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Introduction to UMSL

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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, agencies, and the arts.

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 45 years ago, UMSL has grown to encompass 350 acres of beautifully landscaped rolling hills. The campus has become St. Louis's largest university in the number of students and is now the third largest in the state.

Out of pride in the successes of our students, faculty, and staff and our culture of quality improvement, the campus posts recent highlights on the [UMSL home page](#), maintains detailed information on the [About UMSL site](#), and makes public student achievement data through the national project, [College Portrait](#).

Mission

VISION

The University Missouri-St. Louis will be known as a premier metropolitan public research university and as a university of choice for undergraduate, graduate and professional students.

MISSION

The University of Missouri-St. Louis provides excellent learning experiences and leadership opportunities for a diverse student body. Outstanding faculty and staff, innovative research, and creative partnerships foster synergies that advance the welfare of our stakeholders and benefit the global society.

Academic Structure

UMSL's academic units include several colleges.

College of Arts and Sciences

The College of Arts and Sciences is the largest and most diverse college at UMSL. In its continued efforts to improve and deliver the academic core for the campus, CAS's long-range plans have included various initiatives intended to strengthen the foundational coursework in the liberal arts. Also central to the college's mission is faculty and student collaboration in research and scholarship. Both undergraduate and graduate students participate in a community of scholars that promotes excellence in teaching, critical thinking skills, collaborative learning, and strong research and scholarship across a range of disciplines.

College of Business Administration

Through its undergraduate and graduate degree programs, the College of Business Administration expands student capability in communication, analysis, and judgment, enabling its graduates to deal effectively with today's complex economic environment. The college maintains a balance between the specialization of professional courses and the diversity of liberal arts.

College of Education

Consistently one of the top two institutions in the state in preparation of educators, the College of Education provides undergraduate and graduate programs to support and sustain educational leaders. Its programs

emphasize state-of-the-art technological applications to enhance teaching and learning as well as collaboration among university, school, agency, and corporate partners.

College of Fine Arts and Communication

Faculty, students, and alumni of the College of Fine Arts and Communication, which includes the departments of Art and Art History, Communication, Music, and Theatre, Dance and Media Studies, have distinguished themselves as scholars, visual artists, teachers, and performers. The university's \$55 million Touhill Performing Arts Center that opened in the fall of 2003 provides two world-class venues for performances. In addition, three galleries offer space for display of student and faculty artwork as well as visiting exhibitions.

Graduate School

The Graduate School provides leadership to graduate programs across campus. In contrast to those in traditional universities, our programs reflect our mission as a public metropolitan research university: our faculty and students' scholarship advances understanding of their disciplines in rapidly changing local, regional, and global contexts.

College of Optometry

The College of Optometry is one of 17 such programs in the United States providing professional optometric education and clinical experience. Facilities are furnished with equipment and technology for the enhancement of both teaching and research. The college operates the University Eye Center on campus, the Optometric Center of St. Louis in the city's Central West End, the Harvester Eye Care Center in St. Charles County, and the East St. Louis Eye Center, jointly owned and operated by the UMSL College of Optometry and Southern Illinois University at Edwardsville.

Pierre Laclède Honors College

Students in the Pierre Laclède Honors College major in any of the campus's undergraduate program, and share a commitment to a challenging, innovative general education curriculum. In the Honors College, students and faculty work together to foster an intellectual climate in which democracy, diversity, civility and excellence are fundamental values. The Honors program offers small seminars that emphasize critical reading and open discussion upon which students base essays and research papers. Honors College students are also encouraged to consider exchange study, whether abroad through the Center for International Studies or in North America through the National Student Exchange

College of Nursing

The College of Nursing offers programs at the bachelor's, master's, and doctoral levels. The Bachelor of Science in Nursing is available for a student wishing to pursue a program of study leading to eligibility to complete state licensure examinations to become a registered nurse (R.N.). The Master of Science in Nursing offers studies in adult, children's, and women's health along with nurse educator and nurse leader tracks. Nurse practitioner options are also available (adult, family, pediatric, and women) as part of the MSN program. Doctoral students may choose between the Doctor of Nursing Practice and the Ph.D. in Nursing.

UMSL/Washington University Joint Undergraduate Engineering Program

The University of Missouri St. Louis and Washington University joined forces to offer accredited Bachelor of Science degrees in mechanical, electrical, and civil engineering. Students who enter the program take about half of their course work--mathematics, physics, chemistry, humanities and social sciences, and some elementary engineering subjects--at UMSL. The remaining program consists of engineering courses and laboratories taken at Washington University. Students register for all courses at UMSL, pay tuition at UMSL rates (plus a small surcharge on engineering courses), and receive their degrees from the University of Missouri.

Division of Continuing Education

Continuing Education provides a wide variety of credit courses and noncredit professional development programs that help adults keep abreast of new developments in their field, prepare them for a career in a new field of endeavor, or enrich their personal and family life. Courses leading to undergraduate and graduate programs are also offered on the campuses of the St. Louis Community College South County Education Center, St. Louis Community College at Wildwood, St. Charles Community College, Jefferson College, and Mineral Area College.

Student Life

Numerous student organizations at UMSL, from the Accounting Club to Zeta Tau Alpha sorority, seek members and leaders. Guest speakers, concerts, film series, plays, exhibits, recitals, and a host of informal gatherings crowd each week's schedule. The St. Louis area offers still more recreational sports and cultural events.

The university offers a wide range of varsity and intramural sports for students, whether as players or spectators. On the varsity level, the Tritons compete in most major sports, including men's soccer, basketball, baseball, and golf and women's basketball, soccer, softball, volleyball, and tennis.

Students participate in fitness activities, both organized and individual, on campus. The Mark Twain athletic

facility offers a fitness center, weight room, swimming pool, and basketball, volleyball, handball, and racquetball courts. Outdoor facilities include tennis and handball courts, a fitness trail, and baseball, soccer, and softball fields. Intramural sports are available to all students, with schedules designed for maximum participation.

UMSL Alumni

The university has more than 70,000 graduates living in all 50 states and several foreign countries. Of these alumni, more than 80 percent live and work in the St. Louis metropolitan area and reflect the area's diversity. The university is a major force in providing the region with a highly educated and diverse work force. UMSL alumni can be found in companies and organizations throughout the region and nation.

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University of Missouri - St. Louis

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Undergraduate Degrees (Majors)

Program	Degree	Emphasis Area
<u>Accounting</u>	BS	
<u>Anthropology</u>	BA	
<u>Art History</u>	BA	
<u>Biochemistry and Biotechnology</u>	BS	
<u>Biology</u>	BA; BS	
<u>Business Administration</u>	BSBA	Finance; International Business; Logistics and Operations Management; Marketing
<u>Chemistry</u>	BA; BS	
<u>Civil Engineering</u>	BSCIE	Construction Engineering; Environmental Engineering Science
<u>Communication</u>	BA	
<u>Computer Science</u>	BS	
<u>Criminology and Criminal Justice</u>	BS	
<u>Early Childhood Education</u>	BSED	
<u>Economics</u>	BA; BS	
<u>Educational Studies</u>	BES	Early Childhood; Exercise Science; Professional Educational Studies
<u>Electrical Engineering</u>	BSEE	
<u>Elementary Education</u>	BSED	
<u>English</u>	BA	
<u>French</u>	BA	
<u>German</u>	BA	(Inactive)
<u>History</u>	BA	
<u>Information Systems</u>	BS	
<u>Interdisciplinary Studies</u>	BIS	
<u>Liberal Studies</u>	BLS	
<u>Mathematics</u>	BA; BS	

<u>Mechanical Engineering</u>	BSME	
<u>Media Studies</u>	BS	
<u>Music</u>	BA; BM	Elective Studies in Bus (BM only); Performance (BM only)
<u>Music Education</u>	BM	
<u>Nursing</u>	BSN	
<u>Philosophy</u>	BA	
<u>Physical Education</u>	BSED	PK-9; PK-12
<u>Physics</u>	BA; BS	Astrophysics (BS only); Engineering Physics (BS only); General Physics (BS only); Geographics; Medical Physics (BS only)
<u>Political Science</u>	BA	
<u>Psychology</u>	BA	
<u>Public Policy and Administration</u>	BSPPA	
<u>Secondary Education</u>	BSED	Business Education; English; Mathematics; Modern Foreign Language-French; Modern Foreign Language-German; Modern Foreign Language-Spanish; Music; Science-Biology; Science-Chemistry; Science-Physics; Social Studies-Economics; Social Studies-History; Social Studies-Poli Science; Social Studies-Psychology; Social Studies-Sociology
<u>Special Education</u>	BSED	Emotionally Disturbed; Learning Disability; Mentally Retarded
<u>Social Work</u>	BSW	
<u>Sociology</u>	BA; BS	
<u>Spanish</u>	BA	
<u>Studio Art</u>	BFA	Drawing; General Fine Arts; Graphic Design; Photography; Painting; Printmaking; Art Education
<u>Theatre and Dance</u>	BA	

Undergraduate Certificates

- Advertising Certificate
- African Studies Certificate
- Biochemistry Certificate
- Biotechnology Certificate
- Certificate in Foreign Language and Study Abroad
- Conservation Biology Certificate
- Creative Writing Certificate
- Disaster and Risk Management
- East Asian Studies Certificate
- European Studies Certificate
- Undergraduate Certificate in Gerontological Studies
- Greek Studies Certificate
- International Business Certificate
- Labor Studies Certificate
- Latin American Studies Certificate
- Non-Profit Arts Organization Management & Leadership
- Photographic Studies Certificate
- Certificate in Public Relations
- Studies in Religions Certificate
- Trauma Studies Certificate
- Women and Gender Studies Certificate

Professional Writing Certificate

Other Instructional Areas

In addition to the degrees and emphasis areas above, many departments offer undergraduate certificates and specializations in several subject areas.

- American Studies
- Arabic
- Archaeology
- Astronomy
- Athletic Coaching
- Atmospheric Science
- Black Studies
- Chinese
- Classical Studies
- Dance
- Educational Foundations
- Educational Technology
- Employee Training and Development
- Ensemble Performance
- Ethics
- Exercise Science Education
- Geology
- Interpersonal Communication
- Japanese
- Jazz Studies
- Legal Studies
- Literature
- Medical Physics
- Organizational Communications
- Pre-Architecture
- Pre-Engineering
- Pre-Health Sciences
- Pre-Journalism
- Pre-Law
- Pre-Veterinary Science
- Probability and Statistics
- Public Affairs Journalism
- Public Law
- Public Relations
- Radio and Television
- Reserve Officer Training Corps

Graduate Degrees

Program	Degree	Emphasis Area
<u>Accounting</u>	MACC	
<u>Adult and Higher Education</u>	MED	Adult Education; Higher Education
<u>Applied Mathematics</u>	PHD	Computer Science; Mathematics
<u>Biochemistry and Biotechnology</u>	MS	
<u>Biology</u>	MS	Animal Behavior; Biochemistry; Biotechnology; Conservation Biology; Development; Ecology; Evolution; Genetics; Molecular and Cellular Biology; Physiology; Plant Systematics; Population Biology; Tropical Biology
<u>Biology</u>	PHD	Biochemistry; Environmental Studies; Molecular Biology and Biotechnology; Plant Systematics
<u>Business Administration</u>	MBA	Accounting; Finance; Information Systems; Management; Marketing; Logistics & Supply Chain Management; Operations Management
<u>Business Administration</u>	PHD	Information Systems; Logistics & Supply Chain

		Management
<u>Chemistry</u>	MS; PHD	Biochemistry; Inorganic; Organic; Physical
<u>Communication</u>	MA	
<u>Computer Science</u>	MS	
<u>Counseling</u>	MED	Community Counseling; Elementary; Secondary
<u>Creative Writing</u>	MFA	
<u>Criminology and Criminal Justice</u>	MA; PHD	
<u>Economics</u>	MA	Business Economics; General Economics
<u>Education</u>	EDD	Adult & Higher Education; Educational Administration; Counselor Education; Teaching-Learning Processes
<u>Education</u>	PHD	Counseling; Educational Leadership and Policy Studies; Educational Psychology; Teaching-Learning Processes
<u>Educational Administration</u>	EDS	
<u>Educational Administration</u>	MED	Community Education; Elementary Administration; Secondary Administration
<u>Elementary Education</u>	MED	General; Early Childhood; Reading
<u>English</u>	MA	American Literature; English Literature; Linguistics
<u>Gerontology</u>	MS	
<u>History</u>	MA	Museum Studies
<u>Information Systems</u>	MS	
<u>Mathematics</u>	MA	
<u>Music Education</u>	MME	
<u>Nursing</u>	MSN	Adult Nurse Practitioner; Family Nurse Practitioner; Pediatric Nurse Practitioner; Women's Health Nurse Practitioner; Neonatal Nurse Practitioner; Nurse Educator; Nurse Leader
<u>Nursing</u>	PHD; DNP	
<u>Philosophy</u>	MA	
<u>Physics</u>	MS	Applied Physics; Astrophysics
<u>Physics</u>	PHD	
<u>Political Science</u>	MA	American Politics; Comparative Politics; International Politics; Political Process and Behavior; Public Admin and Public Policy; Urban and Regional Politics
<u>Political Science</u>	PHD	
<u>Psychology</u>	MA	
<u>Psychology</u>	PHD	Behavioral Neuroscience; Clinical-Community Psychology; Industrial and Organizational Psychology
<u>Public Policy Administration</u>	MPPA	Health Policy; Local Government Mgmt; Managing Human Resources and Organization; Nonprofit Organization Mgmt; Policy Research and Analysis
<u>School Psychology</u>	EDS	
<u>Secondary Education</u>	MED	General; Curriculum and Instruction; Middle Level

		Education; Reading; Teaching English to Speakers of Other Languages
<u>Special Education</u>	MED	General; Behavioral Disorders; Early Childhood Special Education; Learning Disabilities; Mental Retardation
<u>Social Work</u>	MSW	
<u>Vision Science</u>	MS; PHD	

Professional Degree

Program	Degree
<u>Optometry</u>	OD

Graduate Certificates

- Biotechnology
- Business Administration
- Gerontology
- Human Resource Management
- Institutional Research
- International Studies
- Local Government Management
- Logistics and Supply Chain Management
- Long-term Care Administration
- Marketing Management
- Museum Studies
- Non Profit Organization Management and Leadership
- Post MSN Nurse Practitioner Certificate
- Program Evaluation and Assessment
- Psychology - Clinical Re-specialization
- Secondary School Teaching
- Teaching English to Speakers of Other Languages
- Teaching of Writing
- Trauma Studies
- Tropical Biology and Conservation
- Women's and Gender Studies

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Undergraduate Study

UMSL Home

This section includes admission and academic policies for students seeking to study in undergraduate programs at the University of Missouri-St. Louis.

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 Admissions Office's Application website contains links to applications for all categories of applicants.

Admission for First-Time Freshmen

The University of Missouri 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. Veterans and others who have been out of high school for five or more years should refer to the Veterans and Mature Adults section.

Application Procedures

Students applying as first time freshmen (i.e., students without previous college work) need to submit the following:

1. A completed online 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).

2. Application Fee of \$35.00 (\$40.00 for international students) may be paid by:

- A check or money order made payable to UMSL
- A credit card during the online application procedure
- Cash by appearing in person at the office of the Registrar in 351 Millennium Student Center.

3. High School Transcript and Class Rank.

A transcript must be sent directly from the high school to the UMSL Office of Admissions. The transcript should indicate class rank (if the school computes it), all coursework, and, when available, date of graduation. Required college aptitude test scores may also 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 graduating seniors must present an ACT Composite score of at least 24 or an SAT composite score of at least 1090.

4. College Aptitude Test

Freshman admission requires that a test score be submitted from one of the following:

- **American College Testing Program (ACT)** These tests are administered at many locations across the country. Information is available from <http://www.actstudent.org/>, UMSL's Office of Admissions at 314-516-5451, or a high school counselor.
- **Scholastic Aptitude Test (SAT)** These tests are administered at many locations across the country. Testing information is available on the Collegeboard website

When to Apply

Qualified applicants are admitted and notified by letter of their admission in the order that completed applications are received. Applications are accepted after October 1 for the next fall semester on the basis of six or more high school semesters.

Admission Requirements

Any later high school graduate who graduated in 1997 or later 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 a composite ACT score of 24 or SAT of 1100 will be admitted without regard to class rank. Class rank will be used to determine eligibility for admission when the applicant's ACT score is from 17 to 23 (SAT is 800 to 1090).

If the ACT Composite score is **17 to 23** or the total of SAT Verbal and Math scores is **800 to 1090**, the applicant **must** meet the following high school class rank requirement to be admitted automatically.

ACT	SAT Total Verbal, Math	High School Class Percentile Rank
23	1050-1090	48
22	1010-1040	54
21	970-1000	62
20	930-960	69
19	890-920	78
18	840-880	86
17	800-830	94

Automatic Admission

Applicants that

- A. Rank in the top 10% of the graduating class of a Missouri high school; **and**
- B. 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**
- C. Submit an ACT/SAT score.

Will be eligible for automatic admission to any campus of the University of Missouri.

Applicants that

- A. Graduate from a Missouri high school that does not rank its graduates; **but**
- B. Have taken a college preparatory curriculum which includes at least 17 units of credit (four units each of English and math, three units of social studies, three units of science, two units of a single foreign language, and one unit of fine art); **and**
- C. Achieve a 3.5 GPA on a 4.0 scale in these core courses; **and**
- D. Submit an ACT/SAT score.

Will be eligible for automatic admission to any campus of the University of Missouri.

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

Additional factors considered for admission may include:

- Extracurricular activities.
- Outstanding talent and/or abilities.
- College preparatory courses taken.
- Evidence of marked improvement over time in high school academic record.
- Significant work experience and/or family responsibilities.
- A personal statement regarding one or more of the factors above in student's own hand (in essay form).
- Recommendations by 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 and graduation date. First time freshmen may be required to take a placement examination 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 a 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 412 SSB, 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.

Trial Admission

It may be possible for applicants who do not meet the regular admission standards to be admitted on a trial basis. The Director of Admissions reviews each student's academic record and makes decisions on a case-by-case basis.

High School Equivalency Applicants

Individuals may seek admission on the basis of passing the General Education Development (GED) test with a minimum score of 2500 (for tests taken after January 1, 2002; minimum score of 250 required for tests taken prior to January 1, 2002).

In addition, the following must be submitted:

- A completed [on-line Undergraduate Application](#)
- A \$35 non-refundable Application Fee (\$40 for international students)
- 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 ([available online](#)).
- A \$35 non-refundable Application Fee (\$40 for international students)
- ACT Composite score of at least 24 or SAT Composite of at least 1090
- A copy of course of study or transcript reflecting all coursework and grades earned (if available), as well as a statement and date of graduation or completion
- If the home-schooled applicant has not completed all units required for graduation (completion), a test-score report of the General Education Development (GED) test with a minimum composite score of 2500 (for tests taken after January 1, 2002; minimum score of 250 for tests taken prior to January 1, 2002) must be presented.

Veterans and Mature Adults

Applicants may be admitted as degree or non-degree-seeking students if they are veterans of military service or over age 21 and have not previously earned college credit, have not been in school for several years, have not earned a high school diploma or passed the GED; or if they have a diploma but do not meet regular admission requirements from high school. Non-degree-seeking students can become degree candidates on the basis of their performance in university course work.

Admission Information for Prospective Students With Prior College Credit

UMSL values transfer students, defined as a student transferring from another college or university with at least 24 earned semester hours of collegelevel work.

A transferring student who has completed fewer than 24 hours must apply under the procedures for admission to the freshman class with the additional requirement that they submit official transcripts from all collegelevel courses attempted at previous institutions that document at least a 2.0 overall grade point average (4.0 system).

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

- A completed [online Undergraduate Application](#)
- A \$35 non-refundable Application Fee (\$40 for international students)
- Official transcripts from all colleges/universities attended. Hand-carried credentials are not accepted.

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

Suspended and Dismissed Transfer Students

Students under suspension or dismissal from another institution or whose previous record is of unsatisfactory quality may apply but will need to appeal to the Faculty Senate Committee on Admissions and Financial Aid to be admitted to UMSL.

Missouri State Transfer Agreement.

Although transfer students should be aware that requirements for degrees vary from institution to institution so 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 should 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 [articulation agreements with area colleges](#). Should community college students have any question about the transferability of courses not in the

articulation agreement, they should contact the appropriate Transfer Coordinator, preferably prior to taking a course.

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), 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 and Art History 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.

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A student admitted to the university and holding an associate degree 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 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 Without an Associate Degree

Transfer applicants who do not have an associate degree will have their transcripts evaluated on a course-by-course basis and will be allowed to transfer a maximum of 60 credit hours from two year institutions. Students who have fulfilled the general education requirements outlined by CBHE and certified by the sending institution will meet UMSL's general education requirements.

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A student not in good standing at another campus of the University of Missouri (suspended or dismissed) must submit an appeal to the Senate Committee on Admissions and Student Financial Aid to be admitted to UMSL.

Any course that leads to an undergraduate degree 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. Grades, including D and F grades, and honor points earned in such courses 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.

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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 Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, and Wisconsin to enroll in the institutions and specified programs located outside their home state at reduced tuition levels. Contact Financial Aid for more information.

Students from Other Countries

Prospective students living outside the United States and its possessions should contact the Office of International Student and Scholar Services (below) at least one year before the date of desired admission for information about application 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. All students should make arrangements to take the Test of English as a Foreign Language (TOEFL) well in advance of their admission date.

Since 1998, all students in F-1 and J-1 status have been required to purchase an inexpensive 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
261 Student Millennium Center
One University Boulevard
St. Louis, MO 63121-4400
Phone: (314) 516-5229
Email: iss@umsl.edu
Or visit the [Office of International Students website](#)

Returning UMSL Students

Returning undergraduate students who are admitted and/or enrolled will be automatically eligible to register without having to reapply for the period of one academic year. Students who do not attend for two semesters 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.

The returning student application is available [on line](#) or by calling the Office of Admissions at (314)-516-5451.

Admission for Students Not Seeking a 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. [Visiting student applications are available on line.](#) 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.

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 transcripts are required; however, the admission applies only for that particular semester. To attend for another semester, the student must reapply. The [non-degree application is available on-line](#), in person at 351 Millennium Student Center, or by calling (314) 516-5451. 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 351 Millennium Student Center, or by calling (314) 516-5451. Students should complete and return the form with proof of age to the Office of Admissions on the day before classes are scheduled to begin.

BULLETIN 2009

University of Missouri - St. Louis

2010

Undergraduate Study

UMSL Home

This section includes admission and academic policies for students seeking to study in undergraduate programs at the University of Missouri-St. Louis.

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 [Admissions Office's Application website](#) contains links to applications for all categories of applicants.

Admission for First-Time Freshmen

The University of Missouri 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. Veterans and others who have been out of high school for five or more years should refer to the Veterans and Mature Adults section.

Application Procedures

Students applying as first time freshmen (i.e., students without previous college work) need to submit the following:

1. A completed online 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).

2. Application Fee of \$35.00 (\$40.00 for international students) may be paid by:

- A check or money order made payable to UMSL
- A credit card during the online application procedure
- Cash by appearing in person at the office of the Registrar in 351 Millennium Student Center.

3. High School Transcript and Class Rank.

A transcript must be sent directly from the high school to the UMSL Office of Admissions. The transcript should indicate class rank (if the school computes it), all coursework, and, when available, date of graduation. Required college aptitude test scores may also 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 graduating seniors must present an ACT Composite score of at least 24 or an SAT composite score of at least 1090.

4. College Aptitude Test

Freshman admission requires that a test score be submitted from one of the following:

- **American College Testing Program (ACT)** These tests are administered at many locations across the country. Information is available from <http://www.actstudent.org/>, UMSL's Office of Admissions at 314-516-5451, or a high school counselor.
- **Scholastic Aptitude Test (SAT)** These tests are administered at many locations across the country. Testing information is available on the [Collegeboard website](#)

When to Apply

Qualified applicants are admitted and notified by letter of their admission in the order that completed applications are received. Applications are accepted after October 1 for the next fall semester on the basis of six or more high school semesters.

Admission Requirements

Any later high school graduate who graduated in 1997 or later 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 a composite ACT score of 24 or SAT of 1100 will be admitted without regard to class rank. Class rank will be used to determine eligibility for admission when the applicant's ACT score is from 17 to 23 (SAT is 800 to 1090).

If the ACT Composite score is **17 to 23** or the total of SAT Verbal and Math scores is **800 to 1090**, the applicant **must** meet the following high school class rank requirement to be admitted automatically.

ACT	SAT Total Verbal, Math	High School Class Percentile Rank
23	1050-1090	48
22	1010-1040	54
21	970-1000	62
20	930-960	69
19	890-920	78
18	840-880	86
17	800-830	94

Automatic Admission

Applicants that

- A. Rank in the top 10% of the graduating class of a Missouri high school; **and**
- B. 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**
- C. Submit an ACT/SAT score.

Will be eligible for automatic admission to any campus of the University of Missouri.

Applicants that

- A. Graduate from a Missouri high school that does not rank its graduates; **but**
- B. Have taken a college preparatory curriculum which includes at least 17 units of credit (four units each of English and math, three units of social studies, three units of science, two units of a single foreign language, and one unit of fine art); **and**
- C. Achieve a 3.5 GPA on a 4.0 scale in these core courses; **and**
- D. Submit an ACT/SAT score.

Will be eligible for automatic admission to any campus of the University of Missouri.

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

Additional factors considered for admission may include:

- Extracurricular activities.
- Outstanding talent and/or abilities.
- College preparatory courses taken.
- Evidence of marked improvement over time in high school academic record.
- Significant work experience and/or family responsibilities.
- A personal statement regarding one or more of the factors above in student's own hand (in essay form).
- Recommendations by 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 and graduation date. First time freshmen may be required to take a placement examination 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 a 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 412 SSB, 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.

Trial Admission

It may be possible for applicants who do not meet the regular admission standards to be admitted on a trial basis. The Director of Admissions reviews each student's academic record and makes decisions on a case-by-case basis.

High School Equivalency Applicants

Individuals may seek admission on the basis of passing the General Education Development (GED) test with a minimum score of 2500 (for tests taken after January 1, 2002; minimum score of 250 required for tests taken prior to January 1, 2002).

In addition, the following must be submitted:

- A completed [on-line Undergraduate Application](#)
- A \$35 non-refundable Application Fee (\$40 for international students)
- 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 ([available online](#)).
- A \$35 non-refundable Application Fee (\$40 for international students)
- ACT Composite score of at least 24 or SAT Composite of at least 1090
- A copy of course of study or transcript reflecting all coursework and grades earned (if available), as well as a statement and date of graduation or completion
- If the home-schooled applicant has not completed all units required for graduation (completion), a test-score report of the General Education Development (GED) test with a minimum composite score of 2500 (for tests taken after January 1, 2002; minimum score of 250 for tests taken prior to January 1, 2002) must be presented.

Veterans and Mature Adults

Applicants may be admitted as degree or non-degree-seeking students if they are veterans of military service or over age 21 and have not previously earned college credit, have not been in school for several years, have not earned a high school diploma or passed the GED; or if they have a diploma but do not meet regular admission requirements from high school. Non-degree-seeking students can become degree candidates on the basis of their performance in university course work.

Admission Information for Prospective Students With Prior College Credit

UMSL values transfer students, defined as a student transferring from another college or university with at least 24 earned semester hours of collegelevel work.

A transferring student who has completed fewer than 24 hours must apply under the procedures for admission to the freshman class with the additional requirement that they submit official transcripts from all collegelevel courses attempted at previous institutions that document at least a 2.0 overall grade point average (4.0 system).

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

- A completed [online Undergraduate Application](#)
- A \$35 non-refundable Application Fee (\$40 for international students)
- Official transcripts from all colleges/universities attended. Hand-carried credentials are not accepted.

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

Suspended and Dismissed Transfer Students

Students under suspension or dismissal from another institution or whose previous record is of unsatisfactory quality may apply but will need to appeal to the Faculty Senate Committee on Admissions and Financial Aid to be admitted to UMSL.

Missouri State Transfer Agreement.

Although transfer students should be aware that requirements for degrees vary from institution to institution so 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 should 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.

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BULLETIN 2009 University of Missouri - St. Louis 2010

Academic Policies

UMSL Home

The Faculty Senate determines academic policies for undergraduate studies at the University of Missouri-St. Louis. These policies govern all students at UMSL, but most programs have additional policies for their majors.

Courses and Grades

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 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 two credit 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).

Grading System

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

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
EX = Excused
DL = Delayed
Y = No basis for a grade

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 on the UMSL campus 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](#), and 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 phone, mail, e-mail, fax, or in person; contact information is available at the [Registration website](#).

Education majors.

Professional education courses must be completed with a grade point average of 2.50. Since no grade lower than a C 2.0 can be applied to the degree, a C- grade is not acceptable.

Delayed Grade.

A student whose work is incomplete at the end of any semester and who has, in the instructor's judgment, sufficient reasons for failing to complete the work, may, with the approval of the instructor and department chairperson, be assigned a delayed grade. Such work must be made up no later than one semester after the incomplete grade is given, or the grade automatically becomes F. The dean may, in unusual circumstances, extend this time limitation (summer session is not counted as a semester). Instructors inform the registrar of a change in a delayed grade only via a special form.

Y Grade.

When students do not attend a class but do not officially withdraw from the course or the university, instructors may determine that there is no basis for evaluating the work. The Y (no basis for evaluation) is given in these cases. Unlike the Delayed Grade, the Y Grade cannot be changed by completing the course's assignments.

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.

1. 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.
2. 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.

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-, 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.

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+, C, or C- have been earned. All grades earned will affect the calculation of students' cumulative grade point average; the course hours, however, will be counted only once in calculating hours toward a degree. (See Grade Modification.)

Grade Modification.

When the grade received in an initial attempt in a course at UMSL is a D+, D, D-, or F, 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. A maximum of five classes may be dropped from the calculation of the student's GPA. 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.

Transcripts

The registrar will furnish transcripts to a student upon receipt of a completed and signed [transcript request form](#) online or in person in the Records Office, 327 MCS. Transcripts are furnished to third parties only if students have filed written consent with the Registrar's Office. There is a charge for each transcript.

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

Enrollment and Graduation Policies

Course Schedules

The Schedule of Courses contains the specific courses offered each semester with their meeting times and locations. This schedule is posted on [MyView](#).

Course schedules are generally published in mid-March for the fall semester, mid-October for the spring semester, and mid-January 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.

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.

Course Load

A normal full time semester course load is 15 semester credit hours. Minimum full time 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.

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.

Dropping/Adding Courses

To add courses to their original enrollment, students must get approval from their advisers. Students may not enter courses after the first week of a regular semester or the first three days of the summer session. Courses may be dropped, without approval and without receiving a grade, through the fourth week of a regular semester. Spring, summer, and fall session calendars include specific deadlines. Students who officially drop one or some of their classes may have fees reassessed and/or refunded based on the current fee reassessment schedule.

From the fifth through the twelfth weeks of the fall or spring semesters (for summer session, the third through the sixth weeks), students may withdraw from a course with an "Excused" grade, providing they are passing the course and receive the approval of their instructor, adviser, and dean's office representative. Otherwise, a failing grade is given. Students not attending classes who fail to drop officially receive F or Y grades, depending on how much they participated in class. After the allowable period, "Excused" grades are given only in exceptional instances where the instructor's approval and dean's approval are given. These grades are recorded on the students' official records at the end of the term. If an F grade is recorded, it is counted in computing the grade point average. No partial credit is granted to students who withdraw from a course during any semester or otherwise fail to complete the work required for full course credit.

Section Changing

Section changing is normally completed during the first week of a regular semester and the first three days of a summer session. Approvals may not be necessary during this time. However, after the first week of a regular semester and the first three days of a summer session, a section change form must be obtained from the department or dean's office. The signature of the instructor teaching the new section is required. The form is to be submitted to the Registration Office, 351 Millennium Student Center.

Change of Major

To change academic majors, students should consult their adviser and the dean's office. Students admitted to one college or school may pursue work in others under the conditions set forth by the faculty. The chairperson of a student's major department shall determine which courses in other colleges or schools, or even other institutions, shall apply as credit toward the degree.

Students who wish to change a major must submit a change of major form. These forms may be obtained in their College Advising office, the Registrar's Office, or the Center for Student Success, 225 Millennium Student Center.

Withdrawing from the University after Classes Begin

After classes begin, students may withdraw from the university by completing the withdrawal form, available in the dean's office. During the first four weeks of a regular semester students may withdraw from the university without receiving grades. After this period, grades of F or "Excused" are issued, based on whether the student is passing or failing. After the regular semester's twelfth week, "Excused" grades are given only in exceptional instances with the instructor's and the dean's approvals. These grades are recorded on the student's official record at the end of the term. An F grade is counted in computing the grade point average. 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 a Y grade. Any F grades are counted in computing grade point averages. Fall, spring, and summer session calendars list specific withdrawal dates.

Academic Probation, Suspension, and Dismissal

Students may be placed on academic probation any time that their cumulative GPA falls below a 2.00. Students should consult advisers in their respective dean's office for additional information.

Students may be suspended if they do not pass more than two thirds of their courses, their semester grade point average is below 1.5, or their cumulative grade point average falls below 1.75. Students may be suspended if they have been on scholastic probation for two or more semesters, not necessarily consecutive, and again become subject to probation. The dean may retain students on probation rather than suspend them if circumstances justify such action.

Students who have once been suspended may be dismissed if they again become subject to suspension. Students placed on probation because of poor scholastic records at other institutions are regarded as having been once suspended under these rules. Normally, students who have been dismissed are not considered for readmission. In certain unusual cases, students may be readmitted on probationary status after one year.

Students admitted on probation to the summer session must enroll for at least six credit hours. If they receive any grades below C, their work will be reviewed by the dean or appropriate committee to determine eligibility to reenroll. Students enrolled in the summer session whose grade point averages are below 1.5 may have their work reviewed. Students suspended or dismissed from one school or college shall not be admitted to any other school or college until they are eligible for readmission to the original college or school, unless they obtain the consent of the dean or appropriate committee. In this event, the dean or committee shall file a written statement for the student's official records, stating the reasons for the decision.

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.

Graduation

Students are expected to file a degree application form with their respective dean's office at least one year before the expected graduation date. The dean's office makes a final check to determine that all graduation requirements have been met. Students should check with the dean's office or an adviser to be sure their program fulfills the requirements of the department and college or school, as well as the university general requirements. 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.

Academic Integrity

Academic Dishonesty

Academic dishonesty is a serious offense that may lead to probation, suspension, or expulsion. One form of academic dishonesty is plagiarism--the use of an author's ideas, statements, or approaches without crediting the source. Academic dishonesty also includes such acts as cheating by copying information from another student's examination, take-home test, or laboratory manual. The code of student conduct is in this Bulletin and is also available in the UMSL Student Planner.

