduate Certificate

The Certificate is an 18-hour program through the Gateway Writing Project (GWP); it may also be coordinated with other graduate programs. Certificate courses may be applicable to the M.A. in English with emphasis in composition or to various M.Ed. programs. The GWP Certificate is especially appropriate for post-master's candidates who wish to pursue a specialization in teaching writing. The Graduate Certificate in the Teaching of Writing requires a 9 semester-hour core of courses developed by the Gateway Writing Project: the GWP invitational institute (6 hrs) and an exit course (3 hrs.). The remaining 9 hours are electives (at the 5000 or 6000 level) in English or in Education as approved by the advisor.

Admission

Applicants must be admitted to Graduate School and be selected by the faculty admissions committee for the Graduate Certificate in the Teaching of Writing. The committee will review candidates using multiple sources that could include an interview, an application essay, and supporting documentation. Criteria include experience teaching writing at any level and academic record, especially in writing and the teaching of writing.

Required Core Courses

| | | |
|------------------|--|---|
| ENGL/TCH ED 6880 | Leadership in the Teaching of Writing | 6 |
| TCH ED 6890 | Seminar in Professional Writing for Teachers | 3 |

Electives

Appropriate electives will be determined by the advisor in consultation with the student.

Total Hours

18

For complete information, see The Gateway Writing Project's Graduate Certificate in Teaching Writing

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Write, revise, and prepare writing for publication and identify as a writer.
- Summarize current theory/research, especially research by teachers of writing.
- Design curriculum and assessment that uses writing to promote learning in all subject areas.
- Demonstrate leadership for promoting better writing in school settings.
- Reflect on own teaching and own writing in service of improving student writing.

Technical Writing Undergraduate Certificate

Requirements

Students earn the Online Certificate in Technical Writing by completing 18 hours in selected online writing courses with a grade point average of 3.0 or better, including a capstone course. Twelve of the 18 hours must be taken at the University of Missouri-St. Louis. Courses may not be taken on a satisfactory/unsatisfactory basis.

UMSL Courses

| | | |
|-----------|---|---|
| ENGL 3120 | Business Writing | 3 |
| ENGL 3130 | Technical Writing | 3 |
| ENGL 3160 | Writing in the Sciences | 3 |
| ENGL 4870 | Advanced Business and Technical Writing | 3 |
| ENGL 4871 | Publishing: Writers, Editors, and Readers | 3 |
| ENGL 4872 | Technical Presentations | 3 |
| ENGL 4890 | Writing Internship | 3 |
| ENGL 4892 | Independent Writing Project | 3 |

Missouri S&T Courses

| | | |
|--------------|---|---|
| ENGLISH 3560 | Technical Writing | 3 |
| TCH COM 2560 | Technical Marketing Communication | 3 |
| TCH COM 3440 | Theory of Visual Technical Communication | 3 |
| TCH COM 4085 | Internship in Technical Communication (individual enrollment) | 3 |

| | | |
|--------------|---|---|
| TCH COM 4450 | International Dimensions of Technical Communication | 3 |
| TCH COM 4530 | Help Authoring | 3 |
| TCH COM 4450 | Proposal Writing | 3 |
| TCH ED 5510 | Technical Editing | 3 |
| TCH COM 5530 | Usability Studies | 3 |
| TCH ED 5560 | Web-Based Communication | 3 |
| TCH COM 5610 | History of Technical Communication | 3 |
| TCH COM 5620 | Research Methods in Technical Communication | 3 |

Students may use ENGL 4890, ENGL 4892, ENGL 4870, ENGL 4871, and ENGL 4872 as their capstone course.

When the student has completed requirements for the certificate, the coordinator will notify the university registrar and the college from which the student will graduate. Upon the student's graduation, completion of the Online Technical Writing Certificate will be noted on the official transcript and a certificate will be mailed to the student's residence. Students who have graduated before completing the Online Technical Writing Certificate will receive the certificate in the mail and will have the certificate entered on their official transcripts.