Honor Statement

The University of Missouri-St. Louis encourages students to pursue excellence within a respectful and collegial environment and to assume responsibility for the consequences of personal actions. For that reason the university requires students to reject any type of dishonest behavior.

Honesty precludes seeking, providing, or receiving any form of unauthorized assistance on tests or any type of assignment. It requires giving credit through appropriate citation to the author of materials used in written or oral assignments.

The full Student Standard of Conduct is available on the Web and in the student planner. By registering for a class at UMSL, students agree to follow this standard of integrity.

Confidentiality Policy

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, the Schedule of Courses, the UMSL Bulletin, and the Current (student newspaper) 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 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.

2. 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 before the end of the two week period following the first day of classes that any or all of the information designated as directory information should not be released without the student's prior consent. The student privacy form is available on-line. The information listed above will become directory information or public information as of the first day of classes following the end of the two week period in a regular semester and the first day of classes following the end of the one week period during the summer session.

3. University of Missouri-St. Louis students have access to the educational records identified in Paragraph 1 above. In accordance with Public Law 93 380 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.

4. 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.

5. 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.

6. 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.

7. 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.

8. 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:

- 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.
- 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.

- 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.
- The student shall be afforded a full and fair opportunity to present evidence relevant to the hearing.
- 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.

9. The University of Missouri-St. Louis will not mail grade reports to parents unless the student has completed the necessary authorization in the registrar's office.

10. 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.

11. 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.

Academic Recognition

Honor Societies

The following is a list of honor societies at the University of Missouri-St. Louis:

Alpha Epsilon Rho (Communication)
Alpha Mu Alpha (College of Business Administration-Marketing)
Alpha Mu Gamma (Foreign Languages and Literatures)
Alpha Phi Sigma (Criminology and Criminal Justice)
Alpha Sigma Lambda
Beta Alpha Psi (College of Business Administration, Accounting Majors)
Beta Beta Beta (Biology)
Beta Gamma Sigma (College of Business Administration)
Beta Sigma Kappa (College of Optometry)
Chi Sigma Iota (Counseling and Family Therapy)
Financial Management Association (College of Business Administration)
Golden Key National Honour Society (Campus-wide)
Kappa Delta Pi (College of Education)
Lambda Alpha (Anthropology)
Omicron Delta Epsilon (Economics)
Phi Alpha (Social Work)
Phi Alpha Theta (History)
Phi Kappa Phi (Interdisciplinary)
Pi Alpha Alpha (Public Policy Administration)
Pi Sigma Alpha (Political Science)
Psi Chi (Psychology)
Sigma Delta Pi (Spanish)
Sigma Iota Rho (International Studies)
Sigma Tau Delta (English)
Sigma Theta Tau International Honor Society of Nursing, Nu Chi Chapter (Nursing)

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 part time 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 winter semesters combined.

Who's Who Among Students in American Universities and Colleges

Eligible students may be nominated to Who's Who Among Students in American Universities and Colleges by students (themselves or others), faculty members, or administrators. Nominees are selected on the basis of scholastic ability, participation and leadership in academic and extracurricular activities, service to the university, and a promise for future usefulness. Nomination forms and further information may be obtained in room 366 Millennium Student Center or by visiting the [Who's Who information page](#).

Latin Honors

To graduate with Latin honors, [students must have attended UMSL for at least 56 graded hours] and must meet the following qualifications: cum laude 3.2 to 3.49 grade point average; magna cum laude 3.5 to 3.79

grade point average; summa cum laude 3.8 to 4.0 grade point average. 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 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. (Effective April 2000.)

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.

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.

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Registration

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Registering for Classes: New Students

Newly admitted/re-admitted students are eligible to register after the close of the pre-registration period. [MyView](#) lists enrollment dates, Academic Calendars, and courses offered.

Registering for Classes: Former Students

Former UMSL students who have not been enrolled for a year must submit a reenrollment application available in the [Registrar's Office](#).

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](#).

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.**

Registration Cancellation

Students who have enrolled and paid their fees but do not wish to attend the university may cancel their registration any time before the first day of the semester. Cancellation forms may be obtained at the Office of the Registrar or by logging into [MyView](#). The refund schedule for cancellation of registration after class work begins can be found on the [Cashier's Office website](#).

Enrollment and Academic Advising

Undergraduate students are admitted to the college or school that offers the degree program declared on the student's application. The university's [Academic Advising Website](#) has advising information for all undergraduate students.

Undeclared students, visiting students, and non-degree-seeking students are admitted to the College of Arts and Sciences but advised in the Center for Student Success 225 MSC.

Undeclared students are encouraged to declare a major as soon as possible since it is important to determine what specific requirements must be satisfied to complete the baccalaureate program. The Center for Student Success has workshops that assist students with their decisions.

College of Arts and Sciences

All incoming undergraduate students are required to be advised. Advising services are available in the College Advising Office located in 303 Lucas or in their major department. Students who have declared majors are encouraged to contact their major departments as soon as possible. Please visit the [college website](#) for a complete list of Departmental Faculty Advisors and other student resources.

Since there are specific requirements that each major must satisfy to complete a baccalaureate program, students are urged to declare their majors as soon as possible. This may be done at the time of application or later in the Office of Undergraduate Student Affairs of the College of Arts and Sciences. Once a student declares a major, the department offering the degree will assign a faculty adviser and contact the student. The adviser, usually a faculty member in the student's area of interest, will assist in selecting suitable courses and advise the student in matters relating to degree requirements.

Students with specific concerns related to the specialized degree requirements of the college, including transfer credit, should consult with the academic departments responsible for their majors. Students may also contact the Office of Undergraduate Student Affairs of the College of Arts and Sciences by phone at (314) 516-5501 for clarification on any academic issues or by e-mail at artscience@umsl.edu

College of Business Administration

The [College of Business Administration's office of undergraduate academic advising](#) provides assistance to students in planning their academic careers, and in dealing with appropriate course selection, College of Business Administration requirements, general education requirements, evaluation of transfer credit, course

prerequisites, school policies and regulations, and graduation requirements. Other matters related to a student's academic career should also be directed to this office.

Transfer students admitted to the College of Business Administration should contact the advising office and plan to meet with an advisor early in the semester for an evaluation of transfer credit and the planning of their degree programs.

All students are urged to make advising appointments early during each semester, prior to registration dates, to obtain approval of schedules for upcoming semesters. Advising is a continuous and ongoing process. For additional information, call 314-516 5888 or email bus_undergrad@umsl.edu.

College of Education

Students wishing to prepare for teaching careers should consider the following:

Students who intend to teach in elementary, early childhood, middle school, special education, secondary education, or physical education settings must apply for admission to the College of Education.

Students who intend to teach in secondary school classrooms may choose to pursue the bachelor's degree in the College of Arts and Sciences plus certification, or the B.S. in education degree, which includes Missouri certification.

With either option, students must meet university and departmental requirements, as well as those for teacher certification in Missouri. Regardless of which option students choose, they must complete the formal application to the teacher education program, [available online](#). Careful planning of individual schedules is necessary to ensure selection of appropriate courses and to avoid extending programs. Students should therefore seek advisory help from the [Teacher Certification and Advising Office](#) at the earliest opportunity. Regular consultation with advisers is essential. The office provides assistance to all students interested in professional education programs and certification requirements. Questions about admission to the teacher education program, sequencing of courses, prerequisites, graduation requirements, and related matters should be directed to 314-516-5937 or in person in Room 155 Marillac Hall, South Campus.

College of Fine Arts and Communication

The College of Fine Arts and Communication includes the programs in Art and Art History, Communication, Music, and Theatre, Dance and Media Studies, and pre-architecture.

For advising, students may contact the Office of Undergraduate Student Affairs located in 303 Lucas, call 314-516-5501, or visit the [college's Advising Website for departmental contacts](#).

Students who maintain a relationship with their department have greater opportunities to meet other students with similar interests as well as to optimize their student experience.

College of Nursing

The College of Nursing offers the bachelor of science in nursing degree (B.S.N.) for non-RNs through a four-year or accelerated program of study. RNs who are graduates of diploma or associate degree nursing programs complete a junior senior B.S.N. completion option (RN to B.S.N.). With both options (pre- or post-licensure), 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 and the Missouri State Board of Nursing's minimum standards. For that reason, students receive exceptional advising support from college advisors.

Pierre LaCade Honors College

Honors Scholars receive both academic advising and personal counseling from the college's administrative and teaching staff throughout their undergraduate careers. During the first two years, particular attention is given to the ways in which students fulfill Honors College and university general education requirements and prepare themselves for their majors by taking the necessary prerequisites. After a major is declared, Honors College advisement with regard to work done for honors credit continues and is supplemented by major related advising provided by the appropriate academic unit. The college identifies candidates for major graduate fellowships and assists them in preparing their dossiers. Similar assistance is given to scholars planning to go on to graduate and professional schools or seeking career opportunities immediately upon graduation. Honors advising is housed in 106 Provincial House and is explicit on the college's [Academic Advising Website](#).

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Fees for Undergraduate Study

UMSL Home

Fee Assessment

Fees for coursework vary due to the student's residency standing, undergraduate, graduate or post-graduate status, hours, term of enrollment and the applicability of any special fees assessed in specific courses or programs. The total per credit hour fee rate commonly consists of the Educational fee, Information Technology Fee, Student Facility, Activity, & Health Fee and any special course fees or parking permit fees. On the [Cashier's website](#), undergraduate, graduate and optometry fee rates are listed per credit hour for residents and nonresidents. Course, supplemental and special fee rates are also listed along with descriptions of the fees. See the [FEES section on the Cashier's website](#) for more information.

Financial Responsibility

Each semester, a Financial Responsibility agreement will be presented to all students. 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 Financial Aid 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 [Cashier's 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 Notification

Billing notification emails are sent to students (and any Authorized payers) on a monthly basis. Billing statements are available online in [MyView](#) for students and at [eBill](#) for Authorized Payers. Students are expected to check their University e-mail and review and respond to their monthly billing statements regularly. Students will login to MyView with their [SSQ ID](#) and password.

MyView

Through the [MyView](#) student system, students can access real-time detailed account and billing information, manage direct deposit and eBill user profiles, view their statement history and make a payment through one convenient location in the Self Service Student Center. The Student Center provides these features and even more drill-down capability, filters and self-help as well as greater access to information to enable and enhance the educational experience. See the student financials [MyView help](#) page for help with subjects relating to MyView student financials.

Payment of Fees

The Cashier's office offers several payment options, including a minimum monthly payment. 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 Schedule](#). If a student chooses to make the minimum payment or a partial payment, a finance charge of 1% of the Adjusted Amount Due will be assessed. The monthly 1% finance charge can be avoided by paying the balance in full.

The payment due date is the first day of each month. Student accounts will be subject to a \$10 late fee if payment is not received by the due date shown on the monthly billing statement. All fees, fines, bookstore charges, etc. must be paid by the last day of the term. After the semester ends, unpaid accounts will be turned over to an outside collection agency. Collection agency fees of up to 50% of the unpaid account balance will be added to the student's account. Student accounts must be paid in full before a student will be permitted to register for upcoming semesters, receive transcripts, or receive a diploma.

Payment Options

Online – Log on to the [MyView](#) student system to make payment using a personal checking or savings account or a MasterCard or Discover credit card.(2.75% service charge applied to credit card payments)

Scheduled Payments – The minimum payment or billed balance due may be deducted from a checking, savings or credit card each month.(2.75% fee applies to all credit card payments) Instructions on scheduling

a series of payments can be found on the student financials [MyView help](#) page located on the Cashier's website.

Mail – Send payment stub and a check or money order to the Cashier's office at: The University of Missouri - St. Louis 285 Millennium Student Center (MSC 212) One University Blvd. St. Louis, MO 63121-4400. Both the student number and student name need to be on the check or money order.

In person – Visit the Cashier's Office at 285 Millennium Student Center Payment in cash, check, money order or pin based MasterCard or VISA debit are accepted at the cashier stations. Credit card payments cannot be processed at the cashier stations, but are accepted online from <http://ebill.umsl.edu>.

Payment Kiosks – Payment from a personal checking or savings account or by MasterCard or Discover credit card can be made at any of the four payment kiosks located in the MSC. (2.75% service charge applied to credit card payments)

Payment Drop Box – A secure payment drop box is situated just outside the Cashier's Office, room 285 of the Millennium Student Center. Only check or money order payments, please.

Any check presented to the university for payment that is returned unpaid will be assessed a \$20.00 returned check fee in addition to any fees that the bank may charge.

Cancellation of Registration Due to Nonpayment of Fees

The university will attempt to notify any student whose registration is about to be administratively cancelled 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 cancelled student's space in a course will be given to other students on that course's wait lists. The cancelled student will be placed at the end of the course wait list.

Any student who has been administratively cancelled for nonpayment of assessed fees may not enroll in a class unless the required fees have been paid and the student has officially re-registered.

Cancelled students who re-register on or after the first day of the semester will be assessed an additional nonrefundable late registration charge.

Fee Reassessment

Students who are leaving school or dropping classes are responsible for canceling their registration and verifying that all of their classes have been dropped. Any refunding of fees will be made according to the [Reassessment Schedule](#). The refund process requires two to four weeks processing time after withdrawal or dropped classes. 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.

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 educational fees, at any time when in the discretion of the governing board the same is in the best interest of the university, provided that no increases can or will be effective unless approved by the governing board not less than thirty (30) days prior to the beginning of the academic term (semester, etc.) to which the fees are applicable, 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.

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General Education Requirements

UMSL Home

General Education Requirements:

Students must successfully complete the general 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 their degree audit (DARS) report for recommended general education courses in their major.

The University of Missouri-St. Louis General Education Program was approved by the Faculty Senate April 23, 2002. This program affords both new UMSL students and transfer students attending our university the opportunity to develop and use intellectual tools and to acquire a breadth of knowledge necessary in our challenging, technological, and diverse world. This program challenges students to investigate various disciplines as potential majors and to develop environments, 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).

General Education Requirements

Application of Policy to Freshmen

Freshmen who enrolled at UMSL or at any other accredited post-secondary institution in fall 2002, or later must complete the requirements of the General Education Plan to earn a baccalaureate degree from the University of Missouri-St. Louis. For purposes of this policy, a freshman is defined as any student who has completed less than 24 semester hours of credit*.

*Only credit that is transferable to UMSL is applicable. For purposes of implementing the general education plan at UMSL, the phrase "credit that is transferable" shall be interpreted to mean all credit associated with coursework completed with a grade of D- or better at a regionally accredited post-secondary institution (or an approved foreign college or university). Credit associated with military science and developmental/remedial coursework shall be excluded from this understanding of "credit that is transferable".

Application of Policy to Students Who Started Prior to Fall 2002

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 meet the general education requirements stipulated in the UMSL 2001-2002 Bulletin or elect to complete the current General Education Plan described below.

*Only credit that is transferable to UMSL is applicable

SKILL GOALS:

Communicating Skills (minimum 2 three-hour courses or 6 hrs) [C]

Managing Information Skills (min. 1 course or 3 hrs) [MI]

Valuing Skills (min. 1 course or 3 hrs) [V]

KNOWLEDGE GOALS:

Social and Behavioral Sciences Knowledge Goal (min. 3 three-hour courses or 9 hours minimum) [SS]

Humanities and Fine Arts Knowledge Goal (min. 3 three-hour courses or 9 hours minimum) [H]

Mathematics and Life/Natural Sciences (min. 4 three-hour courses or 12 hours minimum) [MS]

Students may take only those courses listed below for the 42-hour General Education block. **Many courses satisfy more than one goal, are designated as such, and may be counted for all of the goals listed for each specific course.** Select courses that concentrate fully on a skill goal(s) but no knowledge goals have been marked with an asterisk, and it should be noted that those courses concentrate on the designated skill comprehensively.

Once students have met the required number of courses or hours under each goal, they may take any of the certified General Education courses listed under any of the goals to achieve the 42-hour program. This offers them the opportunity to use the General Education program to meet their individual needs and interests. **Students may not take any upper-level courses or any lower-level courses that do not appear on the list of certified General Education courses to complete the 42-hour block.**

Transfer students entering UMSL may transfer a CBHE approved 42-hour block of General Education courses, in accordance with the CBHE Transfer and Articulation agreement. However, those students transferring with fewer than 42 hours or from a non-participating institution will have their transcripts evaluated on a course-by-course basis.

The General Education Program of the University of Missouri-St. Louis offers students an exciting and challenging program that develops the skills and knowledge necessary to succeed in today's changing world. The following information outlines each of the six goals and the courses that meet the competencies students must achieve to accomplish the designated skills and knowledge goals. The program also allows for individual choices in disciplines and skills to assist the students in their undergraduate endeavors at UMSL.

GENERAL EDUCATION GOALS AND COURSES

PLEASE NOTE:

* Course addresses skill goal(s) and **no** knowledge goals. The course covers the skill goal comprehensively and is suggested for those students who seek an in-depth coverage of that skill.

**Course will count for Cultural Diversity Graduation Requirement.

***Course will count for State Government/History Requirement (Honors students should check with Honors College each semester for list of Gen. Ed. Courses that meets this requirement). **ALL COURSES ARE THREE-HOUR COURSES UNLESS OTHERWISE NOTED.**

GOALS:

SKILL GOALS:

COMMUNICATING (min. 2 courses or 6 hrs)

MANAGING INFORMATION (min. 1 course or 3 hrs)

VALUING (min. 1 course or 3 hrs)

KNOWLEDGE GOALS:

SOCIAL AND BEHAVIORAL SCIENCES (min. 3 three-hour courses or 9 hr)

HUMANITIES AND FINE ARTS (min. 3 three-hour courses or 9 hrs)

MATHEMATICS AND LIFE/NATURAL SCIENCES (min. 4 three-hour courses or 12 hrs)

GOAL # 1 COMMUNICATING SKILLS

The Communicating Skills Goal develops students' effective use of the English language and quantitative and other symbolic systems essential to their success in school and in the world. Students should be able to read and listen critically and to write and speak with thoughtfulness, clarity, coherence, and persuasiveness (CBHE General Education, June 2000).

Students must complete a minimum of two courses or six hours in the Communicating Skills area including a freshman composition course (ENGL 1100, 1110 or HONORS 1200) and one other course taken from the following list:

*comprehensive coverage of skill goal

** satisfies cultural diversity requirement

***satisfies state government requirement

Department	Course #	Course Title	
English	1100 or	Freshman Composition*	
English	1110 or	Freshman Composition for International Students*	
Honors	1100	Freshman Composition for Honors Students	
Select a minimum of one Course:			
Art History	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
Communication	1030	Interpersonal Communication*	
Communication	1040	Introduction to Public Speaking*	
Communication	1050	Introduction to Mass Communication	
Biology	1102	Human Biology	
Chemistry	2223	Quantitative Analysis	
Chemistry	2633 (2 hrs)	Organic Chemistry Laboratory	

English	1120	Literary Types	
English	1130	Topics in Literature;	
English	1170	American Literary Masterpieces	
English	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
English	1200	Myth	
English	1700	African-American Literature	
English	2030	Poetry Writing	
English	2040	Short Story Writing	
English	2120	Topics in Writing	
English	2240	Literature of the New Testament	
English	2250	Literature of the Old Testament	
English	2310	English Literature I	
English	2320	English Literature II	
English	2330	Introduction to Poetry	
English	2710	American Literature I	
English	2720	American Literature II	
English	2810	Traditional Grammar*	
French	2102	Intermediate French Language and Culture II	
French	2180	Readings in French	
German	2170	German Composition and Conversation	
German	2180	Readings in German	
History	1001	American Civilization to 1865***	
History	1002	American Civilization 1865 to Present***	
History	1004	The History of Women in the United States***	
History	1030	The Ancient World	
History	1031	Topics in European Civilization to 1715	
History	1032	Topics in European Civilization since 1715	
History	1051	Latin American Civilization**	
History	1061	African Civilization To 1800**	
History	1062	African Civilization Since 1800**	
History	1064	African Diaspora Since 1800**	
History	1075	World History to 1500	
History	1076	World History since 1500	
History	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
Honors	1110	Honors Western Traditions: Humanities	
Honors	1130	Honors Western Traditions: Social & Behavioral Sciences	
Honors	1330	Honors Non-Western Traditions**	
Honors	1900	Cross-Cultural Readings	
Honors	2010	Honors Inquiries in the Humanities	
Honors	2020	Honors Inquiries in the Fine Arts	
Honors	2030	Honors Inquiries in the Social and Behavioral Science.	
Honors	2050	Honors Inquiries in Natural Sciences	
Media Studies	1050	Introduction to Media Studies	
Media Studies	2218	Public Policy in Telecommunication	

Music History & Literature	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
Philosophy	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
Spanish	2171	Spanish Conversation and Pronunciation	
Spanish	2172	Spanish Composition	
Spanish	2180	Readings in Spanish**	
Theatre & Dance	1175	Arts and Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
Theatre & Dance	1210	Fundamentals of Acting	
Theatre & Dance	1800	Introduction to Theatre	
Theatre & Dance	1850	Introduction to Non-Western Theatre **	
Theatre & Dance	2020	Acting for the Camera	
Theatre & Dance	2105	Script Analysis	
Theatre & Dance	2211	Acting Styles	
Theatre & Dance	2810	History of World Theatre and Drama Through the Restoration	
Theatre & Dance	2820	History of World Theatre and Drama from 18th Century to Contemporary Times	
Theatre & Dance	2840	History of Dance to the 19th Century	

GOAL # 2 MANAGING INFORMATION SKILLS

The Managing Information Skills Goal develops students' abilities to locate, organize, store, retrieve, evaluate, synthesize and annotate information from print, electronic, and other sources in preparation for solving problems and making informed decisions (CBHE General Education, June 2000).

Students must complete a minimum of one course or three hours in the Managing Information Skills area taken from the following list:

*comprehensive coverage of the skill goal

**satisfies cultural diversity requirement

***satisfies state government requirement

Department	Course #	Course Title	
Anthropology	1005	Introduction to Biological Anthropology	
Anthropology	1006	Introduction to Non-Human Primates	
Anthropology	1019	Introduction to Archaeology**	
Anthropology	1033	World Archaeology**	
Anthropology	2105	Human Variation**	
Art History	1104	Indigenous Arts of North America**	
Art History	2212	Greek Art and Archaeology	
Art History	2213	Roman Art and Archaeology	
Art History	2214	Early Christian and Byzantine Art	
Art History	2225	Medieval Art	
Art History	2237	Northern European Renaissance Art	
Art History	2245	Baroque Art and Architecture	
Art History	2250	Nineteenth Century European Art	
Art History	2265	History of Photography	
Art History	2270	American Art to 1876	
Art History	2272	American Art since 1876	
Art History	2279	American Architecture	
Art History	2281	Art since 1960	
Astronomy	1001A	Cosmic Evolution/Introductory Astronomy (without lab)	

Astronomy	1001	Cosmic Evolution/Introductory Astronomy (with lab)
Atmospheric Science	1001A	Elementary Meteorology (without lab)
Atmospheric Science	1001	Elementary Meteorology (with lab)
Biology	1202	Environmental Biology
Biology	1350	Conservation of Biodiversity
Biology	1811	Introduction to Biology I: From Molecules to Organisms
Biology	1821	Introduction to Biology II: Organisms and the Environment*
Business Administration	1590	Personal Finance
Business Administration	2900	Legal Environment of Business
Chemistry	1011	Chemistry in the Environment and Everyday Living
Chemistry	1052	Chemistry for the Health Professions
Chemistry	1062	Organic and Biochemistry for Health Professions
Chemistry	1111	Introductory Chemistry I
Chemistry	1121	Introductory Chemistry II
Chemistry	2223	Quantitative Analysis
Chemistry	2622	Organic Chemistry II
Chemistry	2633	Organic Chemistry Laboratory
Chemistry	3412	Basic Inorganic Chemistry
Computer Science	1010	Introduction to Computers (credit not granted for both CMP SCI 1010 and INFSYS 1800)*
Computer Science	1011	Introduction to the Internet and World Wide Web
Criminology & Criminal Justice	1100	Introduction to Criminology & Criminal Justice
Criminology & Criminal Justice	1200	Foundations of Law (POL SCI 1200)
Economics	2410	The Economics of Women, Men and Work
Economics	2800	History of American Economic Development
English	1100	Freshman Composition
English	1110	Freshman Composition for International Students
Finance	1590	Personal Finance
Geography	1001	Introduction to Geography
Geography	1002	World Regions
Geology	1001A	General Geology
Geology	1001	General Geology
Geology	1002A	Historical Geology
Geology	1002	Historical Geology
History	2800	History of American Economic Development
Honors	1200	Freshman Symposium: Cultural Traditions I**
Honors	1310	Non-Western Traditions
Information Systems	1800	Computers and Information Systems (credit not granted for both INFSYS 1800 and CMP SCI 1010)*
Media Studies	2271	History of American Film
Media Studies	2272	Contemporary Cinema
Physics	1011	Basic Physics I
Physics	1012	Basic Physics II
Physics	2111	Physics: Mechanics and Heat

Physics	2112	Physics: Electricity, Magnetism and Optics	
Political Science	1200	Foundations of Law (Crimin1200)	
Political Science	1450	Introduction to Labor Studies 4	
Political Science	1500	Introduction to Comp. Politics	
Political Science	1550	Women and Politics in the Developing World	
Political Science	1820	Global Issues	
Political Science	1990	The City	
Sociology	1999	The City	
Theatre & Dance	2820	The History of World Theatre & Drama from 18th Century to Contemporary Times	
Theatre & Dance	2840	History of Dance to the 19th Century	

GOAL # 3 VALUING SKILL

The Valuing Skills Goal develops students' abilities to understand the moral and ethical values of a diverse society and to understand that many courses of action are guided by value judgments about the way things ought to be. Students should be able to make informed decisions through identifying personal values and the values of others and through understanding how such values develop (CBHE General Education, June 2000).

Students must complete a minimum of one course or three hours in the Valuing Skills area taken from the following list:

**satisfies cultural diversity requirement

***satisfies state government requirement

Department	Course #	Course Title	
Anthropology	1011	Introduction to Cultural Anthropology**	
Anthropology	1025	World Cultures	
Anthropology	1052	The Olympic Games: Ideals & Reality	
Anthropology	2117	Greek History & Culture**	
Anthropology	2120	Native People of North America	
Art History	1101	Ideas in Art History	
Art History	1102	Art of Egypt and the Ancient Near and Middle East	
Art History	1104	Indigenous Arts of North America**	
Art History	2212	Greek Art and Archaeology	
Art History	2213	Roman Art and Archaeology	
Art History	2214	Early Christian and Byzantine Art	
Art History	2225	Medieval Art	
Art History	2237	Northern European Renaissance Art	
Art History	2245	Baroque Art and Architecture	
Art History	2250	Nineteenth Century European Art	
Art History	2265	History of Photography	
Art History	2270	American Art to 1876	
Art History	2272	American Art since 1876	
Art History	2279	American Architecture	
Art History	2281	Art since 1960	
Biology	1202	Environmental Biology	
Biology	1350	Conservation of Biodiversity	
Business Administration	1590	Personal Finance	
Business Administration	1900	Introduction to Personal Law	
Business Administration	2900	Legal Environment of Business	
Criminology & Criminal			

Justice	1110	Theories of Crime	
Criminology & Criminal Justice	1120	Criminal Law	
Criminology & Criminal Justice	1130	Criminal Justice Policy	
Criminology & Criminal Justice	1200	Foundations of Law (POL SCI 1200)	
Criminology & Criminal Justice	2230	Crime Prevention	
Criminology & Criminal Justice	2251	Youth Gangs	
Criminology & Criminal Justice	2260	Corrections	
Criminology & Criminal Justice	2265	Capital Punishment	
Economics	1000	Introduction to the American Economy	
Economics	1001	Principles of Microeconomics	
Economics	2010	The Business Firm: History, Theory and Policy	
Economics	2610	The Economics of Professional Sports	
English	1120	Literary Types	
English	1200	Myth	
English	2280	The Contemporary World in Literature**	
English	2340	Introduction to Drama	
Finance	1590	Personal Finance	
Geography	2001	Cultural Geography	
History	1003	African-American History***	
History	2117	Greek History and Culture	
Honors	1201	Freshman Symposium: Cultural Traditions II	
Honors	1230	American Traditions***	
Honors	1310	Non-Western Traditions Series -Humanities	
Honors	1330	Non-Western Traditions-Social Sciences	
Honors	2310	Cultural Diversity in the Humanities**	
Honors	2330	Cultural Diversity in the Social Sciences**	
Media Studies	1060	Introduction to World Cinema	
Media Studies	1110	Introduction to Radio and Television Broadcasting	
Music History & Literature	1001	Introduction to Music	
Music History & Literature	1010	History of Western Music I	
Music History & Literature	1020	History of Western Music II	
Music History & Literature	1080	Introduction to Irish Traditional Music	
Music History & Literature	1090	Non-Western Music I**	
Music History & Literature	1110	Introduction to Irish Traditional Music in North America	
Music History & Literature	1130	Introduction to Music Theatre	
Music Theory & Composition	1301	Theory of Music I	

Music Theory & Composition	1311	Theory of Music II	
Music Theory & Composition	2301	Theory of Music III	
Music Theory & Composition	2311	Theory of Music IV	
Philosophy	1090	Telecourse: Philosophy and Other Disciplines	
Philosophy	1091	Telecourse: Significant Figures in Philosophy	
Philosophy	1110	Western Philosophy I	
Philosophy	1111	Western Philosophy II	
Philosophy	1120	Asian Philosophy **	
Philosophy	1125	Islamic Philosophy**	
Philosophy	1130	Approaches to Ethics	
Philosophy	1150	Major Questions in Philosophy	
Philosophy	1160	Logic and Language	
Philosophy	1185	Philosophy of Religion	
Philosophy	2252	Philosophical Foundations of Criminal Justice (CRIMIN 2252)	
Philosophy	2253	Philosophy and Feminism	
Philosophy	2254	Business Ethics	
Philosophy	2255	Environmental Ethics	
Philosophy	2256	Bioethics	
Philosophy	2258	Medicine, Values and Society	
Philosophy	2259	Engineering Ethics	
Philosophy	2280	Minds, Brains and Machines	
Political Science	1100	Introduction to American Politics***	
Political Science	1200	Foundations of Law (Crimin1200)	
Political Science	1500	Introduction to Comparative Politics	
Political Science	1550	Women and Politics in the Developing World	
Political Science	1800	World Politics	
Political Science	1900	The City	
Social Work	2000	Social Work and Social Problems	
Social Work	2200	Social Welfare as a Social Institution	
Sociology	1010	Introduction to Sociology	
Sociology	1040	Social Problems	
Sociology	1999	The City	
Theatre & Dance	2020	Acting for the Camera	
Women & Gender Studies	2253	Philosophy & Feminism	

GOAL # 4 SOCIAL AND BEHAVIORAL SCIENCES KNOWLEDGE

The Social and Behavioral Sciences Knowledge Goal develops students' understanding of themselves and the world around them through the study of content and the processes used by historians and social and behavioral scientists to discover, describe, explain, and predict human behavior and social systems. Students must understand the diversities and complexities of the cultural and social world, past and present, and come to an informed sense of self and others (CBHE General Education, June 2000).

Students must complete a minimum of three courses or nine hours in the Social and Behavioral Sciences Knowledge area taken from the following list:

**satisfies cultural diversity requirement

***satisfies government requirement

Department	Course #	Course Title
Anthropology	1005	Introduction to Biological Anthropology
Anthropology	1006	Introduction to Non-Human Primates
Anthropology	1011	Introduction to Cultural Anthropology**
Anthropology	1019	Introduction to Archaeology **
Anthropology	1025	World Cultures**
Anthropology	1033	World Archaeology**
Anthropology	1035	Ancient Greek Civilization and Culture
Anthropology	1052	The Olympic Games: Ideals and Reality
Anthropology	2105	Human Variation**
Anthropology	2117	Greek History and Culture (same as HIST 2117)
Anthropology	2120	Native People of North America
Anthropology	2121	Symbols in American Indian Culture
Business Administration	1900	Introduction to Personal Law
Communication	1050	Introduction to Mass Communication
Criminology & Criminal Justice	1100	Introduction to Criminology and Criminal Justice
Criminology & Criminal Justice	1110	Theories of Crime
Criminology & Criminal Justice	1120	Criminal Law
Criminology & Criminal Justice	1130	Criminal Justice Policy
Criminology & Criminal Justice	1200	Foundations of Law (POL SCI 1200)
Criminology & Criminal Justice	2230	Crime Prevention
Criminology & Criminal Justice	2251	Youth Gangs
Criminology & Criminal Justice	2260	Corrections
Criminology & Criminal Justice	2265	Capital Punishment
Economics	1000	Introduction to the American Economy
Economics	1001	Principles of Microeconomics
Economics	1002	Principles of Macroeconomics
Economics	1500	Entertainment Economics: The Movie Industry
Economics	2010	The Business Firm: History, Theory and Policy
Economics	2410	The Economics of Women, Men and Work
Economics	2610	The Economics of Professional Sports
Economics	2800	History of American Economic Development
Geography	1001	Introduction to Geography
Geography	1002	World Regions
Geography	2001	Cultural Geography
History	1001	American Civilization to 1865***
History	1002	American Civilization 1865-Present ***
History	1003	African-American History***
History	1004	The History of Women in the United States***
History	1030	The Ancient World
History	1031	Topics in European Civilization to 1715
History	1032	Topics in European Civilization since 1715

History	1041	East Asian Civilization to 1800**	
History	1042	East Asian Civilization from 1800**	
History	1051	Latin American Civilization**	
History	1052	Mexican Civilization**	
History	1061	African Civilization To 1800**	
History	1062	African Civilization Since 1800**	
History	1064	African Diaspora Since 1800**	
History	1075	World History to 1500	
History	1076	World History since 1500	
History	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
History	2117	Greek History and Culture	
History	2800	History of Economic Development	
Honors	1130	Western Traditions--Social Science	
Honors	1230	American Traditions***	
Honors	1330	Non-Western Traditions--Social Science	
Honors	2030	Honors Inquiries in Social and Behavioral Sciences	
Honors	2330	Cultural Diversity in the Social Sciences**	
Media Studies	1050	Introduction to Media Studies	
Political Science	1100	Introduction to American Politics***	
Political Science	1200	Foundations of Law (CRIMIN 1200)	
Political Science	1450	Introduction to Labor Studies	
Political Science	1500	Introduction to Comparative Politics	
Political Science	1550	Women and Politics in the Developing World	
Political Science	1800	World Politics	
Political Science	1820	Global Issues	
Psychology	1003	General Psychology	
Psychology	1268	Human Growth and Behavior	
Social Work	2000	Social Work and Social Problems	
Social Work	2200	Social Welfare as a Social Institution	
Sociology	1010	Introduction to Sociology	
Sociology	1040	Social Problems	

GOAL # 5 HUMANITIES AND FINE ARTS KNOWLEDGE

The Humanities and Fine Arts Knowledge Goal develops the students' understanding of the ways in which humans have addressed their condition through imaginative work in the humanities and fine arts; to deepen their understanding of how that imaginative process is informed and limited by social, cultural, linguistic, and historical circumstances; and to appreciate the world of the creative imagination as a form of knowledge (CBHE General Education, June 2000).

Students must complete a minimum of three courses or nine hours from the Humanities and Fine Arts Knowledge area taken from the following list:

**satisfies cultural diversity requirement

Department	Course #	Course Title	
Art History	1100	Introduction to Western Art	
Art History	1101	Ideas in Art History	
Art History	1102	Art of Egypt and the Ancient Near and Middle East	
Art History	1104	Indigenous Arts of North America**	
Art History	1105	Introduction to the Arts of Africa	
Art History	1108	Introduction to Arts of Asia	
		Arts & Ideas (HIST 1175, M H L T 1175, PHIL	

Art History	1175	1175, TH DAN 1175, ART HS, 1175)	
Art History	2211	Art and Archeology of the Ancient World	
Art History	2212	Greek Art and Archaeology	
Art History	2213	Roman Art and Archaeology	
Art History	2214	Early Christian and Byzantine Art	
Art History	2225	Medieval Art	
Art History	2235	European Art and Architecture 1300-1800	
Art History	2237	Northern European Renaissance Art	
Art History	2245	Baroque Art and Architecture	
Art History	2250	Nineteenth Century European Art	
Art History	2255	Modern Art**	
Art History	2265	History of Photography	
Art History	2270	American Art to 1876	
Art History	2272	American Art since 1876	
Art History	2279	American Architecture	
Art History	2281	Art since 1960	
English	1120	Literary Types	
English	1130	Topics in Literature	
English	1170	American Literary Masterpieces	
English	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
English	1200	Myth	
English	1700	African-American Literature	
English	1710	Native American Literature	
English	2030	Poetry Writing	
English	2040	Short Story Writing	
English	2120	Topics in Writing	
English	2240	Literature of the New Testament	
English	2250	Literature of the Old Testament	
English	2280	The Contemporary World in Literature	
English	2310	English Literature I	
English	2320	English Literature II	
English	2330	Introduction to Poetry	
English	2340	Introduction to Drama	
English	2710	American Literature I	
English	2720	American Literature II	
French	2102	Intermediate French Language and Culture II	
French	2180	Readings in French	
German	2170	German Conversation and Composition	
German	2180	Readings in German	
Honors	1110	Western Traditions	
Honors	1111	Western Cultural Traditions and Critical Thinking	
Honors	1200	Freshmen Symposium: Cultural Traditions I	
Honors	1201	Freshman Symposium: Cultural Traditions II	
Honors	1210	American Traditions in Humanities	
Honors	1310	Non-Western Traditions Series Humanities**	
Honors	1900	Independent Cross-Cultural Readings	
Honors	2010	Inquiries in the Humanities	

Honors	2020	Inquiries in the Fine and Performing Arts	
Honors	2310	Cultural Diversity in the Humanities**	
Japanese	2150	Classical Japanese Literature in Translation	
Media Studies	1060	Introduction to World Cinema	
Media Studies	1070	Introduction to Cinema	
Media Studies	1110	Introduction to Radio and Television Broadcasting	
Media Studies	2271	History of American Film	
Media Studies	2272	Contemporary Cinema	
Music History & Literature	1001	Introduction to Music	
Music History & Literature	1010	History of Western Music I	
Music History & Literature	1020	History of Western Music II	
Music History & Literature	1060	Introduction to African-American Music	
Music History & Literature	1070	Introduction to Jazz	
Music History & Literature	1080	Introduction to Irish Traditional Music	
Music History & Literature	1090	Non-Western Music I	
Music History & Literature	1110	Introduction to Irish Traditional Music in North America	
Music History & Literature	1130	Introduction to Music Theatre	
Music History & Literature	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
Music Theory & Composition	1301	Theory of Music I	
Music Theory & Composition	1311	Theory of Music II	
Music Theory & Composition	2301	Theory of Music III	
Music Theory & Composition	2311	Theory of Music IV**	
Philosophy	1090	Telecourse: Philosophy and Other Disciplines	
Philosophy	1091	Telecourse: Significant Figures in Philosophy	
Philosophy	1110	Western Philosophy I	
Philosophy	1111	Western Philosophy II	
Philosophy	1120	Asian Philosophy**	
Philosophy	1125	Islamic Philosophy**	
Philosophy	1130	Approaches to Ethics	
Philosophy	1150	Major Questions in Philosophy	
Philosophy	1160	Logic and Language	
Philosophy	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
Philosophy	1185	Philosophy of Religion	
Philosophy	2252	Philosophical Foundations in Criminal Justice (Crimin2252)	
Philosophy	2253	Philosophy and Feminism	
Philosophy	2254	Business Ethics	
Philosophy	2255	Environmental Ethics	

Philosophy	2256	Bioethics	
Philosophy	2258	Medicine, Values and Society	
Philosophy	2259	Engineering Ethics	
Philosophy	2280	Minds, Brains and Machines	
Spanish	2171	Spanish Conversation and Pronunciation	
Spanish	2172	Spanish Composition	
Spanish	2180	Readings in Spanish	
Theatre & Dance	1175	Arts & Ideas (HIST 1175, M H L T 1175, PHIL 1175, TH DAN 1175, ART HS, 1175)	
Theatre & Dance	1210	Fundamentals of Acting	
Theatre & Dance	1800	Introduction to Theatre 1	
Theatre & Dance	1850	Introduction to Non-Western Theatre	
Theatre & Dance	2020	Acting for the Camera	
Theatre & Dance	2105	Script Analysis	
Theatre & Dance	2211	Acting Styles	
Theatre & Dance	2810	History of World Theatre and Drama Through the Restoration	
Theatre & Dance	2820	The History of World Theatre & Drama from 18th Century to Contemporary Times	
Theatre & Dance	2840	History of Dance to the 19th Century	

GOAL # 6 MATHEMATICS AND LIFE/NATURAL SCIENCES KNOWLEDGE

The Mathematics and Life/Natural Sciences Knowledge Goal develops students' abilities in the areas of mathematics and sciences. In mathematics, the goal develops the students' understanding of fundamental mathematical concepts and their applications. Students should develop a level of quantitative literacy that would enable them to make decisions and solve problems and which could serve as a basis for continued learning. To meet this goal, students must have one mathematics course that has the same prerequisite(s) and level of rigor as college algebra. In the life and natural sciences, this goal develops the students' understanding of the principles and laboratory procedures of life and physical sciences and to cultivate their abilities to apply the empirical methods of scientific inquiry. Students should understand how scientific discovery changes theoretical views of the world, informs our imaginations, and shapes human history. Students should also understand that science is shaped by historical and social contexts (CBHE General Education, June 2000). Students must complete a minimum of four courses or twelve hours in the Mathematics and Life/Natural Sciences Knowledge area.

Note: All students are required to earn a C- or better in a college-credit mathematics course (MATH 1020 or higher meets this requirement at UMSL), or achieve a score of 26 or higher on the Missouri Math Placement Test. Students should check the current schedule of courses for more details regarding math proficiency and placement.

Department	Course #	Course Title	
Anthropology	1005 (4 hrs)	Introduction to Biological Anthropology	
Astronomy	1001A (3hrs)	Cosmic Evolution/ Introductory Astronomy (without lab)	
Astronomy	1001 (4hrs)	Cosmic Evolution/ Introductory Astronomy (with lab)	
Astronomy	1011	Planets and Life in the Universe	
Astronomy	1012	The Violent Universe and the New Astronomy	
Astronomy	1050	Introduction to Astronomy I	
Astronomy	1051	Introduction to Astronomy II	
Astronomy	1121	The Search for Extraterrestrial Life	
Atmospheric Science	1001A (3 hrs)	Elementary Meteorology (without lab)	
Atmospheric Science	1001 (4 hrs)	Elementary Meteorology (with lab)	

Biology	1012	General Biology	
Biology	1013 (2 hrs)	General Biology Laboratory	
Biology	1102	Human Biology	
Biology	1131(4 hrs)	Human Anatomy and Physiology I	
Biology	1141(4 hrs)	Human Anatomy and Physiology II	
Biology	1162	General Microbiology	
Biology	1202	Environmental Biology	
Biology	1350	Conservation of Biodiversity	
Biology	1811 (5 hrs)	Introductory Biology I: From Molecules to Organisms	
Biology	1821 (5 hrs)	Introductory Biology II: Organisms and the Environment	
Chemistry	1011	Chemistry in the Environment and Everyday Living	
Chemistry	1052 (4 hrs)	Chemistry for Health Professions	
Chemistry	1062 (2 hrs)	Organic and Biochemistry for Health Professions	
Chemistry	1111 (5 hrs)	Introductory Chemistry I	
Chemistry	1121 (5 hrs)	Introductory Chemistry II	
Chemistry	2223	Quantitative Analysis	
Chemistry	2612	Organic Chemistry	
Chemistry	2622	Organic Chemistry II	
Chemistry	2633 (2 hrs)	Organic Chemistry Laboratory	
Chemistry	3412	Basic Inorganic Chemistry	
Geology	1001A (3hrs)	General Geology (without lab)	
Geology	1001 (4 hrs)	General Geology (with lab)	
Geology	1002A (3hrs)	Historical Geology (without lab)	
Geology	1002 (4 hrs)	Historical Geology (with lab)	
Honors	2050	Inquiries in the Natural Sciences	
Mathematics	1020	Contemporary Mathematics	
Mathematics	1030	College Algebra	
Mathematics	1035 (2 hrs)	Trigonometry	
Mathematics	1100	Basic Calculus	
Mathematics	1102	Finite Mathematics	
Mathematics	1105	Basic Probability and Statistics	
Mathematics	1150	Structure of Mathematical Systems	
Mathematics	1800 (5 hrs)	Analytic Geometry and Calculus I	
Mathematics	2510	Structure of Mathematical Systems II	
Physics	1001	How Things Work	
Physics	1011 (4	Basic Physics I	

	(hrs)		
Physics	1012 (4 hrs)	Basic Physics II	
Physics	2111(5 hrs)	Physics: Mechanics and Heat	
Physics	2112 (5 hrs)	Physics: Electricity, Magnetism and Optics	

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.

Other Requirements**Mathematical Skills**

Proficiency in the basic mathematical skills area should be satisfied before the student completes **24** hours of course work. Proficiency can be obtained in either of the following ways.

Completing, with a grade of C- or better, a college degree credit mathematics course. Scoring 26 or higher on the Missouri Math Placement Test (MMPT). The MMPT covers mathematics through the college algebra level.

*The first two college credit mathematics courses that the university offers which satisfy mathematics proficiency are MATH 1020: Contemporary Mathematics and MATH 1030: College Algebra. MATH 1020 is designed as a terminal mathematics course for students who do not plan to take calculus. MATH 1030 is required for all students who want to go on to calculus. The prerequisite for enrolling in MATH 1020 or MATH 1030 is a satisfactory score on the math placement test. **This test must be taken not earlier than six months before enrolling in the course.**

Study guides for the UMSL Math Placement Test and the MMPT (as well as the UMSL Trigonometry Test, which is not needed for minimum math proficiency) are available on the university's home page, under math placement information/math practice test, as well as at the circulation desk of the Thomas Jefferson Library (file number 991). Students will need to make their own copies. Math placement test dates are published in the *Schedule of Courses* and on the math placement website.

Advanced Expository Writing

Effective fall semester 1985, students must also complete ENGL 3100, Advanced Expository Writing, or its equivalent, with a grade of C- or above.

American History and Government

Students must satisfactorily complete a course or courses in American history or government taken at UMSL or at other colleges or universities in Missouri. Transfer students should check with the dean's office of their division to find out if they have fulfilled this requirement.

The requirement may be satisfied by one of the following courses:

- CRIMIN 1100**, Introduction to Criminology and Criminal Justice (Criminology majors may not use this course to satisfy the state requirement.)
- HIST 1001**, American Civilization I
- HIST 1002**, American Civilization II
- HIST 1003**, African-American History
- HIST 1004**, The History of Women in the United States
- HIST 2007**, The History of Missouri
- HIST 3002**, United States History
- POL SCI 1100**, Introduction to American Politics
- POL SCI 2260**, Law, Politics and Society
- POL SCI 2280**, Judicial Politics and Policy
- POL SCI 2290**, Gender and the Law
- POL SCI 2300**, State Politics
- POL SCI 2320**, African Americans and the Political System
- POL SCI 2350**, Introduction to Urban Politics
- POL SCI 2380**, The Politics of Gender in the United States
- POL SCI 2400**, Public Administration
- POL SCI 2420**, Introduction to Public Policy
- POL SCI 3200**, Constitutional Law
- POL SCI 3210**, Civil Liberties
- POL SCI 3260**, The Supreme Court

POL SCI 3300, The American Presidency
POL SCI 3330, Introduction to Political Behavior
POL SCI 3331, Congressional Politics
POL SCI 3350, Political Parties and Elections
POL SCI 3450, Urban Administration
POL SCI 4460, Urban Planning and Politics

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. These courses are also coded with the initials [CD] for Cultural Diversity This requirement may be met by one of the following courses:

ANTHRO 1011, Introduction to Cultural Anthropology
ANTHRO 1019, Introduction to Archaeology
ANTHRO 1021, The Body in Culture
ANTHRO 1025, World Cultures
ANTHRO 1033, World Archaeology
ANTHRO 1041, Sex and Gender Across Cultures
ANTHRO 1051, Anthropology of Sport
ANTHRO 1091, Introductory Topics in Anthropology
ANTHRO 2111, Cultures of East Asia
ANTHRO 2114, Cultures of the Near and Middle East
ANTHRO 2120, Native Peoples of North America
ANTHRO 2123, Cultures of Oceania
ANTHRO 2124, Cultures of Africa
ANTHRO 2131, Archaeology of Missouri
ANTHRO 2132, Archaeology of North America
ANTHRO 2134, Archaeology of the Inca, Aztec, and Maya
ANTHRO 2135, Old World Archeology
ANTHRO 2138, African-American Archaeology
ANTHRO 2173, Archaeology and Cultures of the Biblical World
ANTHRO 2191, Special Topics in Non-Western Cultures
ANTHRO 3235, Women in Sub-Saharan Africa: A Contemporary Perspective
ART HS 1102, Art of Egypt and the Ancient Near and Middle East
ART HS 1104, Indigenous Arts of North America
ART HS 1105, Introduction to the Arts of Africa
ART HS 1108, Introduction to Asian Art
ART HS 4408, Topics in Asian Art
ENGL 2280, The Contemporary World in Literature
CHINESE 2150, Chinese Literature in Translation
JAPANESE 2150, Classic Japanese Literature in Translation
HIST 1041, East Asian Civilization
HIST 1042, East Asian Civilization
HIST 1051, Latin American Civilization
HIST 1061, African Civilization To 1800
HIST 1062, African Civilization Since 1800
HIST 1064, The African Diaspora since 1800
HIST 2031, Modern Japan: 1850 to the present
HIST 2032, Modern China: 1800 to the Present
HIST 2033, Modern History of the Asian Pacific Rim
HIST 2051, History of Latin America: To 1808
HIST 2062, West Africa Since 1800
HIST 2063, African Diaspora to 1800
HIST 2064, African Diaspora Since 1800
HIST 3032, History of Women in Comparative Cultures
HIST 3202, History of Latin America since 1808
HONORS 1330, Honors Non-Western Traditions
HONORS 2310, Cultural Diversity in the Humanities
HONORS 2330, Cultural Diversity in the Social Sciences
M H L T 1090, Non-Western Music I
PHIL 1120, Asian Philosophy
PHIL 1125, Islamic Philosophy
POL SCI 1500, Introduction to Comparative Politics
POL SCI 1550, Women and Politics in the Developing World
POL SCI 2520, Middle Eastern Politics
POL SCI 2530, Political Systems of South America

POL SCI 2540, Political Systems of Mexico, Central America, and the Caribbean

POL SCI 2550, East Asian Politics

POL SCI 2580, African Politics

SOC WK 2330, Asians in Migration

TH DAN 1850, Introduction to Non-Western Theatre

Reserve Officers Training Courses

Only MIL SCI 4101 and 4102 may receive degree credit in Arts and Sciences and the College of Fine Arts and Communication. All other Military Science courses receive no credit and they are not counted in the student's grade point average.

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BULLETIN 2009 University of Missouri - St. Louis 2010

Graduate Study

UMSL Home

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.

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 (a) they do not meet admission standards, (b) there are no available openings, or (c) applications are incomplete at the time of the decision. Application procedures and forms are available 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 Degree-seeking, Graduate Certificate or Non-Degree seeking 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, 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 (a) a baccalaureate or advanced degree from an accredited institution of higher education, (b) an undergraduate grade point average (G.P.A.) and major field G.P.A. of at least 2.75, (c) an acceptable score on each requisite examination, and (d) 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 unit.

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 G.P.A. of at least 2.5.

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

A Non-Degree student must maintain a G.P.A. 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. 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.

Since Education Certification students take courses for State Department of Education certification, they do not need departmental approval to take more than nine hours. 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 unit and the dean of the Graduate School.

Traveling Scholars and Inter-University Graduate Exchange Students

There are two avenues for students to take graduate courses at UMSL without applying for admission

1. Traveling Scholars are graduate students at one of the other University of Missouri (UM) campuses.
2. Inter-University Graduate Exchange students are Washington University and St. Louis University students who enroll on the 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 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 unit to which the student has applied may develop alternate ways for that particular student to demonstrate English language competence prior to admission. The graduate dean must approve such alternative metrics.

Applicants from other countries shall provide a summary of their educational experience as a basis of comparison of their backgrounds with those of U.S. applicants. They must also provide a statement of their financial situation and the anticipated form of support for the period of graduate study.

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.

To remain in good standing, students shall 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, they will be subject to all regulations in effect at the time of readmission.

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.

Fulltime Study

The minimal fulltime course load is nine credit hours for a regular semester and/or five credit hours during 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, Graduate Research Assistantship, Graduate Assistantship, or Graduate Instructor position; 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.) Eight equivalency hours after achieving candidacy. This semester-hour equivalency is allowed for a maximum of two fall and two spring semesters.
- 4.) Eight equivalency hours for dissertation work. Once the graduate dean has approved a dissertation proposal, students may request equivalency hours until the eight-year time limit has expired.
- 5) Participation in approved required out-of-class experiences in specific programs. Please see your advisor for the approved 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 unit, for a) students whose cumulative UMMSL G.P.A. 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 UMMSL

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 unit granting the degree approves the transfer.

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

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

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

Time Limitation

The maximum time allowed for completion of a master's degree is six years after the first course enrollment. The maximum time allowed for completion of an 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 petition to and 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 UMMSL 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.

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

Students may drop courses before the end of the fourth week of a regular semester or the second week of the summer session without receiving grades. At the end of this period and until the end of 12 weeks (or from the third through the sixth week of the summer session), students may withdraw from courses with "Excused" grades providing they are passing the course and have the approval of the instructor and their adviser. Otherwise, a grade of F is given. Students who stop attending classes without officially dropping courses also receive grades of F.

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. Students transferring to another University of Missouri campus may ask the UMSL Director of Admissions to furnish a transcript to the Office of Graduate Admissions at the other UM campus.

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.

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
- EX = Excused
- DL = Delayed

The satisfactory/unsatisfactory (S/U) option, which is an option for undergraduate students, is not normally available in courses for graduate credit. S/U grades may be given only for specific internships, practica, or project 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.

Students who stop attending classes without officially dropping courses receive grades of F.

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 Grades

Delayed grades may be given when a student's work is of passing quality but is incomplete because of circumstances beyond the student's control. Although delayed grades do not affect a graduate student's grade point average, they are an important factor in evaluating academic progress. Delayed grades must be removed within two regular semesters after the time recorded or they automatically become F grades. In such cases, course instructors may subsequently change F grades to other grades on their progress in a sequential course and indicate that a grade will be assigned at the end of the sequence. Some programs assign the Delayed Grade for dissertations or theses in progress.

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' web site](#).

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 includes all courses taken at UMSL for graduate credit, including courses that may not be a part of the degree program. The Degree Program GPA includes only the grades of those courses that are part of the degree program. The Degree Program GPA must be at least 3.0 for a student to receive a graduate degree.

Grade modification is not an option for graduate students.

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

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 in a minimum of nine credit hours are 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 Financial Aid.

If at the end of the probationary semester the cumulative GPA is at least 3.0, then the probationary status is removed. A probationary student who fails to raise the cumulative GPA to 3.0 may, on the recommendation of the program, be allowed a second probationary semester.

Dismissal

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 advisor and/or graduate director. Upon recommendation of the unit, the Graduate School may dismiss any graduate student who does not make adequate progress. The Graduate School is responsible for notifying students, with copies sent to the graduate advisor, the graduate director of the program, the Graduate Admissions office, and the Financial Aid Office.

Master's Degree Requirements

Admission

Each master's degree program determines 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 units may require higher enrollments.

Credit Requirements

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

Residence Requirement

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

Dual Master's Degrees

With approval of the unit 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 units involved and the Graduate School, students may simultaneously pursue two master's degrees under the following conditions: (a) No more than one-third of the credit hours required by either program may be applied to both programs; (b) Students must obtain approval of both units 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 for work they have completed toward to a doctoral degree. The unit 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 unit.

Doctoral students may also receive a master's degree for work they have completed toward to a doctoral degree in another unit provided (a) they apply no more than two-thirds of the master's degree courses to their doctoral degree program; (b) they have been admitted to the master's degree program; and (c) 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.

Filing the Degree Program

A master's degree student shall file an approved program plan with the Graduate School before completing the first two-thirds of the credit hours required 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 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.

Master's Thesis

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

Master's 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 disseminate the thesis according to current Graduate School procedures.

Application for Master's Degree

To receive the master's degree, students who have met all degree requirements must apply for graduation by the end of the fourth week of classes during the fall or spring term or by the first day of the eight-week session during the summer term.

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 in residence 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 unit 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

An educational specialist degree student enrolled shall file an approved program plan with the Graduate School before completing two-thirds of the credit hours required 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 (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.

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

Thesis

Units 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. Units 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. 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 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:

1. A pre-candidate is a student who has requirements to fulfill in addition to the dissertation, including course work, language requirements, and/or comprehensive examinations.
2. 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 unit 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 unit 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 unit 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 (a) the number of times the unit will allow its students to take a comprehensive examination, and (b) the maximum and/or minimum period of time the unit 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 unit.

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. As early as possible in a doctoral student's program, but no later than when the student achieves candidacy, the unit will recommend, in consultation with the student, a doctoral dissertation advisor.

Application for Candidacy

Doctoral students may apply for candidacy after passing all required comprehensive and language examinations, written or oral, and successfully completing all course work.

Doctoral Dissertation Committee

The Doctoral Dissertation Committee consists 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 from the unit. A recognized scholar from outside the university may serve as a member upon the recommendation of the unit and approval of the graduate dean. The graduate dean reviews and may approve the committee membership and changes in the committee membership.

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. 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. 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

Only high quality copies are acceptable with the following margins throughout: left margin 1 ½ inches; top, bottom, and right margins, 1 inch. Final copies may be submitted electronically following current procedures on the [Graduate School Electronic Thesis and Dissertation homepage](#) or in person in Room 421 Woods Hall on paper. Original hard 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.

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

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.

Graduate Certificate Program Requirements

Admission

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

Credit Requirements

A minimum of 18 hours of graduate course work is required for a graduate certificate. At least 12 of these hours must consist of courses drawn from the list of core courses for the particular certificate program. At least 12 hours must be completed as a graduate student at UMSL. At least nine hours must be at the 5000 level or above. No more than six hours may be independent study.

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.

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Fees for Graduate Study

UMSL Home

Fee Assessment

Fees for coursework vary due to the student's residency standing, undergraduate, graduate or post-graduate school status, hours, term of enrollment, and the applicability of any special fees assessed in specific courses or programs. The total per-credit-hour fee rate commonly consists of the Educational fee, Information Technology Fee, the Student Facility, Activity, and Health Fee and any special course fees or parking permit fees. On the [Cashier's website](#), undergraduate, graduate and optometry fee rates are listed per credit hour for residents and nonresidents. Course, supplemental and special fee rates are also listed along with descriptions of the fees. See the FEES section on the Cashier's website for more information.

Financial Responsibility

Each semester, a Financial Responsibility agreement will be presented to all students. The agreement explains the billing methods, payment options and all policies related to student accounts. It is the student's responsibility that fees are paid and other financial obligations are met as they become due regardless of who is making the payments. Students who need assistance in meeting their financial obligations should contact the Financial Aid Office in a timely manner. Students are expected to adhere to important dates and policies that impact fees. Due dates, fee reassessment dates and office policies are posted on the [Cashier's website](#) and through links on the [eBill website](#). The non-payment of any financial obligation may result in additional collection fees and holds on students' registration, records, or graduation.

Billing Notification

Billing notification emails are sent to students (and any authorized payers) on a monthly basis. Billing statements are available online in [MyView](#) for students and at [eBill](#) for authorized payers. Students are expected to check their university e-mail and review and respond to their monthly billing statements regularly.

MyView

Through the [MyView](#) student system, students can access real-time detailed account and billing information, manage direct deposit and eBill user profiles, view their statement history, and make a payment through one convenient location in the Self-Service Student Center. The Student Center provides these features and even more drill-down capability, filters and self-help as well as greater access to information.

Payment of Fees

The Cashier's Office offers several payment options, including a minimum monthly payment. 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 Schedule on the Cashier's website. If a student chooses to make the minimum payment or a partial payment, a finance charge of 1% of the Adjusted Amount Due will be assessed. The monthly 1% finance charge can be avoided by paying the balance in full.

The payment due date is the first day of each month. Student accounts will be subject to a \$10 late fee if payment is not received by the due date shown on the monthly billing statement. All fees, fines, bookstore charges, etc. must be paid by the last day of the term. After the semester ends, unpaid accounts will be turned over to an outside collection agency. Collection agency fees of up to 50% of the unpaid account balance will be added to the student's account. Student accounts must be paid in full before a student will be permitted to register for upcoming semesters or receive transcripts or a diploma.

Payment Options

Online - Log on to the [MyView](#) student system to make payment using a personal checking or savings account or a MasterCard or Discover credit card.(2.75% service charge applied to credit card payments)

Scheduled Payments - You may choose to have the minimum payment, or billed balance due deducted from your checking, savings or credit card each month.(2.75% fee applies to all credit card payments) Instructions on scheduling a series of payments can be found on the student financials [MyView help](#) page located on the [Cashier's website](#).

Mail – Send your payment stub and a check or money order to the Cashier's office at: The University of Missouri - St. Louis 285 Millennium Student Center (MSC 212) One University Blvd. St. Louis, MO 63121-4400. Both the student number and student name need to be on the check or money order.

In person – Visit the Cashier's Office at 285 Millennium Student Center. Payment in cash, check, money order or pin based MasterCard or VISA debit are accepted at the cashier stations. Credit card payments cannot be processed at the cashier stations, but are accepted online from <http://ebill.umsl.edu>.

Payment Kiosks – Payment from a personal checking or savings account or by MasterCard or Discover credit card can be made at any of the four payment kiosks located in the MSC. (2.75% service charge applied to credit card payments)

Payment Drop Box – A secure payment drop box is situated just outside the Cashier's Office, room 285 of the Millennium Student Center. Only check or money order payments, please.

Any check presented to the university for payment that is returned unpaid will be assessed a \$20.00 returned check fee in addition to any fees that the bank may charge.

Cancellation of Registration Due to Nonpayment of Fees

The university will attempt to notify any student whose registration is about to be administratively cancelled 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 cancelled student's space in a course will be given to other students on that course's wait lists. The cancelled student will be placed at the end of the course wait list.

Any student who has been administratively cancelled for nonpayment of assessed fees may not enroll in a class unless the required fees have been paid and they have officially re-registered. Cancelled students who re-register on or after the first day of the semester will be assessed an additional nonrefundable late registration charge.

Fee Reassessment

Students who are leaving school or dropping classes are responsible for canceling their registration and verifying that all of their classes have been dropped. Any refunding of fees will be made according to the Reassessment Schedule available on the [Cashier's Website](#). The refund process requires two to four weeks processing time after withdrawal or dropped classes. 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.

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 educational fees, at any time when in the discretion of the governing board the same is in the best interest of the university, provided that no increases can or will be effective unless approved by the governing board not less than 30 days prior to the beginning of the academic term (semester, etc.) to which the fees are applicable, 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.

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[Course Schedules](#)

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University Services

UMSL Home

Academic Resources

The Writing Lab

The Writing Lab offers free tutorial assistance to students working on papers for their classes. No appointment is necessary, and tutors are prepared to help both undergraduate and graduate students in all the disciplines. Issues covered in the lab include organization, sentence clarity, development, grammar, and usage.

English-as-a-Second Language

The English-as-a-Second Language (ESL) program provides assessment and supplementary ESL courses for international students. Courses are listed under Foreign Languages and Literatures Department.

Mathematics Lab

The Math Lab offers individual assistance on a walk-in basis to students needing help with any mathematics from basic math through calculus or mathematical skills required for a course in another discipline. Students or prospective students who are preparing to take the Mathematics Placement Test or C-Base Exam may come to the lab for help. Review materials for the C-Base Exam are also available on general reserve in the Thomas Jefferson Library. Practice math placement exams are available from the Department of Mathematics and Computer Science.

The Math Lab also offers a three-credit hour (not toward a degree) course in Intermediate Algebra and a zero-credit workshop in Beginning Algebra are offered as semester-long lecture classes or as independent study courses with flexible beginning and ending options. Schedules for the courses can be found in the current Schedule of Courses.

Campus Testing Center

The Campus Testing Center provides a controlled environment for students to take make-up exams or to test under conditions where special accommodations are needed and authorized by the Office of Disability Access Services. Students unable to take campus-level exams (e.g. Math Placement) during regularly scheduled group sessions may take them in the center for a fee. All testing is by appointment by calling 314-516-6396 or emailing assessctr@umsl.edu.

Cashier's Office

The Cashier's Office helps students and their families meet their financial obligations to the university. The office produces accurate and timely invoices to collect and process payments, issue refunds, and to ensure that funds are deposited without delay. Staff are available in person at 285 Millennium Student Center, by phone at (314) 516-5151, or my email at umslcash@umsl.edu for inquiries about student accounts.

Distance Learning

Campus Support Offered Online

As a service to its students, most of whom do not live close to campus, UMSL offers several services online or by phone. Online services for registration, fee-payment, testing, advising/financial aid, book sales, and administrative support are services offered through the university's integrated systems, MyView. Before a student is admitted, MyView allows candidates to apply online, explore the course catalog, and access online services, including MyGateway. The student portal on MyGateway lists links to tools that students often need, including links for an enrollment certification letter, class schedule, DARS report, e-bill student account, e-mail forwarding address, creating a friendly e-mail address, accessing grades and GPA, online testing appointments, registration times, and both the online and telephone registration systems. Advising links include academic advising, academic calendars, choosing a major, the *Bulletin*, course schedules, final exam schedule, and policies. Library holdings are also available through technology. Students can conduct reference searches via telecommunications, and entire texts of an increasing number of periodicals are now available online.

MyGateway

The lines between on-campus and off-campus learning is blurring as UMSL faculty increasingly use technology to communicate with students. Most classes at UMSL use MyGateway, whether students take the class on

campus, online, or at an off-campus site. Tutorials are available on the campus's [Information Technology Services website](#).

Off-Campus Classes

Because of the campus's close relations with community colleges, schools, businesses, agencies, and hospitals in the region, some programs are offered at these sites for students' convenience. Most courses in off-campus programs have an instructor on site, but sometimes courses are delivered with technology at the same time (synchronously) as courses on campus. This allows students across the region to take class together without having to drive long distances. Course locations are included in the class schedule available to students and the public on MyView.

Online Education

UMSL's online courses and programs are offered asynchronously through the MyGateway course-management software. The majority of courses require some on-campus activities, so students must consult the [schedule of courses](#) for any on-campus requirements.

Video Instructional Program

The video instructional program offers video lessons available for viewing in UMSL libraries as well over the Higher Education Channel (HEC) cable channel.

Course Listings

The following courses are offered via video:

ANTHRO 1019 Archaeology [SS]

This telecourse uses dramatic onsite filming to enable students to explore how archaeologists reconstruct ancient societies and explain how they evolved. Students will understand how archaeology and anthropology interact, with emphasis on how people have behaved in the past.

ANTHRO 1025 World Cultures [CD, SS, V]

This telecourse is an ethnographic survey of the major culture areas of the world. It is an introductory cultural anthropology course that studies the structure and process of culture.

ANTHRO 1095 Brief Overview of the Four Fields of Anthropology (1)

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 2124 Cultures of Africa [CD]

This telecourse offers a basic ethnographic survey of African cultures, with attention to social groupings, tribalism, religion, language, social change, the ecological relationship between humans and nature.

BIOL 1012 General Biology (For Non-Science Majors) [MS]

This telecourse provides a firm foundation in the fundamental principles of biology.

COMM 2232 Effective Communication in the Organization: Tool for Leadership (3)

Prerequisites: Junior standing or consent of instructor. Telecourse designed to equip students with communication skills applicable to the organizational context. The course will present effective strategies for the articulation of ideas, with particular emphasis on the development of leadership skills.

HIST 1031 Topics in European Civilization: Emergence of Western Europe to 1715 [SS]

This telecourse offers lectures and discussions on the development of Western European society and tradition from approximately 800 to 1715.

HIST 1032 Topics in European Civilization: 1715 to the Present [SS]

This telecourse offers lectures and discussions on the development of Western European society and tradition from 1715 to the present. Hist 1031 or Hist 1032 may be taken separately.

MEDIA ST 1070 Introduction to Cinema

This telecourse examines the history, rhetoric, and aesthetics of film. The content is designed to bring Hollywood filmmaking into clear focus as an art form, as an economic force, and as a system of representation and communication. Film theory and criticism will be studied, as well as major genres, authors, and artists. Introduction to Cinema explores how Hollywood films work technically, artistically, and culturally. The course also probes the deeper meaning of American movies--the hidden messages of genres, the social and psychological effects of Hollywood film style, and the mutual influence of society and popular culture on filmmaking.

PHIL 1090 Philosophy and Other Disciplines [H,V]

Prerequisites: Video course offering. General introduction to philosophy examines its connections to works of art and related areas. Course does not satisfy any requirements for philosophy major or minor.

PHIL 1091 Significant Figures in Philosophy [H,V]

Video course introduces philosophy through a survey of the ideas of some of the important figures in the history of the discipline. Course cannot be used to satisfy any requirements for philosophy major or minor.

PSYCH 1003 General Psychology [SS]

This telecourse is an introductory college level course that covers the fundamental principles and major concepts of psychology. The content is designed to provide a broad introductory survey of the general principles of human behavior.

PSYCH 1268 Human Growth and Behavior [SS]

Prerequisites: PSYCH 1003. This telecourse uses special readings, reports, and/or field research as well as video and audio courses to explore the stages of life as an introduction to developmental psychology.