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Revise and edit texts efficiently
- Adjust style, tone, and format to best suit a professional context
- Develop rhetorical flexibility as it pertains to shifting professional writing expectations
- Identify various readers and stakeholders, and the situations in which they both operate
- Accurately compose language that meets the needs of readers and stakeholders
- Identify and solve real world problems via writing/composition
- Design and create texts in various modes (e.g. digital, videos, alphabetic, auditory, and multiple/combined modes)
- Demonstrate an ability to apply contextually appropriate rhetorical strategies and technologies to solve communication problems successfully and safely

Transportation Studies Minor

General Requirements

All minors are 15 credit hours or 5 courses, including business core courses.

- Students must attain a 2.0 grade point average for all courses in the minor.
- Students must attain a minimum grade of C- in each course included in the minor.
- All courses in the minor must be on a graded basis.
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UMSL.
- One must complete a baccalaureate degree at UMSL in order for a minor to be conferred.

- A minor may be added for up to two years following completion of the baccalaureate degree

Specific Requirements for the Minor

Available to all students.

| | | |
|--------------------------------|---|-----------|
| SCMA 3370/MKTG 3770 | Introduction to Transportation | 3 |
| SCMA 3371/MKTG 3771 | | |
| Select three of the following: | | 9 |
| SCMA 3301 | Introduction to Supply Chain Management | |
| SCMA 3320 | Advanced Supply Chain and Operations Management | |
| SCMA 3376 | Transportation Security and Risk | |
| SCMA 3390 | Internship in Supply Chain and Analytics ¹ | |
| SCMA 3398 | Seminar in Supply Chain Management and Analytics ¹ | |
| SCMA 3399 | Independent Study in Supply Chain and Analytics ¹ | |
| SCMA 4330 | Business Logistics | |
| SCMA/INTL BUS 4381 | Global Supply Chain Management | |
| SCMA 4398 | Advanced Topics in Supply Chain and Analytics ¹ | |
| MKTG 3700 | Principles of Marketing | |
| MKTG 3790 | Internship in Marketing ² | |
| MKTG 3798 | Seminar in Marketing ² | |
| MKTG 3799 | Independent Study in Marketing ^{2, 3} | |
| Total Hours | | 12 |

¹ With approval of the Department chair of Supply Chain & Analytics.

² With approval of the Department chair of Marketing.

³ No more than one approved independent study course may count towards the minor.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Explain the history and importance of global and domestic transportation on society from policy, regulatory, economic, legal, sustainability, and demographic perspectives.
- Describe the role of transportation in supply chain management, the key elements of transportation, basic processes in managing strategic and tactical transportation management operations, and digital transformation of transportation operations.
- Define and explain basic concepts of supply chain and transportation risk management, and their impacts on shareholder value and corporate performance.
- Explain the role of data, analytics and technology in transportation.

Trauma Studies Undergraduate Certificate

The undergraduate Certificate Program in Trauma Studies is an interdisciplinary program requiring 18 credits of training across a minimum of 3 disciplines. This certificate is appropriate for students who want to

specialize in working in a variety of professional settings with individuals who have been exposed to potentially traumatic events (e.g., physical and sexual assault, intimate partner violence, child abuse and neglect, community and gun violence, war, natural disasters). Students develop knowledge and competencies related to trauma exposure, posttraumatic growth, trauma-related difficulties including PTSD, and implications for working across a variety of professional settings.

Many but not all of the courses required by the Certificate Program in Trauma Studies have prerequisites. Some students may satisfy prerequisites by virtue of their prior curriculum and their major program of study. When this is not the case, students are responsible for satisfying the prerequisites.

All students must take at least one course offered by 3 different departments (including their home department).

Up to 9 credit hours of coursework can apply to the major program of study. Certificate Coordinator's approval is required for trauma certificate courses to be double-counted towards another undergraduate certificate program at UM-St. Louis.