PSYCH 2245 Abnormal Psychology

Prerequisite: PSYCH 1003, General Psychology. This telecourse introduces the major theoretical models for explaining and treating disorders - psychodynamic, behavioral, cognitive and biological. Ten of the 13 programs feature specific disorders, including anxiety disorders, personality disorders, the schizophrenias, sexual disorders, substance abuse, and the disorders of childhood. The first program concerns assessment, while the last two provide information on treatment and prevention. This approach serves the introductory abnormal psychology student, while allowing individual faculty latitude to underscore the approach to which they subscribe.

PSYCH 2280 The Psychology of Death and Dying

Same as GERON 2280. Prerequisite: PSYCH 1003. This telecourse will address the psychological aspects of death and dying for both adults and children. The psychological reactions of terminally ill patients and their families will also be examined, and therapeutic interventions will be discussed.

SOC 1010 Introduction to Sociology [V, SS]

This telecourse is an introductory college level course designed to give students an in-depth look at sociological approaches to human behavior, including types of social organizations, patterns of social interaction, and social influences on individual conduct.

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 has 40 faculty members, 30 representing departments and 10 elected at large. In addition, three administrators are non-voting members. The voting members of the University Assembly consist of the elected members of the Senate; the president; the chancellor; the vice chancellor for academic affairs; the dean of the graduate school; the vice provost for student affairs; the dean of continuing education; student representatives equal in number to one-third of the faculty members of the assembly; and three staff members, including the president of the Staff Association. 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.

Institutional Safety

The mission of the University of Missouri-St. Louis police department is to work cooperatively with the university community and within the framework of the Constitution, enforce the laws, preserve the peace, and provide a safe environment for the campus.

The police department an internationally accredited department is committed to professional management and to providing services in a manner that is responsive to community concerns. It pledges to be sensitive to the needs of those it serves.

The police department located in the TeleCommunity Center serves the students, faculty, and staff by providing year round campus security. The police are trained to give emergency aid in the event of accident or illness. All incidents should be reported immediately to the police department, telephone 314 516 5155. A "911" phone number is available on all phones with a 516 prefix and should be used for emergencies only. These numbers are monitored 24 hours a day. Call for help or to report fire or any hazardous conditions. Emergency telephones on campus include the red A Hot Line phones, which are located in every building. In addition, there are a number of outdoor emergency phones that connect directly to the police dispatcher. Also tips on crime prevention and other useful publications are available outside the police department office.

All members of the campus community are strongly encouraged to call the police for an escort if they feel

uncomfortable walking to their car at night. For information regarding services, contact the police by calling 314-516 5158, Monday through Friday, 8 a.m. to 5 p.m. For emergencies, call 314 516 5155 or 911.

Parking and Transportation

Traffic regulation is the responsibility of the Parking and Transportation Department, including issuance of faculty, staff and guest permanent and temporary parking permits. These permits may be picked up at the Parking and Transportation office, located at 7700 Florissant Road, 314 516-4190. Information on traffic regulations, parking, and campus maps can be obtained at the [Parking and Transportation web site](#).

The department provides limited emergency vehicle service (due to dead battery, empty fuel tank, flat tire, etc.), at no charge, to vehicles on campus. Any person requiring such service should call 314-516-5155.

Internships

Internships, co-ops, and other community engagement activities give students, normally undergraduates, the opportunity to combine classroom studies with work experience in a field related to their career goals. These degree-related positions let students gain professional job experience and earn money while learning what career choices they might make. Information is available from [Career Services](#) (314-516-5111 or in 278 Millennium Center).

In addition to internships available through Career Services, internships and practica are available through 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 4325-4329, 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.

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.

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.

Foreign Languages and Literatures

Paid, noncredit positions as tutors in language lab available on a competitive basis. Students of German can apply for summer noncredit internships abroad in the German-American Student Exchange Program at the [Study Abroad Office](#).

History

HIST 4001, Special Readings - internships occasionally available with historical agencies; department chair and/or undergraduate coordinator must approve to obtain credit.

Mathematics and Computer Science

Career-related work arrangements for students majoring in math and/or computer science are primarily administered through [Career Services](#) located in 278 Millennium Student Center. These positions are paid and

non-credit-bearing.

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 2111/2112** 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 3295, Selected Projects in Field Placement - elective, for credit.

PSYCH 3390, Research Assistant.

Social Work

SOC WK 4800 and 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

BUS AD 3090, Internship in Business Administration

BUS AD 3289, Internship Practicum in International Business

BUS AD 3990, Internship in Business Law

FINANCE 3590, Internship in Finance

INFSYS 3890, Internship in Management Information Systems

LOG OM 3390, Internship in Logistics & Operations Management

MGMT 3690, Internship in Management

MKTG 3790, Internship in Marketing

College of Education

Internships (4989) are required for 3 hours credit for most undergraduate programs and Student Teaching (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 Deborah_Ballard@umsl.edu or at 314-516-6710.

College of Fine Arts and Communication

Art

ART HS 3387, Professional Internship for Art History majors only elective, for credit.

ART HS 3388, St. Louis Art Museum Internship for Studio Art or Art History majors only - competitive position elective for credit.

Communication

COMM 1193, Practicum in Applied Communication

COMM 4393, Internship in Applied Communication

Media Studies

On-campus positions, as available:

MEDIA ST 1194, Practicum In Journalism

MEDIA ST 1195, Practicum In Advertising

MEDIA ST 1196, Practicum In Radio

MEDIA ST 1197, Practicum In Television/Film

MEDIA ST 1198, Practicum in Media Studies

Elective for credit, Senior standing, 3.0 GPA, and faculty recommendation required; off-campus positions:

MEDIA ST 3394, Internship in Journalism

MEDIA ST 3395, Internship in Advertising

MEDIA ST 3396, Internship in Radio

MEDIA ST 3397, Internship in Television/Film

MEDIA ST 3398, Internship in Media Studies

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.

Joint Engineering Program

UMSL/Washington University Joint Undergraduate Engineering Program career-related work arrangements for students majoring in all areas of engineering are primarily administered through Career Services. 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 Laclède 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. Visit Career Services, 278 Millennium Student Center, or call 314 516-5111 for more information on these programs and other work arrangements available.

Alumni Association

The Alumni Association sponsors several scholarships for UMSL students, provides special funding for campus projects, and works as an organization to obtain increased public support for the university. Membership in the Alumni Association is open to all graduates and former students with payment of modest dues. For more information, call 314-516 5833.

The Alumni Center, located at 7956 Natural Bridge Road across the street from the main campus entrance, offers students, faculty, staff, and alumni a gathering place for community receptions and other social events. Contact the Alumni Center at 314-516 5722 for reservations.

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Christopher R. Dames, co-Interim Dean of Libraries

M.S., University of Missouri-St. Louis

M.L.S., Kent State University

Marilyn L. Rodgers, co-Interim Dean of Libraries

Reference Leadership Team

M.A.L.S., University of Missouri Columbia

Gregory Ames, Curator, John W. Barriger National Railroad Library

M.L.S., State University of New York, Genesco

Clinton Berry, Reference Librarian

M.A., University of Missouri-St. Louis;

M.A.L.S., University of Missouri-Columbia

Cheryle Cann, Head, Ward E. Barnes Library

M.S.L.S., University of Missouri Columbia

Deborah Cribbs, Reference Librarian,

M.A., I.S.L.T. University of Missouri-Columbia

Christopher Daniel, Acquisitions Librarian,

M.A.L.S., University of Missouri-Columbia

Mary Doran, Reference Librarian

M.L.S., University of California Los Angeles

Julie Dunn-Morton, Curator, Fine Arts Collection,

M.A., University of Delaware;

Ph.D., University of Delaware

Judith Friedrich, Technical Services Librarian

M.A.L.S., University of Missouri Columbia

Tony Garrett, Head of Access Services,

M.A., University of Missouri-Columbia

John N. Hoover, Director, St. Louis Mercantile Library, Associate Director of Libraries for Special Collections

M.A., Southern Illinois University-Edwardsville

M.A.L.S., University of Missouri Columbia;

Rebecca Moorman, Technical Services Librarian

M.S.L.I.S., University of Illinois-Urbana-Champaign

Raleigh Muns, Reference Librarian

M.L.S., University of California Los Angeles

Timothy Nelson, Acquisitions Librarian,

M.Div., Chicago Theological Seminary;

M.L.S., University of Missouri-Columbia

Christopher Niemeyer, Reference Librarian

M.L.I.S., University of Texas at Austin

David Owens, Head, Technical Services

M.A.L.S., University of Missouri Columbia

Janis Peach, Head of Collections/Acquisitions

M.S., University of Illinois-Urbana-Champaign

Frances Piesbergen, Reference Leadership Team/ Serials Acquisitions

M.A.L.S., University of Missouri Columbia

Karen Robinson, Reference Librarian, SISLT,

M.A., Regent University;

M.L.S., Emporia State University

Lindsay Schmitz, Reference Librarian/Government Documents,

M.A., Southern Illinois University-Edwardsville;

M.S., University of Illinois-Urbana-Champaign

Helen Shaw, Reference Librarian

M.Ed., University of Illinois Champaign;

M.A.L.S., University of Missouri Columbia

Betsy Williams, Reference Librarian

M. S., University of Illinois-Urbana-Champaign

The University Libraries support the educational objectives of the university and meet the teaching, research, and informational needs of the campus community. Housed in three locations--the Thomas Jefferson Library and the St. Louis Mercantile Library at UMSL (north campus) and the Ward E. Barnes Library (south campus)--the Libraries' collections consist of more than one million volumes, 3,100 periodical subscriptions, 1.2 million U.S. government documents, over 1.3 million items in microform, and numerous special and manuscript collections. In addition, patrons have access to over 70,000 full-text online journals.

21 million items from the libraries of the four campuses of the University of Missouri, as well as the other institutions belonging to the MOBIUS consortium, can be identified in the MERLIN/MOBIUS online catalogs. Through the MERLIN/MOBIUS catalogs, users can request items from other institutions to be transferred to UMSL for check-out. A full range of services, including interlibrary loan, reference assistance, library instruction and access to a large number of databases are also available through the Libraries

Western Historical Manuscript Collection and University Archives

William M. (Zelli) Fischetti, Associate Director Western Historical Manuscript Collection and University Archives

M.A., University of Missouri-St. Louis

Kenneth F. Thomas, Senior Manuscript Specialist, Western Historical Manuscript Collection

M.A., University of Missouri-St. Louis

Linda J. Belford, Senior Manuscript Specialist, University Archives

M.A., University of Missouri-St. Louis

Susan J. Beattie, Manuscript Specialist

M.A., University of Missouri-St. Louis

Nancy McIlvaney, Manuscript Specialist

M.A., University of Missouri-St. Louis

The Western Historical Manuscript Collection contains primary source materials for research in many fields including local history, the environment, labor history, women's history, politics, and black history. The collection is open to the university community and the general public. Material from the other three campus WHMC collections may be borrowed for research use at UMSL. A catalog of the holdings of the other branches of WHMC is available.

The archives contain official records, campus publications, student newspapers, photographs, and other material on the history of the University of Missouri St. Louis. Located on Level 2 in the Thomas Jefferson Library, the office is open for reference service Monday through Friday, 8 a.m. to 4:45 p.m. and until 9 p.m. on Tuesday. Archival and manuscript material does not circulate.

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Study Abroad 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.

The Office of Study Abroad in the Center for International Studies provides UMSL students with opportunities to study at over 80 different universities in more than 30 countries around the globe. Programs run for an academic year, semester, summer, or winter intersession. Through individual advising at the Center's Study Abroad Office, students can find the program best suited to their personal, academic, and career goals. Internship possibilities are also available for qualified students.

Fees and Financial Aid

The cost of the program depends on the services provided and the country and city of study. For most programs, participants continue to pay UMSL fees plus airfare, room and board, and spending money. Students 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 the Center for International Studies.

Application

Generally, applications are due in mid-February for summer and fall semesters, and mid September for spring semester. Some programs require application two semesters prior to participation. 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, approval of the proposed course of study via the department/divisional advisory process, and for some programs, proficiency in the foreign language of instruction. Most programs are designed for undergraduate students in their junior or senior years of study; however, a limited number of programs for freshmen, sophomores, and graduate students are available.

Student Teaching Abroad

Teacher Education students may be able to student teach in Fuxin, China or Seoul, South Korea during the fall or spring semesters. In addition to meeting the other requirements for student teaching, students complete an application form for one of the sites.

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ROTC

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Students interested in Reserve Officer Training Corps programs may enroll in either the Army ROTC program at UMSL or the Air Force ROTC program sponsored at UMSL through Saint Louis University. These programs provide undergraduate and graduate students with the opportunity to combine academic study with a military officer training program.

For further information concerning the Army ROTC program, contact the Military Science Department, telephone 314-516-7681 or check out our [Website](#). For information on the Air Force ROTC program, contact the Aerospace Science Department at Saint Louis University, telephone 977-8227

Army ROTC

The purpose of the Military Science Department is to develop young men and women into junior commissioned officers for positions of responsibility in the Army Reserve, Army National Guard, or Active Army.

Benefits

Army ROTC offers UMSL students:

- 1) A challenging, important, well paid job at graduation in one of the many professional fields that the modern Army has to offer. Army officers serve in such fields as intelligence, military police, communications, engineering, transportation management, finance, combat arms, hospital administration, nursing, and research and development. Starting salary with allowances of an active duty second lieutenant is approximately \$41,000. Within four years he/she should be promoted to captain with a salary and allowances of nearly \$67,000. Reserve officers attend one weekend per month and an annual two week training camp.
- 2) College financing. All advance course and Army ROTC scholarship students receive \$300-500/month stipend. Only scholarship students receive \$1200 per year for books and supplies. Also, advance course students may join the Reserves as an office trainee and receive pay while in college.
- 3) Full-time enrolled students may compete for the Army ROTC scholarship. The scholarship pays full tuition and mandatory fees plus \$1,200.00 per year for books and supplies.
- 4) Option of two careers. Upon graduation and commissioning as officers in the U.S. Army, students may fulfill their obligation by serving on active duty or reserve duty. Reserve officers spend one weekend a month being a soldier. Officers who serve on active duty receive 30 days paid vacation every year, free medical and dental care, travel, and the opportunity to pursue advanced degrees with educational assistance from the Army on a fully funded or partially funded basis.

The Program

College students who complete the ROTC program earn commissions as second lieutenants in the U.S. Army. The ROTC program may be completed in several different ways as outlined below.

- 1) Four Year Program. The military science program is traditionally offered as a four year program. It is best to start as a freshman, but special arrangements can be made for those who start as sophomores. The first two years of military science are voluntary without service obligation, and are designed to give students a perspective on their leadership ability and what the Army can offer them. The student who decides to continue in ROTC and pursue a commission signs an agreement with the Department of the Army to accept a commission upon completion of the last two years of military science. In return the Army agrees to provide a subsistence allowance (up to \$5,000) and to provide all necessary uniforms and military science books.
- 2) Two Year Program. The two year program is designed to provide greater flexibility in meeting the needs of students desiring commissions in the U.S. Army. UMSL students who did not participate in the four year program and junior college transfer students are eligible for enrollment. Basic prerequisites for entering the

two year program are:

A) The students must be in good academic standing (minimum 2.0 GPA) and pass an Army medical examination.

B) The student must have two academic years of study remaining (undergraduate, graduate, or combination). The student will attend a four week summer camp to catch up with the students in the four year program. Attendance at the basic camp does not obligate the student in any way and is only intended to give the student a look at Army life and opportunities. The student will be paid approximately \$750 for attendance at basic camp.

Veterans

Veterans of any of the armed forces may qualify for advanced placement and should contact the Military Science Department for details.

Scholarships

The Army ROTC currently has scholarships in effect, which pay full tuition and mandatory fees plus \$1,200.00 per year for books and supplies, and provide \$300-500/month for the academic year. These scholarships cover either four, three, or two years. UMSL freshmen and sophomores should apply in January for the two- and three year scholarships. Scholarship students may incur a four year active duty obligation; however, they may request reserve duty to serve with the Army National Guard or Reserve.

Qualifications

All students who desire to enter the Army Reserve Officer Training Corps must be U.S. citizens, in good physical condition, and have high moral character. Students must be at least 17 years old to enroll and not over 34 when they receive their commission. If the student will be older than 34 at the time of earning a degree, it is possible to be accepted into Army ROTC with a waiver. Additional qualifications to be admitted into the advanced course include an academic average of C or better and passing an Army medical examination.

Academics

UMSL Army Reserve Officers Training Corps academics consist of two parts:

- 1) Earning a degree in the student's chosen academic subject.
- 2) Completing 22 credit hours (four year program) or 12 credit hours (two year program) of the military science curriculum. The courses in military science are college level academic courses which receive full academic credit toward the student's elective degree requirements in the College of Business Administration and the College of Education. The curriculum consists of classroom instruction and a leadership laboratory in which students receive leadership experience.

Leadership Laboratory

Leadership laboratory is required of all students enrolled in military science courses. Classes are two hours every Thursday afternoon from 4 p.m. to 6 p.m., unless otherwise designated. In addition, students attend one field training exercise each semester. Leadership laboratory develops individual military skills and leadership ability through participation in drill and ceremonies, survival training, mountaineering, field training exercises, and exposure to progressively greater responsibilities within the Cadet Corps organization.

Graduate Study

The Army realizes the importance of a graduate degree for its personnel. There are several programs available to assist ROTC graduates in obtaining an advanced degree. The Army sends selected second lieutenants immediately to graduate school (with full pay and allowances) to pursue advanced degrees in engineering and the physical sciences. Other officers may postpone active duty for two years to continue graduate study. Students who are accepted into medical school may take up to four years to complete their studies. There are numerous opportunities for an officer to complete a master's degree in service and receive financial assistance from the Army.

Special Training

Selected volunteers may attend one of several special schools during the summer: the Airborne Course at Fort Benning, GA; Air Assault School at Fort Campbell, KY; or the Northern Warfare School in Alaska. Successful course completion earns the coveted badge (such as the jump wings or air assault wings) associated with each school. Special cadet troop leadership training is available on a limited basis. Students participating in the program live and work with an active Army unit during part of one summer.

Cadet Activities

Army ROTC students may participate in many extracurricular activities during the year. Social activities include the Army Military Ball, picnics, and informal parties. Army ROTC students also support various campus and community service activities. Interested students also participate in the Drill Team, Color Guard, Air Rifle Team, and Ranger Challenge Team.

Course Descriptions

Military Science

MIL SCI 1101 Introduction to ROTC (2)

Make your first new peer group at college one committed to performing well and enjoying the experience. Increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations and basic marksmanship. Learn fundamental concepts of leadership in a profession in both classroom and outdoor laboratory environments.

MIL SCI 1102 Introduction to Leadership (2)

Learn/apply principles of effective leading. Reinforce self-confidence through participation in physically and mentally challenging exercises with upper division ROTC students. Develop communication skills to improve individual performance and group interaction. Relate organizational ethical values to the effectiveness of a leader.

MIL SCI 2201 Self/Team Development (3)

Learn/apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams of people. Develop skills in oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation and basic military tactics. Learn fundamentals of ROTC's Leadership Development Program.

MIL SCI 2202 Individual/ Team Military Tactics (3)

Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security and methods of pre-execution checks. Practical exercises with upper division ROTC students. Learn techniques for training others as an aspect of continued leadership development.

MIL SCI 3301 Leading Small Organizations I (3)

Series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead again in situations of increasing complexity. Uses small unit defensive tactics and opportunities to plan and conduct training for lower division students both to develop such skills and as vehicles for practicing leading.

MIL SCI 3302 Leading Small Organizations II (3)

Continues methodology of MIL SCI 3301 or permission of instructor. Analyze tasks; prepare written or oral guidance for team members to accomplish tasks. Delegate tasks and supervise. Plan for and adapt to the unexpected in organizations under stress. Examine and apply lessons from leadership case studies. Examine importance of ethical decision making in setting a positive climate that enhances team performance.

MIL SCI 4401 Leadership Challenges and Goal Setting (3)

Prerequisite: MIL SCI 3302 or permission of instructor. Leadership and Management, begins with a series of lessons enabling the students to make informed career decisions as they prepare for accession into the United States Army. The lessons concentrate on Army operations, training management, communications, counseling, leadership skills, and they support the final transition from cadet to lieutenant.

MIL SCI 4402 Officership/Transition to Lieutenant (3)

Prerequisite: MIL SCI 3401 or permission of instructor. Transition to Lieutenant completes the evolution from cadet to lieutenant by focusing on three areas: first, students are given a basic foundation in military law; second, students build on previous courses to successfully negotiate case studies and practical exercises; third, students will complete a Senior Leadership Project whereby students integrate, apply, and demonstrate their knowledge of military operations.

Air Force ROTC

The objective of the Air Force Reserve Officer Training Corps is to qualify students for appointment as active duty second lieutenants in the United States Air Force. However, any student may enroll in the freshman/sophomore level aerospace studies courses, and students may also enroll in the junior/senior level courses with permission of the professor of aerospace studies.

UMSL offers the two and four year AFROTC programs through an agreement with Saint Louis University. The four year program is tailored for students with three or more years of undergraduate studies remaining. Students with junior standing or above may apply for entry into the two year program. Entry into the two year program is competitive and is based on standardized test scores, academic major, grade point average, physical examination, personal interview with the professor of aerospace studies, and successful completion of a summer field training session at an Air Force base. Applicants must be full time students and must remain in good academic standing.

Reserve Officer Training Corps

The AFROTC Program is divided into the general military course (GMC), the freshman/sophomore level curriculum; and the professional officer course (POC), the junior/ senior level curriculum. The GMC covers two main themes; the Air Force today and the Air Force way. The courses of the POC emphasize the professional development of the future Air Force officer. The curriculum covers Air Force leadership and management and preparation for active duty. Field trips to Air Force bases supplement classroom instruction and familiarize the cadet with Air Force operations and organization.

To be commissioned, AFROTC students/cadets must:

- 1) Pass a medical exam at a military medical facility.
- 2) Obtain a favorable evaluation on an Armed Forces personal history security investigation.
- 3) Flying applicants must complete commissioning requirements before age 26 1/2, and nonflying applicants must complete commissioning requirements by age 30. However, the age limit for nonflying applicants may be extended to age 35 for outstanding individuals.
- 4) Be of good character (as determined by a favorable record with law enforcement authorities).
- 5) Successfully complete all AFROTC course requirements.
- 6) Complete at least a baccalaureate degree.

Air Force ROTC textbooks are loaned to all AFROTC students without charge. Students in the POC will receive a monthly subsistence allowance of \$150 per month for a maximum of 20 months, an Air Force uniform, in excess of \$700 for the summer field training course, and a travel allowance to and from the training location.

In addition to the AFROTC courses offered for academic credit, the Aerospace Studies Department sponsors the Arnold Air Society and Angel Flight. Arnold Air Society is a national honorary service organization, and membership is open to anyone interested in bringing to the local community a better understanding of the Air Force mission and its leaders.

AFROTC field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Students in the four year program participate in four weeks of field training. Major areas of study include junior officer training, aircrew/aircraft orientation, career orientation, survival training, base functions and Air Force environment, and physical training. Students applying for entry into the two year program must successfully complete six weeks of field training prior to enrollment in the professional officer course. The major areas of study included in the six week field training program are essentially the same as those conducted at four week field training, plus the academic curriculum of the general military course including leadership laboratory. POC cadets are eligible for a \$1,000 per semester federal AFROTC scholarship.

Leadership Laboratory is taken once per week throughout the student's enrollment in AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. Leadership laboratory involves 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. It also includes field trips to Air Force installations throughout the United States.

Other training volunteers may attend various special cadet training programs such as light aircraft training, parachute jump training, and advance cadet training. Students participating in the latter work with an Air Force unit during part of the summer.

The Air Force offers four , three , and two year scholarships to qualified students. These scholarships pay tuition, certain fees, and textbook cost. Scholarship recipients receive \$150 per month subsistence allowance. For further information on the Air Force ROTC program at UMSL, call (314) 977 8227, or at Southern Illinois University at Edwardsville (SIUE), call (618) 692 3180.

Aerospace Studies

The Aerospace studies program is divided into two parts: the general military course, the freshman/sophomore level curriculum, and the professional officer course, the junior/senior level curriculum. The GMC covers two main themes: the Air Force today and the Air Force way. The courses of the POC emphasize the professional development of the future Air Force officer. The curriculum covers Air Force leadership and management and preparation for active duty. Field trips to Air Force bases supplement classroom instructions and familiarize the cadet with Air Force operations and organizations.

Leadership laboratory is taken two hours per week throughout the student's enrollment in the AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. The first two years of the leadership laboratory includes a study of Air Force customs and courtesies, drill and ceremonies, issuing military commands, instructing, directing and evaluating the preceding skills, studying the environment of an Air Force officer and

learning about areas of opportunity available to commissioned officers. The last two years of lab consist of activities classified as advanced leadership experiences. They involve planning and controlling military activities of the cadet corps, preparation and presentation of briefings and other oral and written communications, and providing interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets.

AFROTC cadets must also successfully complete supplemental courses to enhance their utility and performance as commissioned officers. These include university courses in English composition and mathematical reasoning. Specific courses are designated by the professor of aerospace studies.

Cadets in the four year program participate in four weeks of field training. Cadets in the two- or three- year programs (exception for prior AF service) must attend the six-week FT session, which is identical to the four-week program plus 90 hours of GMC curriculum. Field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Major areas of study include Air Force orientation, officer training, aircrew/aircraft orientation, survival training, base functions, and physical training.

Students applying for entry into the two- or three- year program must successfully complete six weeks of field training prior to enrollment in the professional officer course. The major areas of study included in the six-week field training program are essentially the same as those conducted at four week field training, plus the academic curriculum of the general military course including leadership laboratory. No direct academic credit is awarded for field training.

Federal scholarships are available for AFROTC cadets--any academic major may apply. Applications are to be submitted by detachment personnel to Headquarters Reserve Officers Training Corps, Maxwell Air Force Base, AL.

Participation in AFROTC is not required to take aerospace courses.

Lower Division (General Military)

Aerospace studies courses (AERO 1001 through AERO 1002) are basic courses designed to acquaint students with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average, but credit hours for these courses will not be included in the total hours for graduation.

Course Descriptions

AERO 1001/1002 The Air Force Today (2)

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets, and it complements this course by providing students with followership experiences. Classroom activity, two hours per week; Leadership Laboratory two hours per week, each semester.

AERO 2001/2002 The Air Force Way (2)

Survey course designed to facilitate the transition from Air Force ROTC cadet to Air Force ROTC candidate. Featured topics include: Air Force heritage, Air Force leaders, Quality Air Force, an introduction to ethics and values, introduction to leadership, group leadership problems, and continuing application of communication skills. Leadership Laboratory is mandatory for Air Force ROTC cadets, and it complements this course by providing cadets with their first opportunity for applied leadership experiences discussed in class. Classroom activity, two hours per week; Leadership Laboratory two hours per week, each semester.

Upper Division(Professional Officer) Courses

Aerospace Studies courses AERO 3001 through AERO 4002 are advanced courses designed to improve communication and management skills required of Air Force officers. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AERO 3001/3002 Air Force Leadership and Management (3)

The study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory leadership laboratory complements this course by providing advanced leadership experiences in officer type activities, giving students the opportunity to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week, each semester.

AERO 4001/4002 Preparation For Active Duty (3)

Examines the national security process, regional studies, advanced leadership ethics, Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of

the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills. An additional Leadership Laboratory complements this course by providing advanced leadership experiences, giving students the opportunity to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week, each semester.

Field Training

Field Training provides leadership and officership training in a military environment, which demands conformity to high physical and moral standards. Within this structured environment, cadets are screened for officer potential as measured against field training standards. Motivation and professional development is achieved through various programs such as flight orientation, marksmanship, and survival training. Students in the four year program participate in four weeks of field training. Field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Major areas of study include: Air Force Orientation, Officer Training, aircrew/aircraft orientation, survival training, base functions and physical training.

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Office of the Vice Provost for Student Affairs

The Office of the Vice Provost for Student Affairs, located in 301 Woods Hall 314-516-5211, offers assistance and a wide variety of services to students. The office is responsible for administering the Student Conduct Code, confidentiality of student records, and the Discrimination Grievance Procedure for Students as well as all of the student service operations below.

Admissions

The Office of Admissions is located in 351 Millennium Student Center, 314-516-5451. The Admissions Office is generally the first point of contact for information and assistance with planning for the college decision process. The Office of Admissions arranges tours of campus, sponsors open houses throughout the year for both firsttime freshmen and transfers, and processes admission applications. Prospective students and families as well as applicants can arrange to meet personally with admission counselors. Counselors will provide information on applying for financial aid and scholarships, placement tests, and new student orientation.

Athletics

Intercollegiate Sports

The Tritons 314-516-5661 compete at the NCAA Division II level and are members of the Great Lakes Valley Conference. The women's intercollegiate athletic program includes basketball, soccer, tennis, volleyball, golf, and softball. The men's intercollegiate athletic program includes basketball, soccer, golf, baseball, and tennis. Scholarships are available for both men and women in all sports. Both men's and women's athletic teams have brought both local and national recognition to the university for more than 20 years, with one national championship and numerous trips to the NCAA Tournament in several sports. UMSL students with validated IDs are admitted free to all home athletic contests.

Recreational Sports

Campus Recreation 314-516-5125 provides students, faculty, staff, and alumni with recreational sports programs geared toward the interests of the entire university community. Current intramural activities include touch football, basketball, volleyball, racquetball, golf, tennis, bowling, softball, hoc soc, fun run, soccer, indoor floor hockey, and weight lifting. The office encourages the campus community to suggest additional sports.

Facilities

The athletic and exercise areas in the Mark Twain Building 314-516-5641 are available for use by the university community at specified hours. During the regular semester, the building is open seven days a week and on specified evenings. Facilities include basketball, volleyball, badminton, and handball/racquetball courts, an aerobic dance room, and an NCAA regulation swimming pool. The facilities also include two conditioning and fitness rooms with stateoftheart equipment, an indoor running track suitable for walking or running, and a sauna. Outdoor facilities include baseball, softball, soccer, intramural fields, and tennis courts.

Career Services

Career Services helps students and alumni to develop, implement, and evaluate job search strategies. Career Readiness/Coaching, Career Counseling & Exploration and other programs are available to all UMSL degree-seeking students and recent graduates.

A professional is available in 278 Millennium Student Center or by phone 314-516-5111 to guide students and alumni in the job search for internships/co-ops and full-time degree-related positions.

Career development services are designed to help students choose a major and/or career. The Career Services website includes a wealth of job outlook and salary information and links to numerous job search sites. UMSLCareerKey provides students access to job leads (please see Internships for information on internships, co-op, part-time degree-related and full-time degree-related positions), on-campus interview

opportunities, and resume referrals to employers.

Career Services holds four annual job fairs with free admission to UMSL students/alumni who pre-register.

Center for Student Success, Multicultural Relations, and Transfer Services

The Center for Student Success, located in Room 225 Millennium Student Center 314-516-5300 helps students face the challenges unique to the college academic experience. The center is committed to helping students deal with academic concerns, connect to campus resources and meet educational goals. The center promotes the collegiate success of students by providing quality programs and services that advance students' academic achievement, educational goals, career development and adjustment to the university. We encourage students to assume responsibility for their decisions as they move toward their goals, with special attention to transfer students and multicultural relations.

Multicultural Relations supports academic success, including student retention and provides resources to meet the individual needs of the student. Cognizant of the unique challenges facing the minority population, MCR provides or supports such services as new student orientation, mentoring, tutoring, academic counseling, career exploration, and leadership development. Workshops and seminars foster a greater awareness of university resources and promote cultural awareness. Multicultural Relations is located in 190 Millennium Student Center 314-516-6807.

Transfer Services offers a broad range of support services to the diverse population of students who transfer to UMSL from other institutions and those who are returning to complete their course of study. Transfer Services provide resources to students as they enter the university and serve as a "home" for students as they complete their baccalaureate studies at UMSL. The location of the Office of Transfer Services is 225 Millennium Student Center 314-516-5162.

The Center for Student Success also collaborates with Career Services and Disability Access Services to provide student services. Hours are convenient to both day and evening students. Students who appear to need support services but have not contacted the center may receive a notice through the Academic Alert program, which allows faculty and staff to notify the center when students need specific support.

Disability Access Services

Located in 144 Millennium Student Center, Disability Access Services 314-516-6554 voice or 314-516-5212 for TDD and its Student Support Services staff provide information, guidance, referral services, and assistance for students with disabilities.

Provisions for Auxiliary Aids, Reasonable Accommodations, and other Services to Students with Disabilities

Since the University of Missouri is committed to equal educational opportunities for qualified students without regard to disabling condition, the university will take necessary action to ensure that no qualified student with a disability is denied access to any particular course or educational program. Such action includes an assessment of the student's abilities and an evaluation of the requirements of the particular course or program.

If the university determines that some type of auxiliary aid is required, it will assist the qualified student in obtaining the necessary auxiliary aid from other sources. If the necessary auxiliary aid is not available from other sources, the university, at its option, will provide the necessary appropriate auxiliary aid.

Requests for the assessments must be made to the director of Disability Access Services no later than six weeks prior to the beginning of the next semester. If an unfavorable determination is made, the student may appeal the decision via the Discrimination Grievance Procedure in the Student Planner.

The university will make reasonable modifications to its academic requirements, if necessary to comply with legal requirements ensuring that such academic requirements do not discriminate or have the effect of discriminating on the basis of a student's known and adequately documented disability, unless the requested modification would require alteration of essential elements of the program or essential elements of directly related licensing requirements or would result in undue financial or administrative burdens. The divisional dean's office, in cooperation with the director of Disability Access Services and the department through which the requirement is fulfilled, will determine the appropriate modification or substitution.

Financial Aid

The Office of Student Financial Aid is located in 327 Millennium Student Center 314-5165526. The staff assist students with applying for financial aid, including scholarships, grants, loans, and work study. The office is open various hours to accommodate both day and evening students. Appointments are not necessary.

To apply for financial aid, students must complete a Free Application for Federal Student Aid (FAFSA). On April 1 Financial Aid staff begin awarding Federal College Work-study, Federal Supplemental Educational Opportunity Grants and Federal Perkins Loan funds to students who have completed the FAFSA and whose

official Student Aid Reports from the Federal Processing Center have arrived in UMSL's Financial Aid Office.

To be considered for all university scholarships, a student must be accepted for admission and have completed a scholarship application. There are separate forms for incoming freshmen and continuing students.

The [Student Financial Aid Office Home Page](#) has useful information including a scholarship directory that is updated biweekly. Some departments also have scholarships for their majors, so students should ask their department for that information.