Required Course:

| | | |
|--|--|------|
| PSYCH/GS 3232 | Psychology of Trauma | 3 |
| Select three to five of the following: | | 9-15 |
| CRIMIN/SOC 4300 | Communities and Crime | |
| CRIMIN/GS 4330 | Violence Against Women | |
| CRIMIN/SOC/POL SCI/MVS 4345 | War Crimes, Genocide, and Justice in the 20th and 21st Centuries | |
| CRIMIN 4350 | Victimology | |
| PSYCH/GERON 3280 | Psychology of Death and Dying | |
| PSYCH/CAST 3290 | Traumatic Stress in Childhood and Adolescence | |
| PSYCH/CAST/SOC WK 4398 | Child Maltreatment: A Multidisciplinary Approach | |
| SOC WK/GS 4610 | Intimate Partner Violence | |
| Choose up to two courses from the following: | | 6 |
| CRIMIN 1120 | Criminal Law | |
| CRIMIN 2240 | Policing | |
| CRIMIN 2251 | Youth Gangs | |
| CRIMIN 3230 | Crime Prevention | |
| CRIMIN/GS/SOC 4325 | Gender, Crime, and Justice | |
| CRIMIN 4340 | Race, Crime, and Justice | |
| ED PSY 3312 | | |
| CNS ED 3200 | Interpersonal Skills in Helping Relationships | |
| MVS 2100/SOC 2801 | | |
| NURSE 3060 | Behavioral Health Concepts | |
| NURSE 3214 | | |
| NURSE 3340 | | |
| POL SCI 2400 | Public Administration | |
| POL SCI 2420 | Introduction to Public Policy | |
| POL SCI/MVS 2860 | | |
| PSYCH/GS 2230 | Psychology of Gender | |
| PSYCH 2245 | Psychological Disorders | |
| SOC/GS/HIST/POL SCI/SOC WK 2102 | Introduction to Gender Studies | |

| | | |
|--------------------|---|-----------|
| SOC WK 3210 | Social Issues and Social Policy Development | |
| SOC WK/GS 3700 | Diversity and Social Justice | |
| Total Hours | | 18 |

¹ Please seek approval of the Coordinator of the Trauma Studies Certificate in advance.

Special Topics courses relevant to trauma studies may be included in the certificate when approved in advance by the coordinator of the trauma studies certificate.

Urban Politics Minor

Requirements for Political Science Minors

A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor. Students may count no more than 3 hours in political science taken on a satisfactory/unsatisfactory basis toward the minor. Students taking an internship POL SCI 3940 may count no more than three hours of the internship toward the minor.

| | | |
|-------------------------------|--|-----------|
| POL SCI 2350 | Introduction to Urban Politics | 3 |
| Select four of the following: | | 12 |
| POL SCI 2300 | State Politics | |
| POL SCI 2320 | African Americans and the Political System | |
| POL SCI 3450 | Urban Administration | |
| POL SCI 3460 | The Politics of Poverty and Welfare | |
| POL SCI 3700 | Nonprofit Organizations and Social Equity | |
| POL SCI 3900 | Special Readings ¹ | |
| POL SCI 3940 | Public Affairs Internship ¹ | |
| Total Hours | | 15 |

¹ May be taken with approval of the faculty advisor.

Learning Outcomes

- Explain key topics in urban politics.
- Demonstrate an understanding of events and factors that have influenced the development of urban politics in the US.
- Analyze the actions of political actors impacting urban politics and their motives.
- Assess issues facing urban communities, formulate evidence-based recommendations, and communicate them with clarity and coherence.

Urban Studies Minor

Requirements

A minor in urban studies requires 15 hours of course work. Candidates must have a cumulative grade point average of 2.0 or better in the minor.

Courses taken on a satisfactory/ unsatisfactory basis may not be applied to the minor. Special topics courses or other courses relevant to urban studies may be included as electives when approved in advance by the urban studies coordinator.