Registrar/Registration/Records

The [Office of the Registrar](#), located in 351 Millennium Student Center, 314-516-5545 is responsible for registration, academic records, grades, transcripts, enrollment verification, veteran certification, change of name and/or address, ordering diplomas, and many other enrollment related services. No appointment is needed for service, and hours are convenient for both day and evening students.

Degree Audit

The Degree Audit office, 351 Millennium Student Center, 314-516 6814, provides an automated record ([DARS report](#)) that reflects a student's progress toward degree completion. This report is very useful in planning a major, tracking graduation requirements, and investigating other areas of study. [DARS reports are available online](#) or from a student's academic adviser, who will assist in the interpretation of the audit.

Office of Residential Life

Located in 101A Provincial House 314-516-6877, the [Office of Residential Life and Housing](#) offers contracts for 9 and 12 months for on-campus housing year-round in air-conditioned, furnished residence halls, in which 93 percent of rooms are singles. Residence Hall rates include all utilities, local phone service, cable, combination refrigerator and microwave, data communications hook-ups, and a tax-exempt declining-balance meal plan. The halls also offer a large swimming pool as well as laundry facilities, kitchenettes, common TV lounges, and the free campus shuttle.

For students who are at least 21 years of age, Mansion Hill Condominiums and University Park Apartments offer one- and two-bedroom unfurnished apartments. The complex is on the free campus shuttle route and offers swimming pool, picnic areas, recreation areas, and laundry facilities with rent billed to students' university account. Students interested in living in upper-class housing should contact the apartment coordinator at 314-524-9446.

As one of the most active and visible student organizations on campus, the Residence Halls Association (RHA) serves as the student voice for residence hall students, providing leadership opportunities and activities both on- and off-campus. Residential students are active in intramurals, student organizations, campus leadership positions, and other university activities. Tours of the UMSL residence halls are available by calling 314-516-6877.

Student Life

The [Office of Student Life](#) (OSL), 366 Millennium Student Center 314-516 5291, advises and serves as a facilitator for programs and services provided to student organizations at the University of Missouri St. Louis. OSL sponsors a diverse series of educational, cultural, recreational, and social programs, services, and activities that complement the academic mission of the campus and attend to developmental needs of students at UMSL.

Approximately 120 student organizations at UMSL ranging in size from 13 to 500 members, address the educational, cultural, social, recreational, and spiritual co-curricular needs of the campus community. Social fraternities and sororities, performing and fine arts, curriculum related support groups, and other special interest clubs enhance the collegiate experience. The Associated Black Collegians, International Students Organization, and Women's Center serve as resources for students on campus. Information regarding student organizations is available in 366 Millennium Student Center. Specific organizations may be contacted by mail through the same address.

University Program Board

The University Program Board, a volunteer group, initiates and implements a variety of lectures, and appearances by comedians and musical groups throughout the year. The board also sponsors games, tournaments, and discounted tickets for local sporting events, concerts, and theater. Most campus events are free to the campus community and are subsidized by student activity fees. Membership in this organization is open to students who are interested in coordinating these types of programs.

Student Government Association

The [Student Government Association](#) (SGA) of the University of Missouri St. Louis, housed in 366 Millennium Student Center 314-5165105, is the student governance body composed of both elected student

representatives from each school and college and organizational representatives from every recognized student organization that petitions for representation. 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 policy making and governance body of the university.

Student Court

The Student Court is nominated by the SGA. The five member court rules on student appeals concerning matters such as disputes between individuals and organizations, or organizations and organizations, as well as traffic parking appeals.

University Bookstore and Triton Tech

The University Bookstore 314-516-5763 is the headquarters for textbooks, reference materials, general reading books, supplies, gifts, Triton gifts and numerous logo items. Triton Tech, located in the bookstore, offers discounted software and hardware. In addition, UPS shipping services are available, as well as fax services and free notary service. Each year the bookstore sponsors special events such as Annual Fashion Show, Book Signings, Student Appreciation, Book Buy Back at the end of each semester, and more. All profits from the bookstore support operating expenses of the Millennium Student Center.

University Health, Wellness, and Counseling Services (UHWCS)

UHWCS provides services to students, faculty and staff from a holistic perspective to assist students in maintaining their optimum level of wellness so that they are able to achieve their maximum academic potential. The UHWCS receptionist arranges appointments via calls (314-516-5711) or drop-in visits at 131 Millennium Student Center. In an emergency, students can usually be seen immediately. UHWCS services are organized into three major areas: Health Services, the Wellness Resource Center, and Counseling Services.

Health Services

Health Services staff offer the following services: Treatment of minor injury and illness, screening exams, immunizations, strep throat testing, pregnancy testing, well women's exams (including Pap smear), birth control, flu shots, urinalysis, and allergy injections. Assistance with referral to medical facilities is provided upon request and when necessary. Students and employees may call (314-516-5671) or visit 131 MSC to schedule an appointment.

Student Accident and Sickness Insurance (optional for U.S. citizens): An Accident and Sickness Insurance plan is available to students and their dependents. Information concerning premiums and coverage is available upon request from University Health Services.

Immunizations: The university requires that all newly enrolled or readmitted students born after 1956 comply with the two dose MMR(Measles, Mumps, Rubella combined) policy. If a second immunization is needed it must be the combined MMR vaccine. Meningococcal vaccine is required for students residing in campus housing. Tuberculosis (TB) screening is required for students in the following categories: lived for two months or more in Asia, Africa, Central or South America, Eastern Europe; health care workers, volunteers and employees of nursing homes, prisons or other residential institutions; or contact with a person known to have active tuberculosis. Proof of immunizations (copies of immunization records) should be submitted to UHWCS in 131 MSC. The immunization policy and form on the Health Services website.

Wellness Resource Center

The Wellness Resource Center sponsors programs for smoking cessation consultation, classes, and support groups, alcohol issues support groups, sexual assault awareness, and Safe Spring Break. The center also provides information on a variety of health issues, raising awareness, and encouraging healthy lifestyle choices. In addition, blood drives held each semester offer students an opportunity to give back to their community. Students may take a health risk appraisal and get assistance with developing a personal wellness plan, which includes diet/nutrition management along with blood pressure, cholesterol and body fat percentage measurement. Students may participate in Wellness Advocates Volunteering to Educate Students (WAVES) to educate the campus community, especially students, about making health lifestyle choices.

Counseling Services

Counseling Services provides personal counseling, consultation, psycho-educational workshops and presentations to classes and student groups. We take the confidentiality of your contacts with us very seriously. Except for the case of very extreme situations, both the content of counseling sessions and the fact that a student or employee has used our services are kept strictly confidential.

Personal Counseling can help students navigate through times of stress and/or overcome barriers to success. Some of the common issues for which students seek counseling include stress/anxiety, depression, low self-esteem, relationship or family issues, loss and grief, eating disorders, sexual assault, a history of abuse.

Students groups and faculty are invited to call Counseling Services 314-516-5711 for speakers on such topics as test anxiety, assertiveness, healthy relationships, dealing with difficult people, personality styles, etc.

Welcome Center

The Welcome Center (257 MSC, across from the Bookstore) is the hospitality center of the campus. Staff answer questions and provide directions to all campus offices. The center also serves as the tour headquarters for prospective students and contains information from all departments, colleges, and offices. The Welcome Center welcomes all visitors to UMSL.

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Center for International Studies

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Faculty

Joel Glassman, Associate Provost, Academic Affairs and Associate Professor of Political Science. Director
Ph.D., University of Michigan

Allan W. Bird, The Eiichi Shibusawa-Seigo Arai Professor in Japanese Studies and Professor of Management
Ph.D., University of Oregon

Adeniyi Coker, The E. Desmond Lee Professor in African and African American Studies and Professor of
Theatre

Ph.D., Temple University

Michael Cosmopoulos, The Hellenic Government-Karakas Family Foundation Professor in Greek Studies and
Professor of Archaeology

Ph.D., Washington University in St. Louis

Hung-Gay Fung, The Dr. Y.S. Tsiang Professor in Chinese Studies and Professor of Finance

Ph.D., Georgia State University

Gearóid Ó hAllmhuráin, The Smurfit-Stone Professor in Irish Studies and Professor of Music

Ph.D., The Queen's University of Belfast

E. Wendy Saul, The Dr. Allen B. and Mrs. Helen S. Shopmaker Professor for Education in cooperation with
Springboard to Learning and Professor of Education

Ph.D., University of Wisconsin-Madison

Eamonn Wall, The Smurfit-Stone Professor in Irish Studies and Professor of English

Ph.D., City University of New York

General Information

The Center for International Studies 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 area communities.

The Center houses the Joint Center for East Asian Studies of UMSL and Washington University, the E. Desmond Lee Global Ethnic Collaborative, the Karakas Family Foundation Alliance for the Advancement of Hellenic Studies, and the Endowed Professorships in African/African American Studies, Chinese Studies, Greek Studies, international education, Irish Studies, Japanese Studies, the German Culture Center and the Greek Culture Center.

Fellows

Each year a number of UMSL faculty are appointed as research Fellows.

Study Abroad and Exchange Programs

The Study Abroad section of this Bulletin contains details about campus study abroad and international exchange programs. The center's Study Abroad Office administers those programs.

Office of International Student and Scholar Services

The Office of International Student and Scholar Services 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.

Undergraduate Certificate Programs

Africana Studies Certificate

Students seeking the Africana studies certificate have two options: an emphasis in African studies and an emphasis in African diaspora studies.

I. African Studies:

1) At least one course in two of the following areas for a total of 9 hours:

Anthropology

ANTHRO 2124, Cultures of Africa

Art and Art History

ART HS 1105, Introduction to The Arts of Africa

History

HIST 1061, African Civilization to 1800

HIST 1062, African Civilization Since 1800

Political Science

POL SCI 2580, African Politics

2) One course in two of the following areas, for a total of 6 hours:

Anthropology

ANTHRO 3235, Women in Sub-Saharan Africa: A Contemporary Perspective

History

HIST 2062, West Africa Since 1800

3) An independent study course (3 hours) in which a research paper will be written on some aspect of African Studies

II. African Diaspora Studies

An approved course in African diaspora studies, three hours.

One course from each of the following areas for a total of 6 hours.

AFRICA

Anthropology

ANTHRO 2124, Cultures of Africa

History

HIST 1061, African Civilization to 1800

HIST 1062, African Civilization Since 1800

DIASPORA

Communication

COMM 3332, Intercultural Communication

Anthropology

ANTHRO 1005, Human Origins

History

HIST 1003, African-American History

HIST 1063, The African Diaspora to 1800

HIST 1064, The African Diaspora Since 1800

HIST 2017, African-American History: From Civil Rights to Black Power

At least one course from each of the following areas for a total of 6 hours:

AFRICA

Anthropology

ANTHRO 3235, Women in Sub-Saharan Africa: A Contemporary Perspective

Art and Art History

ART HS 1105, Introduction to the Arts of Africa

History

HIST 2062, West Africa Since 1800

Political Science

POL SCI 2580, African Politics

DIASPORA

Communication COMM 3332, Intercultural Communication

English
ENGL 1700, Afro-American Literature

History
HIST 2015, Topics in African-American History
HIST 2063, African Diaspora to 1800
HIST 2064, African Diaspora Since 1800

Music
M H L T 1060, Introduction to African-American Music

Political Science
POL SCI 2320, African Americans and the Political System

*** Psychology**
PSYCH 4392, Selected Topics in Psychology: African American Psychology

Sociology
SOC 4360, Sociology of Minority Groups

*Note: Students should take **PSYCH 4392** only when the African American Psychology topic is offered.

East Asian Studies Certificate

1) First- and second-year Chinese, Japanese, Korean, or other appropriate Asian language (20 hours taken in four semesters).

2) **HIST 1041** and **HIST 1042**, East Asian Civilization

3) One course in three of the following areas, a total of nine hours:

Art and Art History

ART HS 1110, The Arts of Japan
ART HS 4408, Topics in Asian Art

History

HIST 2031, Modern Japan: 1850 to Present
HIST 2032, Modern China: 1800 to Present
***HIST 4004**, Senior Seminar
* Note Students should take HIST 4004 only when the topic is appropriate to East Asia.

Music

M H L T 1090, Non-Western Music II

Philosophy

PHIL 1120, Asian Philosophy

Political Science

POL SCI 2550, East Asian Politics
***POL SCI 3590**, Studies in Comparative Politics
***POL SCI 3890**, Studies in International Relations
*Note Students should take POL SCI 3590 or POL SCI 3890 only when the specific topic is appropriate.

An independent study course (3 hours) in which a research paper will be written on some aspect of East Asian studies.

European Studies Certificate

1) Four semesters of college work or the equivalent in a modern European foreign language.

2) **HIST 1032**, Topics in European Civilization: 1715 to the Present.

3) One course each from at least four of the following areas, a total of 12 hours. Students should consult advisers at the Center for International Studies to determine how these courses can best be arranged to meet their interests.

Art and Art History

ART HS 2235, Italian and Northern European Renaissance Art
ART HS 2245, Baroque Art and Architecture
ART HS 4435, Topics in Renaissance Art
ART HS 4445, Topics in Seventeenth- and Eighteenth-Century European Art
ART HS 4455, Topics in Modern Art

English

ENGL 2280, The Contemporary World in Literature
ENGL 2320, English Literature II
ENGL 4450, The Eighteenth-Century English Novel
ENGL 4540, The Nineteenth-Century English Novel
ENGL 4580, Literature of the Late Nineteenth and Early Twentieth Centuries
ENGL 4750, Modern British Fiction
ENGL 4920, Major Works of European Fiction

History

HIST 1031, Topics in European Civilization: Emergence of Western Europe to 1715
HIST 2086, The Age of Reformation
HIST 2092, Europe 1900 - 1950: War and Upheaval
HIST 2093, Europe, 1950 - Present: Peace and Prosperity
HIST 3085, The Age of the Renaissance

Foreign Languages and Literatures

French

FRENCH 2110, Modern French Literature in Translation
FRENCH 2150, European Literature in Translation: Special Topics
FRENCH 3211, Contemporary French Culture
FRENCH 3281, French Literature II: Nineteenth and Twentieth Centuries
FRENCH 4341, Seventeenth-Century French Theatre and Poetry
FRENCH 4342, Seventeenth-Century French Prose
FRENCH 4353, Eighteenth-Century French Literature
FRENCH 4354, Eighteenth-Century French Theatre and Novel
FRENCH 4362, Nineteenth-Century French Novel
FRENCH 4371, Twentieth-Century French Novel
FRENCH 4375, Modern French Theatre

German

GERMAN 2150, European Literature in Translation: Special Topics
GERMAN 3201, Introduction to German Literature
GERMAN 3202, The German Novelle and Drama
GERMAN 3210, German Culture and Civilization

Spanish

SPANISH 4310, Spanish Literature from 1898 to 1939
SPANISH 4315, Spanish Literature from 1939 to the Present
SPANISH 4320, Realism and Naturalism in the Nineteenth-Century Spanish Novel
SPANISH 4321, Poetry and Drama of the Nineteenth Century
SPANISH 4325, Poetry and Drama of the Golden Age

Music

M H L T 4220, Music of the Renaissance
M H L T 4230, Music of the Baroque
M H L T 4240, Music of the Classic Period
M H L T 4250, Music of the Romantic Period

Philosophy

PHIL 3303, Early Modern Philosophy
PHIL 3304, Kant and Nineteenth-Century Philosophy
PHIL 3305, Twentieth-Century Philosophy

Political Science

POL SCI 2510, The Politics of European Union
POL SCI 2560, Russia and the New Republics
***POL SCI 3590**, Leadership and the Global Gender Gap
***POL SCI 3890**, Studies in International Relations

***POL SCI 4510**, Comparative Public Policy and Administration
*Note Students should take POL SCI 3590, 3890, or 4510 only when the topic is appropriately European.

An independent study course (3 hours) in which a research paper will be written on some aspect of European studies.

Greek Studies Certificate

Students seeking the Greek Studies Certificate must complete both a language studies component and a focus area component. Courses are 3 credit hours unless noted otherwise.

I. Greek Language. Students must complete at least 9 credit hours from the following courses.

Ancient Greek

GRK ANC 1001, Ancient Greek 1 (5)
GRK ANC 1002, Ancient Greek 2 (5)
GRK ANC 2101, Intermediate Ancient Greek Language and Culture
GRK ANC 2151, Special Readings (1-3)
GRK ANC 2190, Greek and Latin in English Today

Modern Greek

GRK MOD 1001, Modern Greek I (5)
GRK MOD 1002, Modern Greek II (5)
GRK MOD 2101, Intermediate Modern Greek Language and Culture
GRK MOD 2150, Modern Greek Literature in Translation
GRK MOD 2190, Special Readings (1-3)

II. Focus Area. Students must complete at least 9 credit hours in one of the following focus areas.

1. Literature and Culture

Anthropology

ANTHRO 4350, Special Study*

English

ENGL 1200, Myth

History

HIST 1030, The Ancient World
HIST 2115, Greek History and Culture (same as ANTHRO 2115 and GK MOD 2772)

Modern Greek

GRK MOD 2150, Modern Greek Literature in Translation**
GRK MOD 2190, Special Readings (1-3)**

Music History and Literature

MUSIC 4270, A History of Byzantine Music and Hymnography

Philosophy

PHIL 3301, Ancient Philosophy
PHIL 4401, Plato
PHIL 4402, Aristotle

2. Archaeology and Art History

Anthropology

ANTHRO 2190, Special Topics in Archaeology*
ANTHRO 4309, Archaeological Field School (3-6)*
ANTHRO 4350, Special Study (1-3)*

Art History

ART HS 2211, Art and Archaeology of the Ancient World
ART HS 2212, Greek Art and Archaeology
ART HS 4411, Topics in Ancient Art and Archaeology*
ART HS 3390, Special Study (1-10)*
ART HS 4490, Special Study (1-10)*

Notes:

*Must be taken only when appropriate to Greek Studies.

**These courses will count for either the language requirement or the focus area requirement but not for both.

International Business Certificate

- 1) Students must complete a minimum of 12 hours in the Business Internship Program in London or in some other approved overseas study program.
- 2) One course from Area 1 and one from Area 2 a total of six hours.

Business Administration

FINANCE 3580, International Corporate Finance
MGMT 3689, International Business and Society
MKTG 3787, Marketing in the European Union

International Studies

ECON 3320, Economic Development
POL SCI 3830, International Political Economy
POL SCI 3890, Studies in International Relations (International Relations of East Asia)
SOC 3241, Globalization and its impact on Society and Culture
SOC 4354, Sociology of Business and Work Settings

In lieu of a course from the International Studies Area, students may substitute one course (3 hours) at the advanced level of a foreign language. Advanced level is defined as a course beyond the 13 hour introductory language sequence.

- 3) An independent study course is not required for this certificate option.

Note: Students participating in other approved overseas study programs such as Hogeschool Holland Business School, Ecole Superieure de Commerce de Saint Etienne, or Université Jean Moulin, may also qualify to apply 12 credit hours toward the International Business Certificate.

Latin American Studies Certificate

- 1) Thirteen credit hours or the equivalent in Spanish.
- 2) Either **HIST 1051**, Latin American Civilization, or **SPANISH 3211**, Hispanic Culture and Civilization: Spanish America.
- 3) A total of 12 hours from at least three of the following areas:

Anthropology

ANTHRO 2134, Archaeology of the Inca, Aztec, and Maya

Art and Art History

ART HS 1103, Pre-Columbian Art of Mexico and Central America

History

HIST 2051, History of Latin America: To 1808
HIST 2052, History of Latin America: Since 1808

Political Science

POL SCI 2530, Political Systems of South America
POL SCI 2540, Political Systems of Mexico, Central America, and the Caribbean
***POL SCI 3590**, Studies in Comparative Politics
* Note Students should take **POL SCI 3590** only when the topic is appropriate to Latin America.

Spanish

SPANISH 3211, Hispanic Culture and Civilization: Spanish America
SPANISH 3281, Introduction to Hispanic Literature: Spanish America
SPANISH 4345, Spanish-American Literature of the Twentieth Century
SPANISH 4351, Spanish-American Fiction in the Twentieth Century

An independent study course (3 hours) in which a research paper will be written on some aspect of Latin American studies.

Graduate Certificate in International Studies

A Graduate Certificate in International Studies is a program of study featuring advanced multidisciplinary

course work designed for individuals, including teachers and other professionals, who wish to expand their knowledge and understanding of international and cross-cultural affairs. The Certificate is sponsored by the Center for International Studies and the Departments of Economics, History, Foreign Languages and Literatures, and Political Science. A broad set of course offerings is available in these and other departments, with the flexibility for students to tailor the program to their particular interests and needs. The program has been developed as a vehicle for bringing together the resources of a distinguished faculty in international studies and for providing an opportunity for further graduate learning. 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

Students must complete at least 12 hours chosen from the following list of core courses:

Business Administration

FINANCE 6580, International Finance, Investment, and Commercial Relations

LOG OM 5381, International Logistics and Operations Management

ACCTNG 5480, International Accounting

Economics

ECON 5300, International Trade

ECON 5301, International Finance

History

HIST 6112, Readings in European History Since 1715

HIST 6113, Readings in East Asian History

HIST 6114, Readings in Latin American History

HIST 6115, Readings in African History

Political Science

POL SCI 6450, Proseminar in Comparative Politics

POL SCI 6451, Seminar in Comparative Politics

POL SCI 6480, Proseminar in International Relations

POL SCI 6481, Seminar in International Relations

POL SCI 6488, Studies in International Relations

Sociology

SOC 5410, Comparative Social Structures

Students must complete an additional six hours chosen from the following:

Economics

ECON 3300, International Economic Analysis

ECON 4980, Special Readings

English

ENGL 4920, Major Works Of European Fiction

History

HIST 4001, Special Readings [when appropriate]

Foreign Languages and Literature

FRENCH 4362, Nineteenth-Century French Novel

FRENCH 4365, Modern French Poetry

FRENCH 4371, Twentieth-Century French Novel

FRENCH 4375, Modern French Theatre

SPANISH 4310, Spanish Literature from 1898-1939

SPANISH 4315, Spanish Literature from 1939 to Present

SPANISH 4320, Realism and Naturalism in the Nineteenth Century Spanish Novel

SPANISH 4321, Poetry and Drama of the Nineteenth Century

SPANISH 4345, Spanish-American Literature of the Twentieth Century

SPANISH 4351, Spanish-American Fiction in the Twentieth Century

Music

M H L T 4250, Music of the Romantic Period

M H L T 4260, Music from 1900 to the Present

Political Science

POL SCI 4510, Comparative Public Policy and Administration

POL SC 4850, International Law

POL SC 6485, Directed Readings and Research in International Relations

Note: Students may not count both BUS AD 6580 and BUS AD 3580. No more than 12 credit hours may be from any one discipline.

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University of Missouri - St. Louis

Division of Continuing Education

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Division of Continuing Education Home Page

As the region's only public research university, UMSL serves students who are in many ways nontraditional in their demographic make-up, their approach to higher education, and their educational needs. Meeting the needs of these nontraditional students while extending the expertise of the university to the community is the mission of the Division of Continuing Education.

Through Continuing Education, the university's colleges, schools, and centers administer a wide variety of credit courses, noncredit programs, and problem-oriented research for the benefit of the greater St. Louis metropolitan area and beyond. Programs are offered both on and off campus and online. Research, generally of an applied, urban-related nature, is designed to solve specific problems of client groups.

Arts and Sciences

Continuing Education in the College of Arts and Sciences includes credit courses and noncredit programs from the college's departmental disciplines, including courses and workshops in archaeology, microcomputers, writing, languages, history, and social and physical sciences. Interdisciplinary teaching and research programs deal with such fields as social work, the humanities, women's studies, and economics.

The Center for Entrepreneurship and Economic Education provides credit courses, noncredit programs and curriculum consultations to teachers and schools.

The Microcomputer Program develops and teaches applied computer courses and offers a Chancellor's Certificates on the Computer, along with other certificate programs.

The Advanced Credit Program provides an enrichment experience for university-bound secondary students by offering freshman-level courses for college credit in selected high schools.

The Gateway Writing Project offers credit courses, noncredit programs, and a Graduate Certificate in the Teaching of Writing for elementary, secondary, and college-level teachers. The Gateway Writing Project works with schools and districts to provide professional development programs that meet their individual needs.

Business Administration

Continuing Education credit and noncredit programs through the College of Business Administration are offered in multiple areas, including financial planning; training, facilitation and coaching best practices; organizational development; team leadership; human resource management; broad survey courses; a variety of short, targeted offerings; and customized courses designed to meet individual client needs. Several certificate programs are offered as well as preparatory courses for professional certification programs in financial planning, human resources, and project management.

Education

The College of Education, which is accredited by the National Council for Accreditation of Teacher Education (NCATE) for the preparation of teachers, counselors, and administrators, offers an array of graduate and doctoral programs in education. Through the University's Division of Continuing Education, courses and programs are offered for both practitioners and those considering the field of education as a career. Many credit courses are available at sites throughout the metropolitan area, and professional development conferences and institutes are specially designed to help practitioners stay current in their fields of study. Programs also can be tailored to meet the specific needs of groups or organizations and can be offered on site or at other convenient places and times.

Transition to Teaching Program

The Transition to Teaching Program provides a special certification route for individuals who currently hold bachelor degrees and who want to enter the teaching profession. The program is job-embedded and individuals work full time in classrooms while taking their certification coursework.

Fine Arts and Communication

The College of Fine Arts and Communication offers a variety of Continuing Education activities to the community. Four endowed professorships are focused on community outreach in the arts. The award-winning E. Desmond Lee Music Education Collaborative, and other collaborative activities undertaken by the College in conjunction with arts organizations in the greater St. Louis area, all contribute to the college mission. A range

of credit and noncredit fine arts outreach programs are offered in partnership with the Saint Louis Symphony, Opera Theatre of Saint Louis, the Saint Louis Art Museum, and the Saint Louis Black Repertory Company.

Graduate School and Public Policy Administration

The Nonprofit Management and Leadership Program offers comprehensive education and training for professional staff, board members, and other leaders of nonprofit and voluntary organizations, as well as students and others wishing to explore a future in the field. Through Continuing Education, the program offers noncredit seminars, workshops, and conferences, both on and off campus.

Nursing

The College of Nursing at the University of Missouri-St. Louis offers an RN to BSN program for Registered Nurses both on and off campus. Currently, the college offers the RN to BSN courses at St. Charles Community College, the SSM Health System at DePaul Health Center, and St. John's Mercy Medical Center in St. Louis. The MSN/FNP Program is offered at various outreach sites, depending on interest.

Optometry

The University of Missouri St. Louis College of Optometry offers COPE approved advanced higher education programs that meet the requirements of state boards for individual relicensing. The dissemination of research data along with interactive panel programs of discussions of current issues are developed to advance clinical vision care.

Outreach Sites

The Division of Continuing Education offers selected graduate and undergraduate credit courses at UMSL Lindbergh, a satellite center located at Lindbergh High School in south St. Louis County. Continuing Education also offers credit courses leading to degree completion at other metropolitan sites, including St. Charles Community College, Mineral Area College, Jefferson College, the St. Louis Community College South County Education and University Center, and St. Louis Community College at Wildwood.

Community Partnership Project

The Community Partnership Project develops initiatives that link University resources with the needs and priorities of residents and communities in the St. Louis region. The Community Partnership Project sponsors seminars and brown bag sessions, convenes teams to respond to key urban issues and provides support for faculty and students in connecting with community organizations.

Executive Leadership Consortium

The UMSL Executive Leadership consortium offers on-campus and off-campus credit and noncredit programs, contract programs, consultation, and action research through various campus units. These programs are offered in multiple areas, including leadership education training and advancement. A variety of short, targeted offerings and customized courses are designed to meet individual client needs. These programs and courses are developed on our own initiative and in response to expressed needs to best meet the needs of the lifelong learner.

In-house Training

Specialized research and technical assistance and in house training programs are available to local businesses and organizations. With the help of expert faculty and staff consultants, Continuing Education is equipped to deliver specialized training on an in house basis.

J.C. Penney Conference Center

This large conference facility at UMSL houses a 435 seat auditorium, as well as six large and four small conference rooms, designed to provide an excellent academic environment and maximum convenience for course participants. A complete conference staff provides administrative support for seminars and conferences, as well as coordination for special hosted programs each year.

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College of Arts and Sciences

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College of Arts and Sciences Home Page

General Information

The College offers a wide range of accredited baccalaureate, master's and doctoral degrees and multi-disciplinary certificates through 14 departments, the School of Social Work and the Institute for Women's and Gender Studies.

Anthropology (B.A.)
Biochemistry & Biotechnology (B.S., M.S.)
Biology (B.A., B.S., M.S., Ph.D.)
Chemistry and Biochemistry (B.A., B.S., M.S., Ph.D.)
Criminology and Criminal Justice (B.S., M.A., Ph.D.)
Economics (B.A., B.S., M.A.)
English (B.A., M.A., M.F.A.)
Foreign Languages and Literatures (B.A. in French and B.A. in Spanish)
History (B.A., M.A.)
Liberal Studies (B.L.S.)
Mathematics and Computer Science (B.A., B.S., M.A., M.S., Ph.D.)
Philosophy (B.A., M.A.)
Physics and Astronomy (B.A., B.S., M.A., Ph.D.)
Political Science (B.A., M.A., Ph.D.)
Public Policy and Administration (M.P.P.A.)
Psychology (B.A., M.A., Ph.D.)
Social Work (B.S.W., M.S.W.)
Sociology (B.A., B.S., M.A.)
Women's and Gender Studies (Certificate)

The College of Arts and Sciences consists of some 220 full-time faculty members in the following departments and school, each offering work in specific undergraduate degree programs: anthropology, biology, chemistry, criminology and criminal justice, economics, English, foreign languages and literatures, history, mathematics and computer science, philosophy, physics and astronomy, political science, psychology, social work, and sociology.

In addition the College offers a Bachelors Degree in Biochemistry and Biotechnology and a Bachelor of Science in Liberal Studies.

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, economics, English, history, mathematics and computer science, physics and astronomy, philosophy, political science, psychology, social work, and sociology. An interdisciplinary master's degree in public policy administration is offered in cooperation with the College of Business Administration. Specific degree requirements for both undergraduate and graduate degree programs are described in the departmental sections which follow this general information on the college.

Coursework in the evening or through on-line and/or video instruction is made available by all departments of the College and the School of Social Work. The following degree programs can be completed in the evening:

Bachelor of Arts in Biology, Chemistry, Economics, English, History, Mathematics, Physics, Political Science, Psychology, and Sociology.

Bachelor of Science in Biology, Chemistry, Computer Science, Criminology and Criminal Justice, Economics Mathematics, Physics, and Sociology.

Bachelor of Social Work

Bachelor of Liberal Studies

Consult the website of the department in which you plan to major for details on degree requirements and a

three year schedule of planned course offerings.

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., BSW., 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 & university requirements.

Academic Policies

Grade Requirements

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

- Earn 120 graded hours with a C grade or better, which constitutes a complete degree program neither a grade of C- nor a satisfactory grade may be counted.
- Have a minimum UMMSL 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, all students are required to complete a course that emphasizes Asian, African, Middle Eastern, Latin American, Pacific aboriginal, Native American, or a comparable culture. A list of courses which satisfy this requirement can be found in the introductory section of this Bulletin.

Residency Requirements

Unless otherwise specified, a transfer student must complete 12 hours of graded work at UMMSL 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 UMMSL 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, foreign languages/literatures, geology, history, mathematics/computer science, media studies, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, theatre and dance, 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, French, history, mathematics, philosophy, physics, political science, psychology, sociology, and Spanish.

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 the Department of Foreign Languages and Literatures 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 Foreign Languages and Literatures Department 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 (Music 1400, 1410, 1500, 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

(See Interdisciplinary Programs 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 Social Work (B.S.W.)

The School of Social Work offers the B.S.W. degree, stressing the scientific and applied aspects of social work.

Minors

A number of minors are available at UMSL. Some are offered by individual departments, while others, such as Classical Studies are interdisciplinary in nature and involve a number of 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 archaeology biochemistry, biotechnology, forensic economics, labor studies, gerontology, studies in religions, trauma studies, tropical and conservation biology, nonprofit organization management and leadership, psychology-clinical respecialization, women's and gender studies, and writing.

International Studies Certificate

In cooperation with the Center for International Studies and other Colleges, the College offers certificate programs in African, East Asian, European, Greek, 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, foreign languages and literatures, history, and political science.

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 and earn a substantial income. 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 continuing education branch of the College of Arts and Sciences. These courses are open to UMSL students and qualify for regular academic credit toward degrees in the college. In addition, noncredit courses are offered in a range of disciplines within the college.

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Department of Anthropology

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Anthropology Department Home Page

Faculty

Pamela Ashmore, Associate Professor, Chairperson
Ph.D., Washington University

Michael Cosmopoulos, Hellenic Government-Karakas Family Foundation Endowed Professor of Greek Studies and Professor of Archaeology
Ph.D., Washington University

Jay Rounds, Des Lee Professor of Museum Studies
Ph.D., University of California-Los Angeles

Susan E. Brownell, Professor
Ph.D., University of California-Santa Barbara

Sheilah Clarke-Ekong, Associate Professor,
Ph.D., University of California-Los Angeles

Margo-Lea Hurwicz, Associate Professor
Ph.D., University of California-Los Angeles

Jacquelyn Lewis-Harris, Assistant Professor of Education and Director of the Center for Human Origin and Cultural Diversity
Ph.D., Washington University

Michael Ohnersorgen, Assistant Professor
Ph.D., Arizona State University

Allon Uhlmann, Assistant Professor
Ph.D., Australian National University

Patti Wright, Assistant Professor
Ph.D., Washington University

Donna Hart, Adjunct Associate Professor
Ph.D. Washington University in St. Louis

Mary Vermillion, Adjunct Associate Professor
Ph.D., University of Illinois-Chicago

Lucretia Kelly, Adjunct Assistant Professor
Ph.D., Washington University

Catherine Koziol, Adjunct Assistant Professor
M.A., Washington University

John Wolford, Adjunct Assistant Professor
Ph.D., Indiana University

Paul Schoomer, Senior Lecturer
B.A., Washington University

Jen Glaubius, Lecturer
M.A., University of Cincinnati

General Information

The aim of anthropology is to understand the diversity of humans. For 100 years we have studied the cultures of the world, teaching people how to see themselves more clearly through those who are different from themselves and how to work with the underlying humanity that unifies all cultural differences.

Anthropology is the study of humans through all time and space. The discipline considers our struggle to adapt to and survive in the natural and social environments and to improve our lot in the face of perpetual change. Anthropologists teach how cultures evolve and the role of individuals and groups in the invention and perpetuation of cultural beliefs, behaviors, symbols, and systems. Anthropologists have accumulated in-depth knowledge of hundreds of cultures and use this to understand better our own cultural beliefs, actions, and institutions, as well as those of people from other cultures. As the science of cultures, anthropology brings a powerful perspective to bear in understanding the emerging global order. Cross-cultural and evolutionary insights and knowledge help us envision how we can incorporate vast human diversity into a unified world.

order of peace, prosperity, justice, and opportunity.