Students must take:

| | |
|--|--------------------------------|
| Core Courses: | 9 |
| SOC 2203 | The City |
| SOC 2202 | Urban Sociology |
| SOC 3344 | Problems of Urban Community |
| Electives: select two from the following: | 6 |
| SOC 2280 | Technology and Society |
| SOC 3400 | |
| SOC/CRIMIN 4300 | Communities and Crime |
| HIST 2008 | History of St. Louis |
| POL SCI 2350 | Introduction to Urban Politics |
| POL SCI 3450 | Urban Administration |
| Total Hours | 15 |

Veterans Studies Minor

The Minor in Veterans Studies is a multi-disciplinary program whose course work enhances students' majors to prepare them to work for or with veterans. It is also designed to encourage and enable veteran students to reflect more deeply on their service experiences. This minor includes a foundation course, a series of elective courses, and a capstone. Electives may be chosen from four areas, or from any MVS course above the 2000 level.

Cultural: exploring perspectives and experiences of veterans through various media

Relational: understanding how veterans relate among various aspects of our society

Institutional: understanding the context and structure of military service and veteran institutions now and in the past

Clinical: establishing effective skills to better serve for, with, and in veteran populations

Alternative elective courses could be included with the consent of the department chair. While it is encouraged, students are not required to limit their electives to a single area.

| | |
|----------------------|---|
| MVS 2100 | 3 |
| Electives | 9 |
| Cultural | |
| ANTHRO 1011 | Introduction To Cultural Anthropology (MOTR ANTH 201) |
| ANTHRO 1025 | World Cultures and History |
| ANTHRO 1041 | Sex and Gender Across Cultures |
| ENGL 4650 | Modern American Fiction |
| PHIL 1030 | Present Moral Problems |
| PHIL 1125 | Islamic Philosophy |
| PHIL 4430 | Social and Political Philosophy |
| Institutional | |

| | | |
|--|--|----|
| POL SCI 1800 | Introduction to International Politics (MOTR POSC 201) | |
| POL SCI 3860 | Political Violence | |
| POL SCI 4850 | International Law | |
| CRIMIN 3305 | Crime and Justice in a Globalized World | |
| CRIMIN 4300 | Communities and Crime | |
| Relational | | |
| COMM 2332 | Intercultural Communication | |
| PSYCH 3280 | Psychology of Death and Dying | |
| PSYCH 3232 | Psychology of Trauma | |
| PSYCH 3820 | Cross-Cultural Psychology | |
| PSYCH 4300 | Introduction to Psychopharmacology: Drugs and Mental Illness | |
| SOC 2102 | Introduction to Gender Studies | |
| SOC 4600 | Masculinities | |
| Clinical | | |
| SOC WK 2000 | Social Work and Social Issues | |
| SOC WK 2200 | Social Welfare as a Social Institution | |
| NURSE 2105 | | |
| GERON 2256 | Bioethics | |
| GERON 4680 | | |
| Veterans Studies courses at 2000 level or higher | | |
| Capstone | | |
| MVS 4100 | Veterans Studies Capstone Seminar | 3 |
| Total Hours | | 15 |

Women's Health Nurse Practitioner Post-Graduate Certificate

Post-graduate certificate (PGC) requirements are tailored to the individual student, depending on past academic work, experience, the student's goals, and specialty requirements. Upon completion of the PGC requirements, a certificate is awarded by the College of Nursing (CON) and Graduate School. Graduates are eligible to apply to take board certification exams in the advanced practice role and population for which they have been prepared.

Due to higher education regulation changes, the University of Missouri–St. Louis cannot admit students from all states for online programs. Please see the Center for Teaching and Learning for additional information: http://www.umsl.edu/services/ctl/onlinelearning/state_authorization.html.