Degrees and Areas of Concentration

A Bachelor of Arts in Anthropology is offered with a focus on applied and theoretical skills. The anthropology faculty are actively involved in cultural, archaeological, and biological anthropology research at home and abroad.

Cultural Anthropology

Faculty are involved in research in St. Louis, Los Angeles, Ghana, South Africa, China, Israel, Australia, and Native American communities. They encompass studies in health care choices of elder citizens, museum studies, gender and sexuality, body culture and sports, culture diversity principles, educational anthropology and more. Opportunities abound for students to pursue diverse research experiences on a vast range of topics on human actions, beliefs and organization.

Archaeology

Faculty are involved in regional and global research of both New and Old World Cultures. Students may join faculty in excavations of an 800-year-old ceremonial site at Cahokia Mounds, Illinois a 10th-15th century pre-Aztec society in Northwestern Mexico, and a Bronze Age administrative center near Iklaina, Greece. The department also has an archaeology lab and library with one of the largest extant collections of prehistoric and historical artifacts from eastern Missouri.

Biological Anthropology

Faculty are active in the study of the behavior, ecology, and evolution of primates and of educational issues in the study of paleoanthropology (fossil record of human origins). Students have conducted original research at the St. Louis Zoo. They can study Forensic Anthropology and work with the department's own collection of 19th century skeletal remains.

Student Experience

Students may work closely with faculty in designing their personal course of study and carrying out their own research projects in any of the above fields of study. Research results written by students have been presented at professional meetings, published, and presented to government and community agencies for use in planning and development. Students are encouraged to participate in the department's network of internships, providing an opportunity to practice newly acquired skills. As a capstone experience, all students, under faculty supervision, complete a significant independent research project for the Senior Seminar, culminating in written and oral reports to student colleagues and the faculty. The department encourages study abroad and in other regions of the United States and has scholarship funds to assist. There is an active Association of Student Anthropologists that sponsors an intercultural film series, speakers, and social activities.

Paid undergraduate positions are available on a competitive basis to anthropology majors as department teaching assistants and faculty research assistants.

Minor in Anthropology

The department offers a minor in anthropology. The minor is designed to offer students a flexible introduction to the fundamentals of the discipline to complement their major field of study. A minor is advisable for anyone planning a career with intercultural or international dimensions, where knowledge of cultural systems, environments, values, and symbols is useful.

Certificate in Archaeology

The certificate in archaeology provides applied training in both laboratory and field methods to students who could be hired to assist professional archaeologists in area firms. Internships can be arranged with the UMSL archaeology lab or with a local institution (e.g. Cahokia Mounds State Historic Site, Missouri Historical Society, Mastodon State Historic Site). These internships can be conducted on Saturdays, Sundays or in the evenings.

Undergraduate Studies

General Education Requirements

Majors must satisfy the university and college general education requirements. Any foreign language may be used to meet the language requirement for the B.A. degree.

Degree Requirements

Bachelor of Arts in Anthropology

Six hours of credit will be accepted for courses taken on a satisfactory/unsatisfactory basis from any departmental elective. The statistics requirement may be taken on an S/U basis. All other required courses for the major must be completed with a grade of C- or better. The following courses are required:

- ANTHRO 1005**, Introduction to Biological Anthropology
- ANTHRO 1011**, Introduction to Cultural Anthropology
- ANTHRO 1019**, Introduction to Archaeology
- ANTHRO 3202**, History, Theory, and Practice of Anthropology

SOC 3220, Sociological Statistics, or any other college level statistics course
ANTHRO 4301, Ideas and Explanations in Anthropology
ANTHRO 4308, Practicum in Cultural Research Methods or **ANTHRO 4310**, Laboratory Methods in Archaeology or **ANTHRO 4311**, Primate Research Methods
ANTHRO 4315, Senior Seminar
ANTHRO 4316, Senior Seminar Tutorial

Two courses from two **different** subfields in Anthropology (Cultural Anthropology, Archaeology, Biological Anthropology, or Linguistic Anthropology) numbered 2100-2199
Two courses in Anthropology numbered 3200-3299, in addition to 3202.

The total number of hours required for the major is 39.
Students may elect to take up to, but not to exceed, 12 additional hours in anthropology courses of their choice.

At the end of the program, students should have these competencies:

1. **Discipline-Specific (Content) Knowledge**

Graduates will understand 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.

2. **Communication Skills**

Students will develop social science writing skills, including writing of a research proposal for a grant agency and a substantial research report. Students will develop oral presentation skills, including presenting a formal research report.

3. **Information Management/Quantitative Skills**

Students will master research methods in one of the subfields of anthropology (cultural anthropology, biological anthropology, archaeology). Students will learn to design and conduct an original research project, working in close cooperation with faculty.

4. **Valuing/Ethics/Integrity**

Students will understand the professional ethics and codes of conduct of the discipline.

5. **Critical Thinking Skills**

Students will develop the ability to apply anthropological concepts in performing critical analysis of broad historical trends and complex social issues. Students will understand cultural diversity, thus preparing them to function in multicultural or international settings.

6. **Application/Internship Skills**

Students 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 3202, 4301, 4308 or 4310, 4315, 4316, and one other course numbered from 3000 to 5000.

Anthropology Minor

The minor is designed to offer students a flexible introduction to the fundamentals of the discipline to complement their major field of study. There are 3 possible emphases: Cultural Anthropology, Archaeology, and Biological/Forensic Anthropology. One course should be selected from each of the following 5 groups:

1. **ANTHRO 1011**, Introduction to Cultural Anthropology OR

ANTHRO 1019, Introduction to Archaeology OR

ANTHRO 1005, Biological Anthropology OR

ANTHRO 1006, Introduction to Non Human Primates

2. One 2000-level Anthropology course

3. One 3000-level Anthropology course

4. One 4000-level Anthropology course

5. One elective anthropology course at any level.

A minimum of 15 anthropology credit hours is required. Grades of C- or better must be attained in all courses used to satisfy these requirements. One Elective course taken on an A/U basis may be applied to the minor.

Students in the Bachelor of Liberal Studies must take Anthropology 4301 as their capstone course.

Archaeology Certificate

ANTHRO 1019, Introduction to Archaeology

One anthropology course at the 2100-2199 level with an archaeological emphasis.

One anthropology course at the 3200-3299 level with an archaeological emphasis.

ANTHRO 4310, Laboratory Methods in Archaeology

ANTHRO 4309, Archaeological Field School
ANTHRO 4326, Internship in Archaeology (1-6 credit hours)

Career Outlook

The B.A. in Anthropology equips the student for employment in almost any area in which a bachelor's degree is sufficient and a sensitivity to cultural values and diversity is important. Graduates have found employment as university professors and lawyers and in archaeology research programs, urban development, planning programs, health care delivery, human services, many areas of business, government service, teaching, computer systems design, university administration, and many other areas. Anthropology is excellent preparation for graduate and professional training in administration, the helping professions, development work, law, environmental studies, international and human resource areas of business, and in many other areas, depending upon individual interests. Many UMSL anthropology graduates have gone on to advanced training in master's, doctoral, and professional programs in respected universities around the country. For more career information, contact the department at 516-6020 for an appointment to talk with an appropriate faculty member or to request an information packet.

Course Descriptions

ANTHRO 1005 Introduction to Biological Anthropology (4)

Biological anthropology studies evolutionary theory and its development, the evolution/creationist debate, Mendelian and population genetics, the evolutionary place of humans within the animal kingdom, anatomical and behavioral characteristics of primates, fossilization, primate evolution, the human evolutionary fossil record, biological variability in modern humans, race as a biological concept, and applied biological anthropology. In addition to 3 hours of lecture, 1 hour per week is spent in lab classifying ancient human fossils, observing monkeys and apes at the zoo, and doing other projects.

ANTHRO 1006 Introduction to Non-Human Primates (3)

As a general survey of our closest living relatives, this course introduces the ecology, cognition, communication, social and sexual behavior, and fossil history, of non-human primates. The work of well-known primatologists is used to illustrate various aspects of field research. Conservation status of primates in the wild is assessed as well as current threats to survival.

ANTHRO 1011 Introduction to Cultural Anthropology (3) [V, SS, CD]

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.

ANTHRO 1015 Introduction to Folklore (3)

Introduces the basic concepts of folklore. Examines the connections between folklore as a discipline and anthropology as a discipline. Examines specific folk cultures both in Western societies and in non-Western societies. Emphasizes the view of folk culture as a dynamic part of modern as well as historical societies, with a constant focus on the human element that comprises the very heart and soul of culture.

ANTHRO 1019 Introduction to Archaeology (3) [MI, SS, CD]

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.

ANTHRO 1021 The Body in Culture (3) [CD]

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 cultural beliefs in five areas: how the body works sex and gender eating manners and food pain and punishment beauty and bodily mutilation.

ANTHRO 1025 World Cultures (3) [V, SS, CD]

An ethnographic survey of the major culture areas of the world (Africa, Asia, North and South America, Europe, and Oceania).

ANTHRO 1033 World Archaeology (3) [MI, SS, CD]

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.

ANTHRO 1035 Ancient Greek Civilization and Culture (3)

A survey of the history, language, literature, art, science, and philosophy of the ancient Greeks from prehistory to the Roman conquest. It covers the glamorous Minoan-Mycenaean civilization, the rise of classical Greek civilization and the golden age, the history of the city states such as Athens and "Sparta, and the Hellenistic period under Alexander the Great and his descents. Examines the nature of the ancient Greek language, surveys literary classics such as the Illiad and the Odyssey, and describes the archaeology of Greek myths based on the ongoing UMSL archaeological project in Greece. Discusses the rise of humanism, the ancient Olympic Games, and the legacy of ancient Greece in Western civilization.

ANTHRO 1041 Sex and Gender Across Cultures (3) [CD]

This course considers womanhood, manhood, third genders, and sexuality in a broad cross-cultural perspective. The focus of the course is on the diverse cultural logics that separate females, males and sometimes third genders into different groups in different societies, with the male group usually being the more prestigious one. Focusing on indigenous non-Western cultures, this course 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 what it is like to be male or female in non-Western cultures.

ANTHRO 1051 Anthropology of Sport (3) [CD]

This course is an overview of sports in different times and cultures. It offers a comparative perspective on similarities and differences between sports in Western and non-Western cultural traditions through an examination of such topics as: the ancient Greek Olympic Games vs. sports in ancient China and Japan the use of sports by colonial empires to colonize non-Western subjects the development and spread of the modern Olympic Games sports and nationalism sports in China. Particular attention will be paid to the relationships between sport and gender, social class, ethnic/racial identity, and nationalism.

ANTHRO 1052 The Olympic Games: Ideals and Reality (3)

Prerequisites: None. What would the ancient Greeks think of the modern Olympic Games? This course uses cross-cultural comparison to assess whether the modern Olympic Games live up to their ancient Greek ideals. It begins with the history and philosophy of the ancient Olympic festival too understand the personal, educational, and political nature of the Olympic Ideal in its ancient cultural context. Next it examines the modern Games from the perspectives of athletes, spectators, and society at large to critically evaluate the Games as a contemporary social phenomenon. Finally, students develop constructive solutions to the problems identified.

ANTHRO 1091 Introductory Topics in Anthropology (3) [CD]

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.

ANTHRO 1095 Brief Overview of the Four Fields of Anthropology (1)

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 2105 Human Variation (3)

This course will look at the variation that exists within our own species, both between and within populations. It will investigate the evolutionary and genetic basis of human variation, as well as its diversity, adaptive significance, and distribution. Topics covered will include: body shape and physiology, blood groups, susceptibility to disease, and skin color. It will survey historical attempts to classify humans into different "races" assess definitions of race as a solely cultural construct and critique attempts to link race, intelligence and performance.

ANTHRO 2109 Archaeological Field School (3-6)

Prerequisite: 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 2111 Cultures of East Asia (3) [CD]

An ethnographic and historical survey of the various people of East Asia including Japan, China, North and South Korea, Hong Kong, and Macau. Includes an examination of the varying cultural and social developments within and through the historical, geographical, and cultural environments.

ANTHRO 2114 Cultures of the Near and Middle East (3) [CD]

A study of the cultural diversity and unity of the peoples of the Near and Middle East. Emphasis on historical

and ethnological relationships, social and political structure, religious beliefs, and contemporary problems.

ANTHRO 2117 Greek History and Culture (3)

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) [CD]

A survey of Native Peoples of North America including the prehistory, ethnographic and linguistic groupings, social organization, and cultural systems of these cultures.

ANTHRO 2121 Symbols in American Indian Culture (3)

This class will look at the role of symbols in American Indian cultures in the United States and Canada, in both prehistoric and historic times. It will look at how they have used symbols to communicate, record their history, express themselves artistically, and define a tribal identity. Satisfies Cultural Diversity requirement.

ANTHRO 2123 Cultures of Oceania (3) [CD]

An introduction to the original cultures and peoples of the South and Western Pacific: New Guinea, Australia, New Zealand, Samoa, Hawaii, Easter Island, etc. Focus is on art, religion, language, relationships to the environment, economics, politics, social groupings, and how these intertwine to form distinctly adaptive cultures in one of the least understood regions of the world.

ANTHRO 2124 Cultures of Africa (3) [CD]

A basic ethnographic survey of African cultures, with attention to social groupings, ethnicity, religion, language and social change, and the ecological relationship between humans and nature.

ANTHRO 2125 Introduction to Historical Archaeology (3)

An introductory course in the archaeology of historic period sites. The historic period refers to that portion of human history that begins with the appearance of written documents and continues to contemporary societies. This course will discuss the development, research strategies and future goals of historical archaeology. Archaeological examples will come from all populated continents, but will concentrate on the Americas including the Colonial towns of Jamestown and Williamsburg, Deep South plantations, Civil War battlefields, and shipwreck sites like the Titanic.

ANTHRO 2126 Archaeology of Greater St. Louis (3)

Discussion of Ice Age hunters and gatherers, moundbuilders, fur traders, farmers and industrial workers from the history of the Greater St. Louis Community. The physical testimony to their lives remains buried beneath the city streets and buildings. Archaeology is our link to this cultural legacy. Through the use of archaeological data and historical sources, this class will explore human social and cultural developments in St. Louis.

ANTHRO 2131 Archaeology of Missouri (3) [CD]

An introduction to the prehistoric American Indian cultures of Missouri and adjacent areas from 20,000 years ago to the coming of Europeans. Examines the development of prehistoric cultures in Missouri from small bands of hunters and gatherers to moundbuilding, agricultural societies and discusses the decline of indigenous cultures as they came into contact with European civilization.

ANTHRO 2132 Archaeology of North America (3) [CD]

Examines the archaeological record of human developments throughout prehistoric North America. Topics of discussion include the origins of human culture in America, the processes of prehistoric cultural development in the different regions of the continent, and archaeological approaches to explaining the behavior of North America's prehistoric inhabitants.

ANTHRO 2134 Archaeology of the Inca, Aztec, and Maya (3) [CD]

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.

ANTHRO 2135 Old World Archaeology (3) [CD]

Examines the long and rich archaeological record of the Old World (Africa, Europe, Asia, Australia, and Oceania). Various topics and cultures of the Old World will be discussed from the earliest human ancestors to the rise and fall of complex societies.

ANTHRO 2138 African-American Archaeology (3) [CD]

This course examines people of African descent in the New World through archaeology. Class lectures will outline the development, research strategies and goals of African-American archaeology using examples from the colonial slave trade to the 20th Century. Specific topics include foodways, architecture, spirituality, health, ethnicity, acculturation/creolization, status, racism and gender.

ANTHRO 2173 Archaeology and Cultures of the Biblical World (3) [CD]

A survey of the cultures of the Old Testament World with attention to their evolution, internal and external relationships, as well as their diverse religious, social, economic, and political institutions. The instructor will teach skills in evaluating popular vs. scientific and historical evidence of Biblical events.

ANTHRO 2190 Special Topics in Archaeology (3)

Discusses varying cultural areas from an archaeological perspective. May be repeated with consent of department. Satisfies the Cultural Diversity requirement only when the topic is a Non-Western Culture.

ANTHRO 2191 Special Topics in Non-Western Cultures (3) [CD]

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.

ANTHRO 2192 Anthropological Perspectives on Western Culture (3)

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 2232 Analysis of Archaeological Artifacts (3)

Prerequisites: ANTHRO 1109 or ANTHRO 2109 or consent of instructor. This course teaches the methods and techniques for analyzing the artifacts from an archaeological dig. Students learn to process, analyze, and interpret ceramics, stone tools, plant and animal debris according to form, design, use wear, and associations. This analysis will form the basis of interpretations about human behaviors and cultural and temporal affiliations. The student will prepare a report of the examined collection.

ANTHRO 3202 History, Theory, and Practice of Anthropology (3)

Prerequisite: ANTHRO 1005, 1006, 1011, or 1019. An overview of the history and theory of anthropology from the Victorian era to today with an emphasis on putting theory into practice. The purpose of the course is to help students understand where anthropology has come from and where it may be going, and to teach students how to apply theory to specific questions and problems.

ANTHRO 3209 Forensic Anthropology (4)

Prerequisites: ANTHRO 1005, or BIOL 1102, or junior standing, or consent of instructor. Same as CRIMIN 3209. Students learn basic dental and skeletal anatomy and the methods used by biological anthropologist 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 3210 Applied Anthropology (3)

Prerequisite: ANTHRO 1011, or introductory course in another social science, or consent of instructor. A description and analysis of methods, principles, and use of anthropology in solution of problems associated with the changing conditions of our times. The course will examine a wide variety of cross-cultural case studies.

ANTHRO 3212 Medical Anthropology (3)

Prerequisite: ANTHRO 1011, or introductory course in another social science, or consent of instructor. An examination of the growing interaction between introductory course in another social science, or consent of instructor anthropology and medicine, and the increasing use of anthropologists in medical and health-care settings. In addition to teaching current theory in medical anthropology, the course focuses on anthropologically based skills essential to those working in health-related fields.

ANTHRO 3215 Growing Old in Other Cultures (3)

Same as GERON 3215. This course examines the wide-ranging variability in the roles of older people across different cultures and the effects these have on older people, their families, and their societies.

ANTHRO 3216 Cognition Across Cultures (3)

Prerequisite: ANTHRO 1011, or introductory course in another social science, or consent of instructor. This course explores cognition – perception, knowledge and thought – as a set of social and cultural processes. An introduction to methods for understanding the human mind in context. It will cover key debates, including: cross-cultural variation in thought processes (cognitive relativity vs. psychic unity), the relation between physiology and consciousness, ethnoscience, the social and cultural construction of reality, the different ways that social contexts affect the way people think, the implications of the way knowledge is distributed across society, the social and cultural basis of logic.

ANTHRO 3225 Ritual, Death, and Sports: The Archaeology of Greek Mythology (3)

Prerequisites: ANTHRO 1019 or ANTHRO 1011 or consent of instructor. Since the beginning of our existence, humans have pondered the mysteries of life and death and have strived to find meaning in a constantly changing world. In Western civilization, Greek mythology and religion represent humanity's earliest attempts to deal with the greater forces that affect our lives, which found expression in the great religious and athletic festivals, such as the Olympic Games. We will study the myths, rituals, religious beliefs of the ancient Greeks and how these were expressed in sports and art, in order to get a glimpse of the Greeks' understanding of life, death, and the supernatural. The sources of our exploration are two: the fascinating archaeological discoveries of ancient Greek sites and relevant readings from the ancient Greek literature.

ANTHRO 3226 Origins of Farming and Herding (3)

Prerequisites: ANTHRO 1019 or consent of instructor. This course surveys the archaeological evidence for the domestication of plants and animals from around the world and the accompanying revolution in social organization, which continues to influence the modern world. It discusses key issues, concepts, and debates. It examines case studies of early domesticated plants and animals (e.g. wheat, maize, cattle, dogs, and many others) and regional studies of the development of farming and herding in ancient Egypt, Mesopotamia, China, the Americas, and Europe.

ANTHRO 3227 Monsters & Victims: Women Dramatis Personae in Greek Tragedy and Contemporary Drama (3.0)

Prerequisites: ANTHRO 1011, or introductory course in another social science, or consent of instructor. This course explores female dramatic figures in ancient Greek tragedies that represent women either as victims and/or monsters. From Iphigenia, Alcestis, and Hecuba to Clytemnestra, Phaedra and Medea, it analyzes issues such as the role of sex, gender, female sexuality, ritual and domestic violence in the image-making of women as either scapegoats or monsters by the major Greek tragedians, particularly Euripides. It explores contemporary adaptations by several women playwrights in light of theoretical readings by feminist critics.

ANTHRO 3229 Economic Archaeology and Anthropology (3)

Prerequisites: ANTHRO 1011 or ANTHRO 1019 or consent of instructor. This course examines economic organization and behavior in a cross-cultural context. It looks at the various ways anthropologists have approached the study of economy, and explores how cultural factors such as relations of power, gender, kinship, and ideology affect economic organization in ancient and modern societies. Most of the course will focus on pre-industrial societies (including hunter-gather, tribal, and complex societies), and will address issues of subsistence strategies, craft production and specialization, trade and exchange, money, and markets. It will also briefly explore how modern communities around the globe are responding to contemporary processes like capitalism and globalization.

ANTHRO 3230 Method and Theory in Prehistoric Archaeology (3)

Prerequisites: ANTHRO 1019 or consent of instructor. An advanced course emphasizing the various theories and methods employed in prehistoric archaeological research. Archaeological theories and methods will cover diffusion, cultural ecology, seasonality, plant and animal domestication, subsistence, settlement patterns, spatial analysis, ethnoarchaeology, artifact analysis, seriation, dating techniques, remote sensing, and others. Requires substantial reading and writing.

ANTHRO 3235 Women in Subsaharan Africa: A Contemporary Perspective (3) [CD]

Prerequisite: ANTHRO 1011, or introductory course in another social science, or consent of the 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.

ANTHRO 3236 Sex Trafficking in Cross-Cultural Perspective (3)

Prerequisites: ANTHRO 1041, WGST 2150 or 2102 or consent of instructor. This course introduces the history of and current issues in the international sex industry, including human trafficking, slavery, and prostitution in Europe, Asia, Africa, South America, and North America. It will evaluate the power structures (political, economic, and military institutions) and the process, organization and structure of the industry within the context of nationality, ethnicity, and class, with particular emphasis on voluntary (immigration) and forced (displacement) population migration. Finally, it will look at current legislation and methods to control this growing problem, especially in the United States.

ANTHRO 3244 Religion, Magic, and Science (3)

Prerequisite: ANTHRO 1011, or introductory course in another social science, or consent of the instructor. A consideration of the roles of religion, magic, and science in culture and social organization.

ANTHRO 3250 American Folklore (3)

Prerequisite: ANTHRO 1011, or introductory course in another social science, or consent of the instructor. Focuses on United States society from humanistic and cultural viewpoints. Operates under the basic definition of folklore as "artistic communication in small groups," and thus embraces the idea of folklore as an ongoing creative process combining the conservative elements of tradition with the dynamic aspects of cultural

creation. Comparing United States folklore with that from the borderlands of Canada and Latin America, the course will use fieldwork and concepts in folkloristics to focus on folklore genres (such as narratives, arts, crafts, architecture, oral history, and others) and folk groups (such as ethnic populations, age groups, gender groups, occupations, college students, and others).

ANTHRO 3255 Oral History and Urban Culture in St. Louis (3)

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 neighborhoods. Students will conduct in-depth fieldwork in one city 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)

Prerequisites: ANTHRO 1019, or consent of instructor. Selected topics in archaeology 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)

Prerequisite: 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 3292 Current Issues in Anthropology (4)

Prerequisites: ANTHRO 1011, or introductory course in another social science, or consent of instructor. Selected topics in social, cultural, and biological anthropology, with emphasis on current issues and trends in the field of anthropology. Includes a lab component. May be repeated provided topic is different.

ANTHRO 4301 Ideas and Explanations in Anthropology (3)

Prerequisite: ANTHRO 3202. The theory course in the capstone sequence for Anthropology majors. Students learn to identify and synthesize relevant theories write them up in the form of a comprehensive literature review and apply them constructively to the collection, analysis, and explanation of data. Majors should take this course concurrently with ANTHRO 4308, 4310 or 4311.

ANTHRO 4308 Practicum in Cultural Research Methods (4)

Prerequisites: One course in statistics and ANTHRO 1011, or consent of instructor. (With computer laboratory.) Emphasizes hands-on training in techniques for both the collection and analysis of ethnographic data, including participant observation, selection of ethnographic informants, key informant interviewing, and more systematic methods such as survey research. The use of computer programs for the development of protocols to collect, analyze, and display data will be covered in lab.

ANTHRO 4309 Archaeological Field School (3-6)

Prerequisite: Consent of instructor. Advanced methods in field archaeology and laboratory analysis. Emphasis is placed on sampling, the use of theory in guiding field and laboratory work, advanced field techniques, and specialty analysis. Opportunities are provided for the development of field and laboratory leadership skills. Independent research is encouraged.

ANTHRO 4310 Laboratory Methods in Archaeology (4)

Prerequisite: 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 4311 Primate Research Methods (4)

Prerequisites: ANTHRO 1006, SOCI 3220 or equivalent, or consent of instructor. Course material based on primate behavior, demographics, and morphology, Research techniques for ethological and primatological studies, including the design of research protocols, development of data collection methodologies, analysis of morphological and behavioral data and the scientific description of findings. Students are required to conduct observations of primates at the St. Louis Zoo and participate in the Undergraduate Research Symposium.

ANTHRO 4312 Cultural Resource Management and Historic Preservation (3)

Prerequisites: ANTHRO 1019 or Consent of the Instructor. This course will introduce proper practices of cultural resource management and historic preservation. It provides a technical and theoretical bridge between anthropological archaeology and its application to the management of resources. Among the issues covered will be relevant legislation, the phased approach to archaeological and historical research, state and federal review procedures, proposal writing, interacting with clients, consulting with native peoples, and public and professional ethics and standards. This course will provide hands-on experience. Because one of the skills most sought by project managers and employers is writing competence, it will be writing intensive.

ANTHRO 4315 Senior Seminar in Anthropology (3)

Prerequisite: ANTHRO 4301 and one of the following: ANTHRO 4308, 4310, or 4311. The capstone course for anthropology majors, ideally taken in the final semester of the senior year. Students write a research proposal, conduct an original research project, write it up as a senior thesis, and present the thesis before the department. Must be taken concurrently with ANTHRO 4316.

ANTHRO 4316 Senior Seminar Tutorial (1)

Prerequisites: ANTHRO 4308, 4310, or 4311 and consent of instructor. The student chooses a faculty member with expertise relevant to the topic of the senior thesis. The student and faculty member arrange a schedule of meetings to discuss the drafts of each section of the senior thesis as they are completed. The student will be expected to follow advice about research methods, find and utilize the sources suggested, and incorporate editorial corrections in the writing. The instructor will be the Second Reader of the senior thesis, and will jointly assign the final grade to the senior thesis together with the instructor of Anth 4315. Must be taken concurrently with ANTHRO 4315.

ANTHRO 4325 Internship in Cultural Anthropology (1-3)

Prerequisite: Recommendation of major adviser. Students will be assigned an internship on recommendation of their adviser. 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 a student's interests and career goals.

ANTHRO 4326 Internship in Archaeology (1-6)

Prerequisite: Recommendation of major adviser. Students will be assigned an internship on recommendation of their adviser. 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 a student's interests and career goals.

ANTHRO 4327 Internship in Folklore (1-3)

Prerequisite: Recommendation of major adviser. Students will be assigned an internship on recommendation of their adviser. Internships will consist of a period of study, observation, and training in an appropriate public or private institution. Folklore internships are aimed at providing students with opportunities to work with professional folklorists and anthropologists in an applied setting. Further, it allows a student to devote an entire semester to produce a viable urban fieldwork report. Specific placements will be selected to match a student's interests and career goals.

ANTHRO 4328 Internship in Museum Studies (1-3)

Prerequisite: Recommendation of major adviser. Students will be assigned an internship on recommendation of their adviser. 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 Physical Anthropology (1-3)

Prerequisite: Recommendation of major adviser. Students will be assigned an internship on recommendation of their adviser. Internships will consist 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 physical anthropology.

ANTHRO 4350 Special Study (1-3)

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.

ANTHRO 4391 Current Issues in Anthropology (1-4)

Prerequisite: ANTHRO 1011 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.

ANTHRO 5312 Cultural Resource Management and Historic Preservation (3)

Prerequisites: Graduate standing or consent of instructor. This course will introduce proper practices of cultural resource management and historic preservation. It provides a technical and theoretical bridge between anthropological archaeology and its application to the management of resources. Among the issues covered will be relevant legislation, the phased approach to archaeological and historical research, state and federal review procedures, proposal writing, interacting with clients, helping with native peoples, and public and professional ethics and standards. This course will provide hands-on experience. Because one of the skills most sought by project managers and employers is writing competence, it will be writing intensive.

ANTHRO 5440 Cultural Aspects of Aging (3)

Prerequisite: Graduate status or consent of instructor Same as GERON 5440. Focuses on the variety of solutions encountered in different sociocultural contexts for dealing with the problems, challenges and opportunities of growing old. It is organized around topics that are of concern to both anthropology and social gerontology: the status of the aged, intergenerational relations, aging in modernizing societies, ethnic dimensions of aging in complex societies, health in later life, death and dying. Both in-depth case studies and cross-cultural comparisons are examined in an effort to arrive at a culturally informed assessment of factors affecting aging and the aged in the United States.

ANTHRO 6135 Foundations of Museology I (3)

Prerequisite: Consent of Director of Museum Studies Program. Same as ART HS 6035 and HIST 6135. Concepts for understanding museums in their social and cultural context, history of museums, museology and general social theory, information transfer vs. meaning-making models, museums and communities, the changing role of museums, museums as complex organizations, process models of museology.

ANTHRO 6136 Foundations of Museology II (3)

Prerequisite: Consent of Director of Museum Studies Program. Same as ART HS 6036 and HIST 6136. Audience-centered approaches to museology visitor research and learning theory, philosophical and practical considerations in museum planning, the physical design of museums, creativity, exhibit and program development, collections and curation, the challenge of diversity, the future of museums.

ANTHRO 6137 Effective Action in Museums (3)

Prerequisite: Consent of Director of Museum Studies Program. Same as ART HS 6037 and HIST 6137. The nature of the work done in museums; how museums are organized to accomplish this work, professional roles and practices, technology and resources used by museums, skills for creative and effective leadership in project management and administration in museums, planning, flow charting, budgeting, team dynamics, and related skills. The course will include several site visits to area museums and guest lectures by a variety of museum professionals.

ANTHRO 6138 Museum Studies Master's Project (4)

Prerequisite: Consent of Director of Museum Studies Program. Same as ART HS 6038 and HIST 6138. Research and writing/exhibit development on a selected topic.

ANTHRO 6139 Practicum in Exhibit and Program Development (3)

Prerequisite: Consent of Director of Museum Studies Program. 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.

BULLETIN 2009 University of Missouri - St. Louis 2010

Degree Programs in Biochemistry and Biotechnology

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Faculty

Wesley R. Harris, Professor of Chemistry and Biochemistry, Director
Ph.D., Texas A&M University

George Gokel, Distinguished Professor of Chemistry & Biochemistry
Ph.D., University of Southern California

Xuemin Wang, E. Desmond Lee and Family Fund Endowed Professor of Plant Sciences
Ph.D., University of Kentucky

Keith J. Stine, Professor of Chemistry and Biochemistry
Ph.D., Massachusetts Institute of Technology

Teresa Thiel, Professor of Biology; Associate Dean, College of Arts and Sciences
Ph.D., Case Western Reserve University

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Ph.D., University of Chicago

Bethany Zolman, Assistant Professor of Biology
Ph.D., The William March Rice University

Marc Spingola, Assistant Teaching Professor of Biology
Ph.D., University of New Mexico

General Information

Degrees

The Biochemistry and Biotechnology Program 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, cell biology and developmental 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.

Undergraduate Studies

Degree Requirements

Bachelor of Science in Biochemistry and Biotechnology

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.

1) Biology Core Courses

BIOL 1811, Introductory Biology: From Molecules to Organisms

BIOL 2012, Genetics

BIOL 2013, Genetics Laboratory

BIOL 2482, Microbiology

BIOL 2483, Microbiology Laboratory

BIOL 3622, Cell Biology

2) Chemistry Core Courses

CHEM 1111, Introductory Chemistry I

CHEM 1121, Introductory Chemistry II

CHEM 2223, Quantitative Analysis

CHEM 2612, Organic Chemistry I

CHEM 2622, Organic Chemistry II

CHEM 2633, Organic Chemistry Laboratory

CHEM 3302, Physical Chemistry for the Life Sciences

3) Math and Physics Core Courses

MATH 1030, College Algebra

MATH 1035, Trigonometry

MATH 1100, Basic Calculus **or** **MATH 1800**, Analytic Geometry and Calculus I

PHYSICS 1011, Basic Physics

PHYSICS 1012, Basic Physics

4) Biochemistry and Biotechnology Core Courses

BIOL 4602, Molecular Biology **OR**

BIOL 4612, Molecular Genetics of Bacteria (if both courses are taken, one can be used as an elective)

BIOL 4614, Biotechnology Laboratory I **OR**

BIOL 4615, Biotechnology Laboratory II (if both courses are taken, one can be used as an elective)

BIOL/CHEM 4712, Biochemistry

CHEM 4733, Biochemistry Laboratory

CHEM 4722, Advanced Biochemistry

BIOL 4797, Biochemistry and Biotechnology Seminar **OR**

CHEM 4797, Biochemistry and Biotechnology Seminar (Students may not receive credit for both **BIOL 4797** and **CHEM 4797**)

5) Biochemistry and Biotechnology Elective Courses- 6 credit hours chosen from the following courses:

BIOL 4550, Bacteria Pathogenesis

BIOL 4602, Molecular Biology

BIOL 4612, Molecular Genetics of Bacteria

BIOL 4614, Biotechnology Laboratory I

BIOL 4615, Biotechnology Laboratory II

BIOL 4622, Molecular Cell Biology

BIOL 4632, Nucleic Acid Structure and Function

BIOL 4642, Plant Molecular Biology and Genetic Engineering

BIOL 4652, Virology

BIOL 4842, Immunobiology

BIOL 4905, Research (up to 3 credit hours)
BIOL 4920, Selected Topics (when relevant)
CHEM 3643, Advanced Organic Chemistry Laboratory
CHEM 3905, Chemical Research (up to 3 credit hours)
CHEM 4772, Physical Biochemistry

Electives

Recommendations include basic statistics (MATH 1310 or MATH 1320), computer science, public speaking (COMM 1040), foreign language, ethics, and undergraduate research.

Research Opportunity

Students are encouraged to complete a minimum of 2 credit hours of undergraduate research, which 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.

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.

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:

1. **Discipline-Specific Knowledge.** Graduates from this program will have a solid foundation in the content areas of chemistry, biology, and biochemistry. A certain emphasis on specific, descriptive data is necessary. But the larger emphasis is on a clear understanding of the overriding principles and theorems of these areas that allow students to evaluate specific data within a larger context.
2. **Laboratory Skills.** Scientists not only learn the results of others, they work in the lab to generate new knowledge. Graduates will learn the basic skills associated with performing laboratory experiments in chemistry, biology, and biochemistry, and they will learn how to critically evaluate their data. This includes an appreciation of the potential sources of error associated with laboratory measurements.
3. **Problem Solving Skills.** Graduates will develop the ability to solve problems in their discipline. In part, this expands on laboratory skills, as students learn how to interpret and evaluate their data. These skills also include learning how to take general principles from various areas of chemistry, biochemistry, and biology and apply them to the solution of specific problems.
4. **Communication Skills.** Graduates must not only be able to solve problems, they must also be able to communicate those solutions to others. Graduates will learn how to write scientific reports and papers and will be able to make effective oral presentations of their results and ideas.
5. **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. This requires the ability to work effectively with the scientific literature. Graduates will be able to use the specialized search engines associated with the vast literature in chemistry, biology, and biochemistry to find and retrieve information. Graduates will also have the knowledge background necessary to read papers from the literature with good comprehension.
6. **Professional Ethics.** Graduates will understand and respect the accepted standards of conduct associated with the scientific profession. This will include honestly and objectively evaluating and reporting data and demonstrating the proper respect for the published work of others.

Graduate Studies

Degree Requirements

Master of Science in Biochemistry and Biotechnology

The Biochemistry and Biotechnology Program offers two types of Master of Science degrees. One is a non-thesis option suitable for those with laboratory research experience or for others, such as educators, who do not require research experience. The other option 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.

M.S. Admission Requirements

Applicants to the M.S. program must submit completed application and personal data forms, two letters of recommendation from faculty at previously-attended colleges or universities, and transcripts of all previous postsecondary academic work. Applicants whose undergraduate degree is from a university outside of the United States must submit GRE scores (verbal, quantitative, and analytical). For students with a degree from a U.S. university, submission of Graduate Record Examination scores, although not required, is highly recommended. 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 an undergraduate course in biochemistry (equivalent to Biology/Chemistry 4712). Successful applicants will typically have completed courses in 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 take the TOEFL. Ordinarily, a score of 213 on the computer-based exam (550 on the paper-based exam or 80 on the internet-based exam) or better is required.

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 or 5 credit hours of Graduate Research (BIOL or CHEM 6905) may be applied toward the 30 credit hour total for the thesis or non-thesis options, respectively.

1) Required Courses

CHEM 4722, Advanced Biochemistry

CHEM 5774, Bioinformatics

BIOL 4614, Biotechnology Laboratory I or **BIOL 6615**, Advanced Biotechnology Laboratory II

BIOL 6602, Advanced Molecular Biology or **BIOL 6612**, Advanced Molecular Genetics of Bacteria

BIOL 6889, Graduate Seminar

2) Elective Courses

CHEM 4733, Biochemistry Laboratory

CHEM 4764, Interdisciplinary Topics in Biochemistry

CHEM 4772, Physical Biochemistry

CHEM 5794, Special Topics in Biochemistry

CHEM 6787, Problem Seminar in Biochemistry

CHEM 6905, Graduate Research

BIOL 4842, Immunobiology

BIOL 5069, Topics in Cell and Molecular Biology

BIOL 6550, Advanced Bacterial Pathogenesis

BIOL 6602, Advanced Molecular Biology

BIOL 6612, Advanced Molecular Genetics of Bacteria

BIOL 6615, Advanced Biotechnology Laboratory II

BIOL 6622, Advanced Molecular Cell Biology

BIOL 6632, Advanced Nucleic Acid Structure and Function

BIOL 6642, Advanced Plant Molecular Biology & Genetic Engineering

BIOL 6652, Advanced Virology

BIOL 6699, Graduate Internship in Biotechnology

BIOL 6889, Graduate Seminar

BIOL 6905, Graduate Research

BIOL 6920, Topics in Biology (2-5 credits), when relevant.

Course Descriptions

Prerequisites may be waived by consent of the instructor. Some courses as indicated in the course description may be taken concurrently with the listed offering. Consult an adviser for further information.

Biology Courses

*Note - Majors in Biochemistry and Biotechnology are not required to take BIOL 1821; hence it is not a prerequisite for BIOL 2012, BIOL 2482, or BIOL 3622 for these majors.

BIOL 1811 Introductory Biology: From Molecules to Organisms (5), [MI, MS]

Prerequisite: A minimum of high school chemistry, ENGL 1100 or equivalent (may be taken concurrently), and placement into college algebra or higher. 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)

Prerequisite: BIOL 1811 [biology majors must also take BIOL 1821] and CHEM 1111 or [CHEM 1082 plus CHEM 1091]. Fundamental principles of inheritance, including classical genetic theory as well as recent advances in the molecular basis of heredity. Three hours of lecture per week.

BIOL 2013 Genetics Laboratory (2)

Prerequisite: Concurrent registration in BIOL 2012, or by 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)

Prerequisite: BIOL 1811 [majors must also take BIOL 1821] and CHEM 1111 [or CHEM 1082 plus CHEM 1091]. 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)

Prerequisite: BIOL 1811 [biology majors must also take BIOL 1821] and CHEM 1111 [or CHEM 1082 plus CHEM 1091]. Study of microorganisms, their metabolism, genetics, and their interaction with other forms of life. Three hours of lecture per week.

BIOL 3622 Cell Biology (3)

Prerequisite: BIOL 1811 [biology majors must also take BIOL 1821], CHEM 1111, 1121 and 2612 or equivalents. Examination of the basic biological processes of cells.

BIOL 4550 Bacterial Pathogenesis (3)

Prerequisites: BIOL 2482, BIOL 2012. 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 6550 and BIOL 4550.

BIOL 4602 Molecular Biology (3)

Prerequisite: BIOL 2012 and 4712. A study of the principles of molecular biology, with emphasis on understanding the genetic regulation of DNA, RNA, and protein synthesis and function in the eukaryotic cells. Three hours of lecture per week. Students may not receive credit for both BIOL 4602 and BIOL 6602.

BIOL 4612 Molecular Genetics of Bacteria (3)

Prerequisite: BIOL 2482 and BIOL 2012. A study of the molecular biology of gene replication, transfer, and expression in bacterial cells. Topics include DNA replication, transcription and translation, mutagenesis, DNA repair and recombination, gene transfer, and the regulation of genes and global expression systems. Three hours of lecture per week. Students may not receive credit for both BIOL 4612 and BIOL 6612.

BIOL 4614 Biotechnology Laboratory I (4)

Prerequisite: 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 hands-on experience with the techniques of the field will be addressed through lectures, discussion, 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 4000-level or above 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)

Prerequisite: BIOL 4614 and either BIOL 4602 or BIOL 4612, or consent of instructor. 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. One hour of lecture and six hours of laboratory per week. Fulfills a laboratory requirement only; may not be used to fulfill the 4000-5000 level lecture course requirement for the B.A. or B.S. degree in biology. Students may not receive credit for both BIOL 4615 and BIOL 6615.

BIOL 4622 Molecular Cell Biology (3)

Prerequisite: BIOL 3622, BIOL 4602, and BIOL 4712 or consent of instructor. A study of the structural organization and processes of eukaryotic cells. Topics of discussion will include regulation of transcription, gene product processing and transport, organelle biogenesis and function, cytoskeletal structure and function, and cell interactions. 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)

Prerequisite: BIOL 2012 and 4712 or equivalent or consent of instructor. Comprehensive view of structural properties of DNA and RNA that promote molecular interactions and biological function. Topics include physical properties of nucleic acids, 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 6632.

BIOL 4712 Biochemistry (3)

Same as CHEM 4712. Prerequisite: CHEM 2612 and either BIOL 1811 or CHEM 2622. Examines the chemistry and function of cell constituents, and the interaction and conversions of intracellular substances. Students may not receive credit for both BIOL 4712 and CHEM 4712.

BIOL 4797 Biochemistry and Biotechnology Seminar (1)

Same as CHEM 4797. Prerequisite: Senior standing in the Biochemistry & Biotechnology program. 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 4842 Immunobiology (3)

Prerequisite: BIOL 4712 and CHEM 2612. The fundamental principles and concepts of immunobiology and immunochemistry. Emphasis on the relation of immunological phenomena to biological phenomena and biological problems. Three hours of lecture per week.

BIOL 5069 Topics in Cellular and Molecular Biology (1)

Prerequisite: Graduate standing. Presentation and discussion of student and faculty research projects and/or current research articles in molecular, cellular and developmental biology. May be repeated.

BIOL 6550 Advanced Bacterial Pathogenesis (3)

Prerequisites: BIOL 2482 and BIOL 2012. 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)

Prerequisite: BIOL 2012 and 4712, or consent of instructor. A study of the principles of molecular biology, with emphasis on understanding the genetic regulation of DNA, RNA, and protein synthesis and function in eukaryotic cell. Three hours of lecture per week. Students will be required to give an oral presentation and/or write an extra paper on a topic relevant to the course. Students may not receive credit for both BIOL 6602 and BIOL 4602.

BIOL 6612 Advanced Molecular Genetics of Bacteria (3)

Prerequisite: BIOL 2012 and 2482. A study of the molecular biology of gene replication, transfer, and expression in bacterial cells. Topics include DNA replication, transcription and translation, mutagenesis, DNA repair and recombination, gene transfer, and the regulation of genes and global expression systems. Three hours of lecture per week. Students will be required to give an oral presentation and/or write an extra paper on a topic relevant to the course. Student may not receive credit for both BIOL 6612 and BIOL 4612.

BIOL 6615 Advanced Biotechnology Laboratory II (4)

Prerequisite: BIOL 4614 and either BIOL 4602 or BIOL 4612, or consent of instructor. An in-depth look at 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. One hour of lecture and six hours of laboratory per week. Students will be required to give an oral presentation and/or write an extra paper on a topic relevant to the course. Students may not receive credit for both BIOL 6615 and BIOL 4615.

BIOL 6622 Advanced Molecular Cell Biology (3)

Prerequisite: BIOL 4602, BIOL 3622, and BIOL 4712, or consent of instructor. A study of structural organization and processes of eukaryotic cells. Topics of discussion will include regulation of transcription, gene product processing and transport, organelle biogenesis and function, cytoskeletal structure and function, and cell interactions. Three hours of lecture per week. Students will be required to given an oral presentation and/or write an extra paper on a topic relevant to the course. Students may not receive credit for both BIOL 6622 and BIOL 4622.

BIOL 6632 Advanced Nucleic Acid Structure and Function (3)

Prerequisite: BIOL 2012 and 4712 or equivalent or consent of instructor. Comprehensive view of structural properties of DNA and RNA that promote molecular interactions and biological function. Topics include physical properties of nucleic acids, formation and biological importance of higher order structures, RNA enzymatic activities, nucleic acid-protein interaction, 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 Molecular Biology and Genetic Engineering (3)

Prerequisite: BIOL 4602 or 4612. Topics will include plant cell and developmental biology, DNA transfer into plants, using mutations to identify genes and their functions, regeneration of plants in tissue culture, signal transduction mechanisms, molecular biology of plant organelles, developmental engineering, metabolic engineering, plant microbe interactions, and engineered resistance to pathogen attack. Three hours of lecture

and one hour of seminar per week. Students may not receive credit for both BIOL 4642 and BIOL 6642..

BIOL 6652 Advanced Virology (3)

Prerequisite: BIOL 2482 and 2012. An advanced comparative study of the structure, reproduction, and genetics of viruses. Three hours of lecture, one hour of discussion or seminar per week. Students may not receive credit for both BIOL 4652 and 6652.

BIOL 6699 Graduate Internship in Biotechnology (1-4)

Prerequisite: Graduate standing and enrollment in graduate Biotechnology Certificate Program. Six credit hours maximum (maximum of eight combined credit hours of BIOL 6905 and internship). Internship will consist of 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 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)

Presentation and discussion of various research problems in biology. Graduate student exposure to the seminar process.

BIOL 6905 Graduate Research in Biology (1-10)

Research in area selected by student in consultation with faculty members.

BIOL 6920 Topics in Biology (2-5)

In-depth studies of selected topics in contemporary biology. May be repeated.

Chemistry Courses

CHEM 1111 Introductory Chemistry I (5) [MS]

Prerequisite: Mathematics through college algebra and trigonometry 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 1082 and 1111, and both CHEM 1011 and 1111 in the 120 hours required for graduation. Three hours of lecture and one hour of discussion per week, one hour of laboratory-lecture and three hours of laboratory per week.

CHEM 1121 Introductory Chemistry II (5) [MI, MS]

Prerequisite: CHEM 1111 or advanced placement. Lecture and laboratory are a continuation of CHEM 1111. Three hours of lecture and one hour of discussion per week; one hour laboratory-lecture and three hours of laboratory weekly.

CHEM 2223 Quantitative Analysis (3) [C, MI, MS]

Prerequisite: CHEM 1121. Principles and practice of elementary quantitative chemistry. The lecture treats descriptive statistics with emphasis on small samples; various types of competing equilibria pertaining to acid-base, complexometric and potentiometric titrations; and an introduction to spectrophotometric processes. The laboratory provides exercises in titrimetric, gravimetric, and spectrophotometric techniques. Both portions of the course deal with the analytical chemistry of environmentally-significant problems. Two hours of lecture and four and one-half hours of laboratory weekly.

CHEM 2612 Organic Chemistry I (3) [MS]

Prerequisite: CHEM 1121. 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) [MI, MS]

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) [C, MS]

Prerequisite: CHEM 2612 or consent of instructor. 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 3302 Physical Chemistry for the Life Sciences (3)

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 requirement for other Chemistry B.A. and B.S. degree programs.

CHEM 3643 Advanced Organic Chemistry Laboratory (2)

Prerequisites: CHEM 2223, CHEM 2622, CHEM 2633. 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 laboratory per week. Not for graduate credit.

CHEM 4712 Biochemistry (3)

Same as BIOL 4712. Prerequisite: CHEM 2612 and either BIOL 1811 or CHEM 2622. The chemistry and function of cell constituents, and the interaction and conversions of intracellular substances. Three hours of lecture per week. Students may not receive credit for both BIOL 4712 and CHEM 4712.

CHEM 4722 Advanced Biochemistry (3)

Prerequisite: CHEM 4712. Selected advanced topics in the chemistry of life processes. Three hours of lecture per week.

CHEM 4733 Biochemistry Laboratory (2)

Prerequisite: 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 three and one-half hour of laboratory per week.

CHEM 4764 Interdisciplinary Topics in Biochemistry (3)

Prerequisite: CHEM 4712; CHEM 4722 strongly recommended. Includes advanced studies of enzyme mechanisms, the role of metal ions in enzymatic and non-enzymatic processes, and the application of computational chemistry to biological systems. Three hours of lecture per week.

CHEM 4772 Physical Biochemistry (3)

Prerequisite: CHEM 3312 or CHEM/BIOL 4712. 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, electron transfer, and biological spectroscopy. Three hours of lecture per week.

CHEM 4797 Biochemistry and Biotechnology Seminar (1)

Same as BIOL 4797. Prerequisite: Senior standing in the Biochemistry & Biotechnology program. 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 5774 Bioinformatics (3)

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, and molecular modeling and simulation. Three lecture hours per week.

CHEM 5794 Special Topics in Biochemistry (1-3)

Prerequisite: Consent of instructor. Selected topics in biochemistry. May be taken more than once for credit.

CHEM 6787 Problem Seminar in Biochemistry (1)

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 6905 Graduate Research in Chemistry (1-10)

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Department of Biology

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Faculty

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Ph.D., University of Edinburgh

Charles R. Granger, Curators' Distinguished Teaching Professor
Ph.D., University of Iowa

Elizabeth A. Kellogg, E. Desmond Lee Professor of Botanical Studies
Ph.D., Harvard University

Patricia G. Parker, E. Desmond Lee Professor of Zoological Studies
Ph.D., University of North Carolina, Chapel Hill

Robert E. Ricklefs, Curators' Professor
Ph.D., University of Pennsylvania

Xuemin Wang, E. Desmond Lee Professor of Plant Science
Ph.D., University of Kentucky

Robert Bader, Professor Emeritus
Ph.D., University of Chicago

John G. Blake, Professor
Ph.D., University of Illinois

Arnold B. Grobman, Professor Emeritus
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Ph.D., University of Iowa

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Ph.D., Nottingham University

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Affiliated Faculty

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Ph.D., University of Strasbourg
Peter H. Raven, Research Professor;
Ph.D., University of California-Los Angeles
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George E. Schatz, Research Assistant Professor
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Christopher G. Taylor, Research Assistant Professor
Ph.D., North Carolina State University
Maria Del Carmen Ulloa Ulloa, Research Assistant Professor
Ph.D., Aarhus Universitet
Liming Xiong, Research Assistant Professor
Ph.D., University of Arizona
Yiji Xia, Research Assistant Professor

Ph.D., Iowa State University

Patrick L. Osborne, Adjunct Associate Professor, Executive Director, Whitney R. Harris World Ecology Center

Ph.D., University of East Anglia

Sean Housmandi, Adjunct Assistant Teaching Professor

Ph.D., University of Missouri - St. Louis

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. in Secondary Education with a major in biology and the B.A. or B.S. in Biology with 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.

Departmental Honors

The Department of Biology offers an Honors Program to train students in conducting research in areas of biological research currently under study in the Department.

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. CEIBA Biological Centre in Guyana has hosted several UMSL courses and student researchers. Student researchers work independently at research stations throughout the tropics.

Cooperative Programs

The department participates in a cooperative consortium program in biology with Washington University, Saint Louis University, Southern Illinois University-Edwardsville, 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 Undergraduate Certificates in Biotechnology and Conservation Biology are for majors interested in careers in biotechnology and associated areas and in conservation, respectively.

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 Graduate Certificates in Biotechnology and in Tropical Biology and Conservation provides professional training in the areas of biotechnology and conservation.

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.

Undergraduate Studies

General Education Requirements

Students must satisfy the university and college general education requirements. 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 1102, Human Biology
BIOL 1131, Human Physiology and Anatomy I
BIOL 1141, Human Physiology and Anatomy II
BIOL 1162, General Microbiology
BIOL 1350, Conservation of Diversity

Degree Requirements

Bachelor of Arts in Biology

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 medicine, allied health, public and environmental health, law, and graduate studies in the life sciences. Candidates must have a cumulative grade point average of 2.0 or better in biology courses. Effective fall semester 2009, candidates must also earn a minimum grade of C- in all core courses.

All B.A. degree majors must take at least 39 credit hours but not more than 50 hours in appropriate biology course work. Transfer student must satisfactorily complete at least 12 credit hours of UMSL biology course work (including one laboratory) at the 2000 level or above before receiving a B.A. degree from the College of Arts and Sciences with a major in biology.

Lecture and Seminar Course Requirements

1)Core Courses. The following biology courses or their equivalents are required:

BIOL 1811, Introductory Biology: From Molecules to Organisms
BIOL 1821, Introductory Biology: Organisms and the Environment
BIOL 2012, Genetics
BIOL 3302, Introduction to Evolution
BIOL 3622, Cell Biology
BIOL 4889, Senior Seminar, or **BIOL 4985** and **BIOL 4986** for those seeking teacher certification.

One of the following diversity courses:

BIOL 2402, Vertebrate Biology or
BIOL 2442, Invertebrate Biology or
BIOL 2482, Microbiology or
BIOL 2501, Biology of Plants or
BIOL 4402, Ornithology or
BIOL 4422, Entomology or
BIOL 4482, Parasitology or
BIOL 4501, Flowering Plant Families: Phylogeny and Diversification

2)Elective Courses.

Three 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. Biology courses taken to fulfill basic skill requirements (e.g., statistics requirement or biochemistry option) can be used to satisfy this requirement.

At least two biology lecture courses taken as part of the **core** or as **electives** must be at the 4000 level or higher. No more than one of these higher level courses can be used to fulfill other requirements (e.g., diversity or 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 4905** 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.

Basic Skills Requirement

A well-rounded biologist needs certain skills outside the biology subject matter. The basic skills requirement is designed to provide the student with a background in communication skills and knowledge in associated science areas.

1) 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.

Writing

ENGL 3100, Advanced Expository Writing **or** **ENGL 3160**, Writing in the Sciences (strongly preferred)

2) Associated Science Area. The following courses or their equivalents must be successfully completed in science areas related to biology:

PHYSICS 1011, Basic Physics

PHYSICS 1012, Basic Physics

CHEM 1111, Introductory Chemistry I **or** [**CHEM 1082** and **CHEM 1091**]

CHEM 1121, Introductory Chemistry II

CHEM 2612, Organic Chemistry I

One of the following:

CHEM 2223, Quantitative Analysis **or**

CHEM 2622, Organic Chemistry II **or**

CHEM 2633, Organic Chemistry Laboratory **or**

BIOL/CHEM 4712, Biochemistry

MATH 1310, College Algebra

MATH 1035, Trigonometry

MATH 1100, Basic Calculus **or** **MATH 1800**, Analytical Geometry and Calculus

One of the following:

BIOL 4122, Biometry **or**

MATH 1310, Elementary Statistical Methods **or**

MATH 1320, Applied Statistics I **or**

ED REM 5730, Educational Statistics **or**

PSYCH 2201, Psychological Statistics

Bachelor of Science in Biology

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 addition 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. Effective Fall semester 2009, candidates must earn a minimum grade of C in all core courses.

There is no foreign language requirement for the B.S. degree. However, students should realize that the literature for biological studies is in many different languages and the ability to extract information from this literature is an important skill.

To fulfill the requirements for the B.S. degree a minimum of 44 hours but not more than 50 hours must be completed in appropriate biology course work. Transfer students must satisfactorily complete at least 17 credit hours of UMSL biology course work (including two laboratory courses) at the 2000 level or higher before receiving a B.S. degree in biology.

Lecture and Seminar Course Requirements

1) Core Courses. The following biology courses or their equivalents are required:

BIOL 1811, Introductory Biology: From Molecules to Organisms

BIOL 1821, Introductory Biology: Organisms and the Environment

BIOL 2012, Genetics

BIOL 3302, Introduction to Evolution

BIOL 3622, Cell Biology

BIOL 4889, Senior Seminar **or** **BIOL 4985** and **BIOL 4986** for those seeking teacher certification.

One of the following diversity courses:

BIOL 2402, Vertebrate Biology **or**

BIOL 2442, Invertebrate Biology or
BIOL 2482, Microbiology or
BIOL 2501, Biology of Plants or
BIOL 4402, Ornithology or
BIOL 4422, Entomology or
BIOL 4482, Parasitology or
BIOL 4501, Flowering Plant Families: Phylogeny and Diversification

2) 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. Biology courses taken to fulfill basic skill requirements (e.g., statistics requirement or biochemistry option) can be used to satisfy this requirement.

At least three biology lecture courses taken as part of the **core** or as **electives** must be at the 4000 level or higher. No more than two of these higher level courses can be used to fulfill other requirements (e.g., diversity or statistics requirements, 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 4905** 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.

Basic Skills Requirement

A well-rounded biologist needs certain skills outside the biology subject matter. The basic skills requirement is designed to provide the student with a background in communication skills and knowledge in associated science areas.

1) 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

Writing

ENGL 3100, Advanced Expository Writing or **ENGL 3160**, Writing in the Sciences (strongly preferred)

2) Associated Science Area : The following courses or their equivalents must be successfully completed:

PHYSICS 1011, Basic Physics

PHYSICS 1012, Basic Physics

CHEM 1111, Introductory Chemistry I, or [**CHEM 1082** and **CHEM 1091**]

CHEM 1121, Introductory Chemistry II

CHEM 2612, Organic Chemistry I

CHEM 2622, Organic Chemistry II or **BIOL/CHEM 4712**, Biochemistry

CHEM 2223, Quantitative Analysis or **CHEM 2633**, Organic Chemistry Laboratory

MATH 1030, College Algebra

MATH 1035, Trigonometry

MATH 1100, Basic Calculus, or **MATH 1800**, Analytic Geometry and Calculus I

One of the following:

BIOL 4122, Biometry or

MATH 1310, Elementary Statistical Methods or

MATH 1320, Applied Statistics I or

ED REM 5730, Educational Statistics or

PSYCH 2201, Psychological Statistics

One of the following:

PHIL 2256, Bioethics or **PHIL 3380**, Philosophy of Science

Research Opportunity.

All students acquiring a bachelor of science degree are strongly encouraged to complete 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.

Departmental Honors Thesis

The Department of Biology offers the more motivated and highly achieving students the opportunity to

present primary research in the form of a written Honors Thesis. The first step in conducting an undergraduate thesis is to identify a faculty research mentor; the mentor, along with two UMSL faculty members, will be readers of the thesis. It is highly recommended that students arrange to work full time on their honors thesis during the summer between the junior and senior years. Some funds are available from university, the Harris World Ecology Center, and departmental fellowships, but in more cases support will come from the sponsoring lab.

The thesis will be completed and presented orally in an advertised public forum by the first of the month in which graduation is to occur. The readers of the thesis will decide on the appropriate level of honors, and will report their recommendation to the Dean of Arts and Sciences, so that the student is recognized at graduation as having graduated with Honors in Biology (or High Honors in Biology). In addition to fulfilling the coursework required for a B.S. or B.A. in Biology and the Honors Thesis itself, students must: 1) carry at least a 3.3 GPA, 2) complete a minimum 2 credit hours of BIOL 4905 (Research).

Bachelor of Science in Education with Emphasis in Biology

The B.S. Ed. is a professional degree designed for individuals who wish to pursue a teaching career in biology in the secondary schools. The biology requirements parallel those for the B.A. degree with the exception that **BIOL 4985**, Curriculum and Methods of Teaching Life Sciences, and **BIOL 4986**, Laboratory in Teaching Life Sciences, are substituted for **BIOL 4889**, Senior Seminar. Students must also fulfill the requirements for the B.S. Ed. degree as prescribed by the College of Education.

Bachelor of Arts in Biology with Teacher Certification

Biology majors interested in teaching biology in secondary schools may obtain teacher certification in cooperation with the College of Education by fulfilling the B.A. or B.S. with certain prescribed courses in biology, with the exception of **BIOL 4889**, Senior Seminar, and in addition, completing the following courses:

PSYCH 1003, General Psychology

ED FND 1111, The School in Contemporary Society

ENGL 3160, Writing in the Sciences

HIST 1001, 1002, or 1003, American Civilization

POL SCI 1100, Introduction to American Politics

PHIL 3380, Philosophy of Science

COMM 1040, Introduction to Public Speaking

TH DAN 1210, Fundamentals of Acting

GEOL 1001, General Geology

ATM SC 1001, Elementary Meteorology

ED PSY 3312, The Psychology of Teaching and Learning

ED TEC 2248, Utilization of Computer-Based Materials in Instruction

SEC ED 3213, Techniques of Secondary School Teaching and Field Experiences **OR**

TCH ED 3310, Introduction to Instructional Methods

SPEC ED 3313, The Psychology and Education of Exceptional Individuals

SEC ED 4391, Teaching Reading in Secondary School

Content Areas

BIOL 4985, Curriculum and Methods of Teaching Life Sciences

BIOL 4986, Laboratory in Teaching Life Sciences

SEC ED 3290, Secondary School Student Teaching

BIOL 4999, Science Teaching Intern Seminar

Because specific biology courses are required for teaching endorsement, students are advised to contact the Department of Biology **AND** the College of Education for special advising regarding teacher certification.

Minor in Biology

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 1811, Introductory Biology: From Molecules to Organisms, **BIOL 1821**, Introductory Biology: Organisms and the Environment, and **BIOL 2012**, Genetics. Two additional courses totaling no less than 6 credit hours. At least one course should be at the 3000 level or above.

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.**

Undergraduate Certificate in Biochemistry

The university offers a certificate program for science majors who are interested in careers in biochemistry.

The Biochemistry Certificate is an interdisciplinary specialization that may be earned within either a **biology** or **chemistry** major. To earn the certificate, biology majors must enroll in the Biochemistry Certificate Program upon the completion of 60 credit hours, fulfill all the science (biology, chemistry, math, and physics) course requirements for the B.S. degree in biology, and successfully complete the following courses:

CHEM 2622, Organic Chemistry II
BIOL/CHEM 4712, Biochemistry
CHEM 2223, Quantitative Analysis
CHEM 2633, Organic Chemistry Laboratory
BIOL 4713, Techniques in Biochemistry or **CHEM 4733**, Biochemistry Laboratory
CHEM 4722, Advanced Biochemistry

And **three** of the following **biology** courses:

BIOL 2482, Microbiology
BIOL 2483, Microbiology Laboratory
BIOL 3642, Development
BIOL 4602, Molecular Biology
BIOL 4612, Molecular Genetics of Bacteria
BIOL 4614, Biotechnology Laboratory I
BIOL 4622, Molecular Biology of the Cell
BIOL 4632, Nucleic Acid Structure and Function
BIOL 4842, Immunobiology

Undergraduate Certificate in Biotechnology

The university offers an undergraduate certificate program for biology majors who are interested in careers in biotechnology including biochemistry, microbiology, molecular biology, cell biology, and developmental biology. To earn the certificate, biology majors must enroll in the Biotechnology Certificate Program upon the completion of 60 credit hours, fulfill all the science (biology, chemistry math, and physics) course requirements for the B.S. degree in biology, and successfully complete the following courses:

BIOL 2013, Genetics Laboratory
BIOL 2482, Microbiology
BIOL 2483, Microbiology Laboratory
CHEM 2622, Organic Chemistry II
BIOL 4614, Biotechnology Laboratory I
BIOL/CHEM 4712, Biochemistry
BIOL 4713, Techniques in Biochemistry or **CHEM 4733**, Biochemistry Laboratory

One of the following courses:

BIOL 4602, Molecular Biology
BIOL 4612, Molecular Genetics of Bacteria

And **one** of the following courses:

BIOL 4615, Biotechnology Laboratory II
BIOL 4622, Molecular Biology of the Cell
BIOL 4632, Nucleic Acid Structure and Function
BIOL 4652, Virology
BIOL 4842, Immunobiology
CHEM 4722, Advanced Biochemistry

Undergraduate Certificate in Conservation Biology

The Certificate in Conservation is a multidisciplinary program of study integrating theoretical and applied topics associated with conservation biology. The certificate is intended for undergraduate students with majors in biology or in any other field who wish to develop a specialization in conservation. The certificate is offered by the Department of Biology in cooperation with the departments of Anthropology, Economics, History, Political Science, Social Work, and Sociology. Building on a core curriculum, students can elect courses from these departments to complete their requirements. Regularly enrolled undergraduates at UMSL or individuals with baccalaureate degrees who wish to receive a Certificate in Conservation Biology are eligible to participate in the conservation certificate program. To participate, students must apply to the certificate program. Application forms are available from the biology department. Guidelines for admission to the certificate program are also available. Individuals with baccalaureate degrees who are interested in this certificate must apply to the university as unclassified undergraduates. The certificate requires completion of 21 credit hours, outlined below. Students should consult the *Bulletin* with regard to prerequisites for any of the courses listed here.

Core Courses

Biology
BIOL 2102, General Ecology
BIOL 3202, Conservation Biology
BIOL 3203, Conservation Biology Laboratory

BIOL 4299, Practicum in Conservation

Electives: The remaining 11 credits must be selected from courses listed below. Five credits must be taken from within biology and 6 credits outside biology, from at least two departments.

Anthropology

- ANTHRO 2120**, Native Peoples of North America
- ANTHRO 2131**, Archaeology of Missouri
- ANTHRO 2132**, Archaeology of North America

Biology

- BIOL 3122**, Tropical Resource Ecology
- BIOL 3123**, Tropical Resource Ecology Field Studies
- BIOL 4102**, Behavioral Ecology
- BIOL 4112**, Evolution of Animal Sociality
- BIOL 4182**, Population Biology
- BIOL 4202**, Wildlife Ecology and Conservation
- BIOL 4245**, Field Biology
- BIOL 4382**, Introduction to Marine Science
- BIOL 4402**, Ornithology
- BIOL 4403**, Ornithology Laboratory
- BIOL 4422**, Entomology
- BIOL 4423**, Entomology Laboratory
- BIOL 4501**, Flowering Plant Families Phylogeny and Diversification

Economics

- ECON 3300**, International Economic Analysis
- ECON 3301**, Intermediate Economic Theory:
- ECON 4550**, Natural Resource Economics

History

- HIST 3000**, Selected Topics, when relevant

Political Science

- POL SCI 3480**, Environmental Politics
- POL SCI 3590**, Studies in Comparative Politics, when relevant
- POL SCI 3850**, International Organizations and Global Problem Solving
- POL SCI 4510**, Comparative Public Policy and Administrations

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 Biology Department has developed a 3+3 articulation agreement with Logan College of Chiropractic. 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 (4 th 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 (33):

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)

Choose (3):

MATH 1310 Elementary Statistical Methods; or

MATH 1320 Applied Statistics I or

BIOL 4122 Biometry

COMM 1040 Introduction to Public Speaking (3)

ENGL 1100 Freshman Composition (3)

ENGL 3160 Writing in the Sciences (3)

Major (58):

Foundation courses

BIOL 1811 Introductory Biology: From Molecules to Organisms (5)

BIOL 1821 Introductory Biology: Organisms and the Environment (5)

BIOL 2012 Genetics (3)

BIOL 2482 Microbiology (3)

BIOL 3622 Cell Biology (3)

BIOL 3302 Introduction to Evolution (3)

BIOL/CHEM 4712 Biochemistry (3)

BIOL 4889 Senior Seminar (2)

PHYSICS 1011 Basic Physics (4)

PHYSICS 1012 Basic Physics (4)

CHEM 1111 Introductory Chemistry I (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 (3)

MATH 1035 Trigonometry (2)

Choose (3-5):

MATH 1100 Basic Calculus (3); or **MATH 1080** Analytical Geometry & Calculus I (5)

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)

Graduate Studies

The graduate program offers both Masters and Ph.D. degrees, as well as Graduate Certificates in biotechnology and Tropical Biology and Conservation.

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 1.

Master of Science in Biology

The Department of Biology offers two ways of achieving the Master of Science degree. The first is a 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 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 non-thesis or 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.

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 adviser, 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. Thesis student are required and non-thesis students encouraged to take **BIOL 5089**, Ethical Issues in Biology. Students are expected to maintain a GPA of 3.0 or better.

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 13 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. 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.

Doctor of Philosophy in Biology

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.

Ph.D. Admission Requirements

Applicants to the Ph.D. program must submit a formal application to the Graduate Admissions Office. In addition, the applicant should arrange to have sent: three letters of recommendation from faculty members at previously attended colleges or universities, GRE scores (Verbal, Quantitative, and Analytical), and transcripts of all postsecondary academic work. 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 take the TOEFL examination. Scores must be submitted before admission can be decided. Ordinarily, a score of 550 or better is required.