Admission Criteria

- Admission to the University by completing the UMSL Graduate School application
- MSN, DNP from a nationally accredited nursing program
- MSN or DNP 3.0 minimum GPA
- Current professional licensure
- Acute Care Pediatric Nurse Practitioner (PNP-AC) post-graduate certificate requires at least one (1) year of inpatient pediatric nursing experience

- Psychiatric Mental Health Nurse Practitioner (PMHNP) post-graduate certificate requires at least one (1) year of inpatient or outpatient psychiatric nursing or emergency room nursing experience

Certificate Requirements

Students must complete a minimum of 12 credit hours of coursework from the University of Missouri - St. Louis College of Nursing. Courses must be from the list below.

| | | |
|------------|---|-----|
| NURSE 6518 | Pathophysiology for Advanced Nursing Practice | 3 |
| NURSE 6520 | Pharmacology For Advanced Nursing Practice | 3 |
| NURSE 6524 | Health Assessment for Advanced Nursing Practice | 3 |
| NURSE 6530 | Introduction to Diagnostic Reasoning | 3 |
| NURSE 6746 | Women's Health I | 4 |
| NURSE 6747 | Women's Health II | 4 |
| NURSE 6954 | Advanced Practice Nursing: Practicum I | 2-4 |
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All students must complete 8 credit hours of Residency. One credit hour is equivalent to 75 residency hours.

Workplace and Organizational Science Undergraduate Certificate

Effective Fall 2021, this program will no longer accept applications

This certificate can prepare individuals for graduate studies in industrial-organizational psychology, management, or other areas with a focus on behavior in organizations. It also provides training relevant to managing individuals in organizations that can be applied broadly to business, military, non-profit, health care, law enforcement, and other settings.

Note: **No more than 6 credit hours may be applied from the student's major.**

Required Courses

| | | |
|----------------------|--|---|
| MGMT/SOC 3600 | Management and Organizational Behavior | 3 |
| PSYCH 3318/MGMT 3623 | Industrial and Organizational Psychology | 3 |

Goal 1: Breadth of Study **9**

Choose three courses from the following:

| | |
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| AERO 2001 | Team Leadership Fundamentals I |
| COMM 2231 | Communication in the Organization |
| MIL SCI 1101 | Introduction to Leadership I |
| MIL SCI 2201 | Innovative Team Leadership |
| MVS 2100 | |
| MGMT 3611 | Advanced Management and Organizational Behavior |
| MGMT 3621 | Human Resource Management |

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| MGMT 3622 | Industrial and Labor Relations |
| MGMT 3624 | Employee Training and Development |
| MGMT 3625 | Leadership in Organizations |
| PSYCH 4365 | Psychological Testing and Assessment |
| POL SCI 4060 | Theory of Decisions and Games |
| SOC 4354 | Sociology of Business and Work Settings |

Goal 2: Cultural Competency **3**

Choose one course from the following:

| | |
|--------------------|---|
| COMM 2332 | Intercultural Communication |
| COMM 3337 | Communication and Gender |
| MGMT/INTL BUS 3680 | International Management |
| PSYCH 3820 | Cross-Cultural Psychology |
| PSYCH 4250 | Stereotyping, Prejudice, and Discrimination |
| SOC 1241 | Globalization and Social Change |

Total Hours **18**

Learning Outcomes

Upon completion of the program, certificate earners will be able to:

- Describe the application of theories and methods from workplace and organizational sciences to job analysis, recruitment/selection, training, retainment and performance appraisal processes.
- Identify factors that influence motivation and work performance of employees.
- Identify teamwork processes, challenges and strategies.
- Summarize models of leadership and fit for specific organizational needs.
- Compare and contrast at least two disciplinary specific (e.g., communications, industrial/organizational psychology, management, sociology) approaches to understanding workplace and organizational needs and challenges.
- Write and speak clearly and concisely about theories and research in workplace and organizational sciences.
- Evaluate appropriateness of quantitative and qualitative research methods for specific questions in workplace and organizational sciences.
- Relate concepts and empirical findings from workplace and organizational sciences to personal work experiences and career goals.

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