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. A course in statistics is recommended. 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. Three credits of **BIOL 4920** Selected Topics can be given to graduate students for **BIOL 2012** or **BIOL 3302** 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.

Ph.D. 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 advisory committee, students may take for graduate credit up to 3 credit hours of 3000 level courses in allied departments. All students are required to take **BIOL 5089**, Ethical Issues in Biology. 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.

Specific courses shall be completed as follows:

BIOL 4122 (3 hours), Biometry, or equivalent course in statistics.

BIOL 6889 (2 hours), Graduate Seminar.

Three semesters required (6 credits total).

12 hours of formal course work required by the student's emphasis area at the time a student is admitted to the Ph.D. program.

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

A combination of 6 total credit hours of the following:

BIOL 5059, Topics in Ecology, Evolution, and Systematics

BIOL 5069, Topics in Cellular and Molecular Biology

BIOL 5079, Topics in Floristic Taxonomy

Students in Ecology, Evolution and Systematics are required to take **BIOL 5192** Community Ecology, **BIOL 5312** Theory of Systematics and **BIOL 4182** Population Biology.

Maintenance of Status

All students are expected to maintain a GPA of 3.0 or better. Students will normally meet formally with their thesis committee, or if that has not been formed, with their advisor each year to maintain their status in the program.

First-Year Experience

Ph.D. students are expected to become involved in a research experience during their first-year program, usually by spring semester or summer session.

Qualifying Examination

All students must pass a qualifying examination consisting of a written and oral component. Students

beginning studies in the fall semester will normally take the qualifying examination at the end of their fourth semester of full-time study. Doctoral students who have earned an M.S. degree previously are encouraged to take the examination in their first year.

The examination for Ecology, Evolution and Systematics students evaluates knowledge of fundamental principles presented in formal courses and in papers of special importance in the field. The written exam will be given in April at the end of the spring semester, and the oral portion immediately afterwards.

The Qualifying Examination for Cellular and Molecular students is composed of a written portion in which the student prepares a formal research proposal on a topic different from that of her/his doctoral dissertation research, and an oral portion during which the student defends the research proposal as well as his/her knowledge of the fundamental concepts of molecular biology, cell biology, and biochemistry.

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. The approved proposal must be submitted to the director of graduate studies in biology. Doctoral students may not enroll in more than 4 credits of graduate research (**Biology 6905**) before they have received approval for their dissertation proposal. 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.

Graduate Certificate in Biotechnology

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.

Requirements

I. BIOL 6615, Advanced Biotechnology Laboratory II

II. BIOL 6602, Advanced Molecular Biology or **BIOL 6612**, Advanced Molecular Genetics of Bacteria (If both Group II courses are taken, one may be used as elective credit)

III. The remaining 11 credit hours must be taken from the following **electives**:

Biology

BIOL 4712, Biochemistry

BIOL 4842, Immunobiology

BIOL 5069, Topics in Cellular and Molecular Biology

BIOL 6550, Advanced Bacterial Pathogenesis
BIOL 6612, Advanced Molecular Genetics of Bacteria (if not taken as a required course)
BIOL 6622, Advanced Molecular Biology of the Cell
BIOL 6632, Advanced Nucleic Acid Structure and Function
BIOL 6642, Advanced Plant Molecular Biology and Genetic Engineering
BIOL 6652, Advanced Virology
BIOL 6699, Graduate Internship in Biotechnology
BIOL 6889, Graduate Seminar, when relevant
BIOL 6915, Graduate Research Practicum
BIOL 6920, Topics in Biology, when relevant

Chemistry

CHEM 4722, Advanced Biochemistry
CHEM 4733, Biochemistry Laboratory
CHEM 4772, Physical Biochemistry

Graduate Certificate in Tropical Biology and Conservation

The Graduate Certificate 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 Chemistry, Economics, History, Political Science, Social Work, and Sociology.

Admission

Student enrolled in UMSL who intend to receive a Graduate Certificate in Tropical Biology and Conservation must complete an application form available from the Graduate School. Student not enrolled in a course of graduate studies at UMSL must apply simultaneously to the University's Graduate Admissions office. Students who have a baccalaureate degree or are enrolled in graduate work elsewhere may apply for admission to the certificate program without regular admission to the graduate program. Due to limited space, admission will be on a competitive basis based on student motivation and academic qualifications. The minimum admissions requirements include: (1) at least a 3.0 GPA for undergraduate course work or a 3.2 GPA for 12 credit hours of graduate course work; and (2) current enrollment in the graduate program in biology at UMSL having satisfied the prerequisites of the certificate; or completion of a baccalaureate degree and having satisfied the prerequisites of the certificate program. 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. Up to 3 credits may be taken at the 2000 - 3000 level upon permission of the Graduate Committee. 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, Public Policy of Conservation and Sustainable Development, **OR**
POL SCI 6452, Public Policy of Conservation and Sustainable Development
BIOL 6299, Internship in Conservation Biology (may be replaced with a biology elective for individuals with applied conservation or environmental agency experience upon consent of the Graduate Committee).

Choice of:

BIOL 6212, Theory and Application of Conservation Biology
BIOL 6222, Advanced Tropical Ecology and Conservation

Electives:

Biology

BIOL 4182, Population Biology
BIOL 4202, Wildlife Ecology and Conservation
BIOL 4402, Ornithology
BIOL 4422, Entomology
BIOL 4501, Flowering Plant Families Phylogeny and Diversification
BIOL 5122, Advanced Tropical Resource Ecology
BIOL 5123, Advanced Tropical Resource Ecology Field Studies
BIOL 5192, Community Ecology
BIOL 6102, Advanced Behavioral Ecology
BIOL 6112, Advanced Evolution of Animal Sociality
BIOL 6182, Advanced Population Biology
BIOL 6192, Applications of Geographic Information Systems
BIOL 6212, Theory and Application of Conservation Biology
BIOL 6222, Advanced Tropical Ecology and Conservation
BIOL 6889, Graduate Seminar, when relevant

Economics

ECON 3300, International Economic Analysis

ECON 4550, Natural Resource Economics

History

HIST 3000, Selected Topics in History, when relevant

HIST 6114, Readings in Latin American History, when relevant

HIST 6115, Readings in African History, when relevant

Political Science

POL SCI 3480, Environmental Politics

POL SCI 3595, Studies in Comparative Politics, when relevant

POL SCI 3830, International Political Economy

POL SCI 3850, International Organizations and Global Problem Solving

POL SCI 3890, Studies in International Relations

POL SCI 4510, Comparative Public Policy and Administration

POL SCI 4850, International law

POL SCI 4940, Leadership and Management in Nonprofit Organizations

POL SCI 6448, Political Economy and Public Policy

POL SCI 6480, Proseminar in International Relations

Social Work

SOC WK 4950, Seminar in Social Work Issues, when relevant

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Faculty

Christopher D. Spilling, Professor, Chairperson
Ph.D., The University of Technology, Loughborough, UK

George Gokel, Distinguished Professor, Associate Director of the Center for Nanoscience
Ph.D., University of Southern California

Robert W. Murray, Curators' Professor Emeritus
Ph.D., Yale University

Lawrence Barton, Professor Emeritus
Ph.D., University of Liverpool

James S. Chickos, Professor
Ph.D., Cornell University

Joyce Y. Corey, Professor Emerita
Ph.D., University of Wisconsin

Thomas F. George, Professor and Chancellor
Ph.D., Yale University

Wesley R. Harris, Professor
Ph.D., Texas A. and M. University

David W. Larsen, Professor Emeritus
Ph.D., Northwestern University

Jingyue Liu, Professor, Director of the Center for Nanoscience
Ph.D., Arizona State University

James J. O'Brien, Professor
Ph.D., Australian National University

Keith J. Stine, Professor
Ph.D., Massachusetts Institute of Technology

Alicia M. Beatty, Associate Professor
Ph.D., Washington University

Alexei V. Demchenko, Associate Professor, Director of Graduate Studies
Ph.D., Zelinsky Institute for Organic Chemistry, Moscow

Valerian T. D'Souza, Associate Professor
Ph.D., University of Detroit

Cynthia M. Dupureur, Associate Professor,
Ph.D., Ohio State University

David L. Garin, Associate Professor Emeritus
Ph.D., Iowa State University

Harold H. Harris, Associate Professor
Ph.D., Michigan State University

Stephen M. Hoimes, Associate Professor
Ph.D., University of Illinois-Urbana-Champaign

Jane A. Miller, Associate Professor Emerita
Ph.D., Tulane University

Rudolph E. K. Winter, Associate Professor Emeritus;
Ph.D., The Johns Hopkins University

Zhi Xu, Associate Professor
Ph.D., University of Pittsburgh

Bauer, Elke, Assistant Professor
Ph.D., University of Erlangen-Nuremberg, Germany

Michael R. Nichols, Assistant Professor
Ph.D., Purdue University

Janet B. Wilking, Assistant Professor
Ph.D., Washington University

Chung F. Wong, Assistant Professor

Ph.D., University of Chicago

Nigam P. Rath, Research Professor

Ph.D., Oklahoma State University

James Bashkin, Research Associate Professor

Oxford University, UK

Rensheng Luo, Research Assistant Professor

Ph.D., Wahan Institute of Physics and Mathematics Chinese Academy of Sciences

Anthony Mannino, Adjunct Associate Professor

Ph.D., Ohio State University

John Gutweiler, Lecturer

Ph.D., Saint Louis University

Technical Staff

Joseph Kramer, Spectrometrist

Tohn Tubbesing, Senior Electronics Technician

Donna Kramer, Coordinator, Laboratory Operations

Frank L. May, Research Investigator

Bruce Burkeen, Senior Research Engineering Technician

Joe Flunker, Glassblower

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 Certificate

B.S. in Chemistry (with a Chemistry or Biochemistry Option)

B.S. in Education with an emphasis in Chemistry (in cooperation with the College of Education)

B.A. in Chemistry with teacher certification.

The department is accredited by the American Chemical Society. Students completing the B.S. degree (chemistry or biochemistry option) are certified to 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 and to participate in departmental teaching activities.

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. Research leading to a M.S. thesis or Ph.D. dissertation may be conducted in one of four emphasis areas, namely, 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 and Scholarships

The following scholarships, fellowships and awards are available to 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. There are two such scholarships available.

The Friends and Alumni Scholarship is given to a full-time student with high financial need and pursuing a chemistry degree. There are two such scholarships available.

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.

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 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.

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.

Alumni Graduate Research Fellowships are available for summer study for selected chemistry graduate students. Several undergraduate awards are given each year to outstanding students. The Chemical Rubber Company Introductory Chemistry Award is given to the 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, 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.

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 a double major in chemistry and biology is often chosen by premedical and pre dental 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.

Undergraduate Studies

General Education Requirements

Students must satisfy the university and college general education requirements. Courses in chemistry may be used to meet the university's science and mathematics area 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 highly 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.

Degree Requirements

Bachelor of Arts in Chemistry

This degree is intended primarily for preprofessional students in health science and related areas, as well as prelaw students interested in patent law. Candidates must complete the following chemistry courses:

- CHEM 1111**, Introductory Chemistry I
- CHEM 1121**, Introductory Chemistry II
- CHEM 2223**, Quantitative Analysis
- CHEM 2612**, Organic Chemistry I
- CHEM 2622**, Organic Chemistry II
- CHEM 2633**, Organic Chemistry Laboratory
- CHEM 3022**, Introduction to Chemical Literature
- CHEM 3312**, Physical Chemistry I
- CHEM 3322**, Physical Chemistry II
- CHEM 3333**, Physical Chemistry Laboratory
- CHEM 3412**, Basic Inorganic Chemistry

CHEM 4897, Seminar (1 credit)

In addition, candidates must complete one laboratory course chosen from CHEM 3643, 4233, 4343, 4433, or 4733.

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. 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.

Bachelor of Arts in Chemistry with a Biochemistry Certificate

The university offers a certificate program for science majors who are interested in careers in biochemistry. This is an interdisciplinary program that involves additional courses in biochemistry and biology. In addition to the usual requirements for the B.A. degree in chemistry, the student must take the following courses:

Chemistry

CHEM 4712, Biochemistry
CHEM 4722, Advanced Biochemistry
CHEM 4733, Biochemistry Laboratory
CHEM 4772, Physical Biochemistry

Biology

BIOL 1811, Introductory Biology: From Molecules to Organisms
BIOL 2012, Genetics
BIOL 3622, Cell Biology
BIOL 4602, Molecular Biology or **BIOL 4614**, Biotechnology Laboratory I

Students may obtain a minor in biology by adding BIOL 1821 to the curriculum described above. The Biology department also offers a certificate in biochemistry.

Bachelor of Science in Chemistry

This is the first professional degree in chemistry. It 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 may choose to specialize in chemistry or biochemistry.

Chemistry Option

Candidates must complete the requirements for the B.A. degree in chemistry. In addition, the following chemistry courses are required:

CHEM 3643, Advanced Organic Chemistry Laboratory
CHEM 4212, Instrumental Analysis
CHEM 4233, Laboratory in Instrumental Analysis
CHEM 4343, Physical Chemistry Laboratory II
CHEM 4412, Advanced Inorganic Chemistry
CHEM 4433, Inorganic Chemistry Laboratory
CHEM 4712, Biochemistry

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

Candidates must complete the requirements for the B. A. degree in chemistry. In addition, the following chemistry and biology courses are required:

Chemistry

CHEM 4212, Instrumental Analysis
CHEM 4233, Laboratory in Instrumental Analysis
CHEM 4412, Advanced Inorganic Chemistry
CHEM 4712, Biochemistry
CHEM 4722, Advanced Biochemistry
CHEM 4733, Biochemistry Laboratory
CHEM 4772, Physical Biochemistry or
3 credits of **CHEM 3905**: Chemical Research, or
3 credits of **BIOL 4905**: Research.

Biology

BIOL 1811, Introductory Biology
BIOL 2012, Genetics or
BIOL 3622, Cell Biology

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.

Fifty-one hours of chemistry courses may be applied toward the degree. Each chemistry major candidate must present a seminar and pass a comprehensive examination during the senior year.

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

MATH 1900, Analytic Geometry and Calculus II

MATH 2000, Analytic Geometry and Calculus III

PHYSICS 2111, Physics: Mechanics and Heat

PHYSICS 2112, Physics: Electricity, Magnetism, and Optics

Degrees with Certification to Teach Chemistry in Secondary Schools

One can be certified to teach chemistry at the secondary level with a degree either in Education or in Chemistry. All candidates for certification must enroll in a program that includes Levels I, II, and III course work in the College of Education. The Missouri Department of Elementary and Secondary Education requires that candidates for certification to teach secondary chemistry complete certain Science Core Courses and specialized courses in chemistry

Science Core Courses

Phil 3380, Philosophy of Science

BIOL 1811, Introductory Biology I: From Molecules to Organisms

CHEM 1111, Introductory Chemistry I

CHEM 1121, Introductory Chemistry II

BIOL 1202, Environmental Biology, or another environmental science

PHYSICS 2111, Physics: Mechanics and Heat

and

GEOL 1001, General Geology or

ATM SCI 1001, Elementary Meteorology or

ASTRON 1001 or equivalent

Chemistry Endorsement

CHEM 2223, Quantitative Analysis

CHEM 2612, Organic Chemistry I

CHEM 2622, Organic Chemistry II

CHEM 2633, Organic Chemistry Laboratory

CHEM 3312, Physical Chemistry I or **CHEM 3302**, Physical Chemistry for the Life Sciences

CHEM 4712, Biochemistry

CHEM 4802 or **SEC ED 3240**, Curriculum and Methods of Teaching Physical Sciences

CHEM 4837, Chemistry/Physics Teaching Intern Seminar

SEC ED 4990, Secondary School Student Teaching

Bachelor of Arts in Chemistry with Teacher Certification

Students must complete the B.A. in chemistry requirements, as well as the requirements for teacher certification. (See the College of Education section of this *Bulletin*.) There are a few science courses beyond the minimum listed above.

PHYSICS 2112, Physics: Electricity, Magnetism, and Optics

CHEM 3322, Physical Chemistry II

CHEM 3333, Physical Chemistry Laboratory I and one additional advanced laboratory course

CHEM 3412, Basic Inorganic Chemistry

Minor in Chemistry

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

CHEM 1121, Introductory Chemistry II

CHEM 2223, Quantitative Analysis

CHEM 2612, Organic Chemistry I

CHEM 2633, Organic Chemistry Laboratory

One course from the following list must be completed:

CHEM 2622, Organic Chemistry II

CHEM 3312, Physical Chemistry I

CHEM 3412, Basic Inorganic Chemistry
CHEM 4712, Biochemistry same as Biology 4712

Courses, which are prerequisites to subsequent courses in 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.

Bachelor of Science in Biochemistry and Biotechnology

The Department of Chemistry and Biochemistry, in cooperation with the Department of Biology, offers a Bachelor of Science degree in Biochemistry and Biotechnology. Information about this degree program may be found at the [Biochemistry & Biotechnology Programs Home Page](#).

Competencies/Expectations/Outcomes that all students must demonstrate to complete the program successfully:

1. Knowledge and comprehension in areas of chemistry - Graduates should have a foundation of knowledge in chemistry as outlined by the American Chemical Society Committee on Professional Training in their guide to *Undergraduate Professional Education in Chemistry*. In order to achieve the goals of any one of our chemistry degrees, knowledge is required from the related areas of introductory physics and calculus.
2. Scientific problem-solving skills - Graduates should understand valid scientific approaches to problem-solving and be able to design experiments to test a hypothesis.
3. Data analysis/quantitative skills - Graduates should be able to draw valid conclusions from experimental data and observations. Graduates should be able to carry out statistical and linear regression analysis of data. Graduates should be able to evaluate the main possible sources of error in laboratory measurements.
4. Laboratory skills - Graduates should be able to carry out the basic techniques of preparative and analytical chemistry. An appreciation of the basic aspects of chemical spectroscopy should be achieved. B.S. degree graduates should have developed an appreciation of the application of advanced/specialized instrumentation to solving chemical problems. Graduates should be able to keep accurate records of experiments. Graduates should be able to work effectively in the laboratory individually or as a part of a small team. Graduates should have an awareness of the basic aspects of safe laboratory practices.
5. Communication skills - Graduates should be able to communicate scientific ideas clearly both orally and in written form. This includes the effective presentation of quantitative data and of scientific concepts or procedures using diagrams and/or figures.
6. Library/Information skills - Graduates should be able to search for and retrieve information from scientific journals, databases, and handbooks, especially those widely used by professional chemists.
7. Computer/software skills - Graduates should be proficient in the use of software widely used by practicing scientists, including word processors, scientific plotting and analysis software, spreadsheets, data acquisition software interfaced to commercial instruments, and simulation software.

Graduate Studies

Admission Requirements

Individuals with at least the equivalent of the B.A. degree in chemistry 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' GRE scores, letters of recommendation, and academic programs are also considered. In some cases the committee may require successful completion of undergraduate course work 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.

Financial Support

Teaching assistantships are available to qualified applicants. Research assistantships and fellowships are available for advanced students. For further information, contact the Graduate Studies Committee, Department of Chemistry and Biochemistry.

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.

Distribution Requirement

All graduate students (M.S. and Ph.D.) must fulfill the distributing requirements as described under "Doctoral Degree Requirements."

Master's Degree Requirements

Master of Science in Chemistry

Candidates for the M.S. degree in chemistry must demonstrate proficiency in organic, inorganic, physical, and analytical chemistry within two years of initial enrollment.

A minimum of 30 hours is required, normally including 3 hours in CHEM 6897 Chemistry Colloquium. No more than 3 hours in CHEM 6897 may be applied toward the required minimum of 30 credit hours.

Master of Science in Chemistry 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. A maximum of 12 hours of CHEM 6905 may be applied toward the required 30 hours. At least 9 hours must be at the 5000 level, excluding CHEM 6905. A maximum of 9 hours in 3000 level or above courses outside the department may be accepted if students receive prior approval of their advisers and the Director of Graduate Studies. Students are expected to follow all other general requirements of the Graduate School regarding master's degree and thesis requirements.

Master of Science without Thesis

Unlike the thesis option, students need not be enrolled full-time. Of the required 30 hours, 15 credits must be at the 5000 level. A maximum of 6 credits of CHEM 6905, Graduate Research in Chemistry, may be included in place of 4000 level courses. A maximum of 12 hours taken in 3000 level or above courses outside the department may be accepted with prior approval of the Director of Graduate Studies.

3+4 Chemistry - Optometry Program

This is a new program option for a Chemistry degree that would enable students to earn a BA in Chemistry in 3 years (likely requiring that some courses be taken over the summer semesters) and an Optometry degree in 4 years.

1st Semester (15)

CHEM 1111, Introductory Chemistry I (5)
BIOL 1811, Intro to Biology I (5)
MATH 1800, Analytic Geometry & Calculus (5)

2nd Semester (18)

CHEM 1121, Introductory Chemistry II (5)
BIOL 1821, Intro to Biology II (5)
MATH 1900, Analytic Geometry & Calculus II (5)
+PSYCH 1003, General Psychology (3)

Summer Option

Summer Semester (3-8)

CHEM 2612, Organic Chemistry I (3)
CHEM 2622, Organic Chemistry II (3)
CHEM 2633, Organic Chemistry Laboratory (2)
*Or General Education Courses

3rd Semester (13+)

MATH 2000, Analytic Geometry & Calculus III (5)
PHYSICS 2111, Physics: Mechanics & Heat (5)
****CHEM 2612**, Organic Chemistry I (3)
*General Education Courses

4th Semester (15)

PHYSICS 2112, Physics: Elec, Mag & Optics Chem (5)
CHEM 2223, Quantitative Analysis (3)
CHEM 3412, Basic Inorganic Chemistry (2)

- **CHEM 2622**, Organic Chemistry II (3)
- **CHEM 2633**, Organic Chemistry Laboratory (2)

Summer Option

Summer Semester (3-8)

- CHEM 2612**, Organic Chemistry I (3)
- CHEM 2622**, Organic Chemistry II (3)
- CHEM 2633**, Organic Chemistry Laboratory (2)
- *Or General Education Courses**

5th Semester (13+)

- CHEM 3022**, Intro. To Chemical Literature (1)
- CHEM 3312**, Physical Chemistry I (3)
- #CHEM 4712**, Biochemistry (3)
- #CHEM 4733**, Biochemistry Laboratory (2)
- +PSYCH 2201**, Psychological Statistics (4)
- *General Education Course**

6th Semester (11+1)

- CHEM 3333**, Physical Chemistry Lab I (2)
- CHEM 3322**, Physical Chemistry II (3)
- CHEM 4897**, Seminar (1)
- +BIOL 2482** Microbiology
- +BIOL 2483**, Microbiology Laboratory 2
- *General Education Courses**

Summer Option

Summer Semester

- *General Education Courses**

The basis for this 3+4 program is that students are required to do the courses (and the prerequisites) for the Chemistry Bachelor of Arts degree with the exception that students can substitute Optometry's Physical Optics and Photometry course (OPTOM 8140) for the advanced laboratory which is required for the B.A. in chemistry degree; additionally CHEM 3322 (Physical Chemistry II and CHEM 4897 (Seminar) can be completed in the first year of enrollment in the Optometry program though this is NOT recommended because students in the Optometry program take more than 20 credit hours each semester. In order to complete the chemistry program in 3 years, it is likely that some courses would need to be taken over the summer sessions (between semester 2 and 3 and between semester 4 and 5). Three chemistry classes that also are offered over the summer are suggested as options in the above schedule. These are quite compacted classes so it is not generally advised as the best option. If that summer option is chosen for those chemistry classes, however, some of the required General Education courses can be taken during the regular (3rd and 4th) semesters in place of the chemistry classes (CHEM 2612, 2622, 2633) that also are scheduled for the 3rd and 4th semester. Alternatively, General Education courses can be taken in the summer.

+ The College of Optometry requires two courses in English [e.g., Freshman Composition (ENGL 1100), junior English courses (e.g., ENGL 3160, 3100)] which is also a General Education requirement, two courses in Psychology, two Liberal Arts courses, a Statistics course, and a course in Microbiology with Lab. If Psychological Statistics (PSYCH 2201, 4 credits) is taken as the second Psychology course, that also satisfies the Statistics course requirement. One of the courses suggested in psychology (General Psychology, PSYCH 1003) also satisfies one of the three-course requirement in Social and Behavioral Sciences Knowledge (see not below on General Education courses).

The College of Optometry strongly recommends a course in Anatomy or Physiology and a course in Biochemistry. BIOL 1102 satisfies the Anatomy or Physiology requirement but this course is not included in the schedule listed above. Another course recommended by the College of Optometry is Cell Biology (BIOL 3622, Cell Biology, 3 credits)- this is not listed above either.

**** CHEM 2612, 2622, and 2633 are courses offered during the summer; currently, CHEM 2223 is not.**

*General Education courses [(1) Communicating Skills (two 3 credit courses), (2) Managing Information Skills (one 3-credit course), (3) Valuing Skill (one 3-credit course), (4) Social and Behavioral Science Knowledge (three 3-credit courses) (5) Humanities and Fine Arts Knowledge (three 3-credit courses), and (6) Mathematics and Life/Natural Sciences Knowledge (four 3-credit courses)] and Foreign Language courses (required for the Chemistry B.A. degree) are not listed specifically here. The requirements for Skill Goal 2 and Knowledge Goal 6 would be fulfilled by completing courses in the program listed above.

Gaining admission to Missouri's College of Optometry is a competitive process. Students selecting this 3+4 option should seek an initial interview with the Manager, Student and Special Services (and the Pre-Optometry Advisor) in the UMSL College of Optometry to insure that all prerequisites for the College of

Optometry will be completed. In August following the completion of their second year of this 3+4 program, students may apply formally to the UMSL College of Optometry and arrange to take the Optometry Admissions Test (OAT) early in the fall of their third year. The OAT is offered through computer sites and may be scheduled almost at any time. After receipt of a completed application in the Fall Semester of the candidate's third year and depending on the OAT outcome, the applicant may be invited for a formal interview in the College of Optometry. Following the formal interview, candidates with a 3.0 or better grade point average in the science prerequisites for optometry and a score of 310 or better in the OAT exam may be accepted into the UMSL College of Optometry.

Doctoral Degree Requirements

Incoming doctoral students must demonstrate proficiency in biochemistry, organic, inorganic, physical, and analytical chemistry within one year of initial enrollment. A minimum of 60 hours is required, including research hours.

Distribution Requirement

Students must take chemistry courses for graduate credit at the 4000 and 5000 levels. Students may choose to concentrate the majority of their coursework in one of four areas (biochemistry, inorganic chemistry, organic chemistry, or physical chemistry). Students must complete at least 6 hours of chemistry coursework in one (or more) sub-disciplines(s) outside of their major emphasis area. The following courses may not be used to fulfill the distribution requirement: Chem. 4212, 4233, 4302, 4343, 4412, and 4433.

Qualifying Examinations

In addition to the requirements set forth by the Graduate School, each student seeking the Ph.D. degree must successfully complete a qualifying examination in his/her major area of specialization prior to advancement to candidacy. The format of the qualifying examination depends upon the student's major area of emphasis (biochemistry, inorganic, organic or physical). In general, the qualifying examination consists of either comprehensive written and/or oral examinations, usually administered near the end of the 4th semester, or a series of cumulative examinations given eight times a year. In the latter case, a student must pass a minimum of two cumulative examinations per year and eight cumulative examinations before the end of the 6th semester. At least six of these cumulative examinations must be in the student's major area of specialization. For more detailed information, contact the Director of Graduate Studies in the Department of Chemistry & Biochemistry.

Seminar Requirement

Students must present a seminar in their third year and during each subsequent year. The third year seminar may be the defense of the doctoral dissertation proposal. One of the seminars is for the purpose of describing dissertation research. Students must enroll in Chemistry 6897, Chemistry Colloquium, each semester they are in residence.

Advancement to Candidacy

In addition to general Graduate School requirements for advancement to candidacy, students must complete the following:

- 1) 21 hours of nondissertation work. **This may not include:**

CHEM 4212, Instrumental Analysis
CHEM 4233, Laboratory in Instrumental Analysis
CHEM 4302, Survey of Physical Chemistry with Application to the Life Sciences
CHEM 4343, Physical Chemistry Laboratory II
CHEM 4412, Advanced Inorganic Chemistry
CHEM 4433, Inorganic Chemistry Laboratory
CHEM 6196, Advanced Reading in Chemistry
CHEM 6487, Inorganic Problem Seminar
CHEM 6687, Organic Problem Seminar
CHEM 6787, Biochemistry Problem Seminar
CHEM 6812, Introduction to Graduate Study in Chemistry
CHEM 6822, Introduction to Graduate Research in Chemistry
CHEM 6897, Chemistry Colloquium

but should include at least six credit hours of coursework outside of their major area of emphasis (see Distribution Requirement)

Courses in areas other than chemistry may be included with prior departmental approval.

- 2) Successfully pass a qualifying examination or cumulative examinations.
- 3) Present at least one seminar to the department on the dissertation research.
- 4) Participate in the undergraduate academic program as a teaching assistant for at least one semester.
- 5) Be in good standing.

Dissertation

Three copies 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 qualifying examination or otherwise fail to meet the academic and professional standards set forth by the Graduate School and the Department of Chemistry and Biochemistry.

Master of Science in Biochemistry and Biotechnology

The Department of Chemistry and Biochemistry, in cooperation with the Department of Biology, offers a Master of Science degree in Biochemistry and Biotechnology. Information about this degree program may be found at the [Biochemistry & Biotechnology Programs Home Page](#).

Course Descriptions

Prerequisites may be waived by consent of the department or instructor. Some courses as indicated in the course description may be taken concurrently with the listed offering. Consult your department adviser for further information.

CHEM 1011 Chemistry in the Environment and Everyday Living (3) [MI, MS]

This course examines the role of chemistry in everyday life and in the environment, and is intended for students not pursuing scientific or engineering majors. Chemical principles are introduced to the extent necessary for understanding of issues, but this course does not provide the basis for further technical courses. Two hours of lecture per week; on alternate weeks, one hour of discussion or two hours of laboratory.

CHEM 1052 Chemistry for the Health Professions (4) [MI, MS]

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 nor 1062 in the 120 hours required for graduation. Four hours of lecture per week.

CHEM 1062 Organic and Biochemistry for the Health Professions (2) [MI, MS]

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 (5) [MS]

Prerequisites: Mathematics through college algebra and trigonometry (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 1111 in the 120 hours required for graduation. Three hours of lecture and one hour of discussion per week; one hour of laboratory-lecture and three hours of laboratory per week.

CHEM 1121 Introductory Chemistry II (5) [MI, MS]

Prerequisite: CHEM 1111 or advanced placement. Lecture and laboratory are a continuation of CHEM 1111. Three hours of lecture and one hour of discussion per week; one hour laboratory-lecture and three hours of laboratory weekly.

CHEM 1134 Special Topics in Introductory Chemistry (1-5)

Prerequisite: Consent of instructor. A lecture or laboratory course to assist transfer students in meeting the requirements of CHEM 1111 and 1121.

CHEM 2223 Quantitative Analysis (3) [C, MI, MS]

Prerequisite: CHEM 1121. Principles and practice of elementary quantitative chemistry. The lecture treats descriptive statistics with emphasis on small samples; various types of competing equilibria pertaining to acid-base, complexometric and potentiometric titrations; and an introduction to spectrophotometric processes. The laboratory provides exercises in titrimetric, gravimetric, and spectrophotometric techniques. Both portions of the course deal with the analytical chemistry of environmentally-significant problems. Two hours of lecture and four and one-half hours of laboratory weekly.

CHEM 2612 Organic Chemistry I (3) [MS]

Prerequisite: CHEM 1121. 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) [MI, MS]

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) [C, MS]

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)

Prerequisite: CHEM 2622 (may be taken concurrently) and CHEM 3412. The 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)

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 requirement for other Chemistry B.A. and B.S. degree programs.

CHEM 3312 Physical Chemistry I (3)

Prerequisites: CHEM 1121 and MATH 2000 (may be taken concurrently), and PHYSICS 2111. Principles of physical chemistry, including thermodynamics, theory of gases, phase equilibria, kinetics, crystal structure, spectroscopy, and quantum mechanics. Three hours per week.

CHEM 3322 Physical Chemistry II (3)

Prerequisite: CHEM 3312. Continuation of CHEM 3312. Three hours of lecture per week.

CHEM 3333 Physical Chemistry Laboratory I (2)

Prerequisite: CHEM 2223 and CHEM 3312. Experiments designed to illustrate principles introduced in CHEM 3312. One hour of lecture and four and one-half hours of laboratory per week.

CHEM 3412 Basic Inorganic Chemistry (2) [MI, MS]

Prerequisites: CHEM 1121. Review of principles of atomic structure, covalent and ionic bonding. Properties of the elements and synthesis reactions and bonding aspects of important compounds of main group and transition metal elements. Two hours lecture per week.

CHEM 3643 Advanced Organic Chemistry Laboratory (2)

Prerequisites: CHEM 2223, CHEM 2622, CHEM 2633. 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 laboratory per week. Not for graduate credit.

CHEM 3905 Chemical Research (1-10)

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 (2)

Prerequisite: CHEM 3322. Principles and applications of modern methods of instrumental analysis for analytical chemistry measurements. Topics will be selected from the areas of electrochemistry, absorption and emission spectroscopy, chromatography, mass spectrometry, surface analysis, and nuclear magnetic resonance. Two hours of lecture per week.

CHEM 4233 Laboratory in Instrumental Analysis (2)

Prerequisites; CHEM 4212 and 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 4302 Survey of Physical Chemistry with Applications to the Life Sciences (3)

Prerequisites: CHEM 2612 and MATH 1800 or MATH 1100, and PHYSICS 1012. Principles of physical chemistry with applications to the life sciences. Topics will include thermodynamics, equilibria, kinetics, and spectroscopy. This course will be taught simultaneously with CHEM 3302, but students in 4302 will have additional assignments or projects. No student may receive credit for both CHEM 3302 and 4302.

CHEM 4343 Physical Chemistry Laboratory II (2)

Prerequisites: CHEM 3322 (may be taken concurrently) and CHEM 3333. Experiments designed to illustrate principles introduced in CHEM 3322. One hour of lecture and four and one-half hours of laboratory per week. Not for graduate credit.

CHEM 4412 Advanced Inorganic Chemistry (3)

Prerequisites: CHEM 3322 (may be taken concurrently) CHEM 3412 and CHEM 2622. 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. Three hours of lecture per week.

CHEM 4433 Inorganic Chemistry Laboratory (2)

Prerequisites: CHEM 3333, CHEM 4412 and CHEM 3643, (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 4652 Spectroscopic Identification of Organic Compounds (3)

Prerequisite: CHEM 3643. An applied approach to the use of spectroscopic techniques in organic chemistry. Topics to include integrated applications of infrared and Raman spectroscopy, nuclear magnetic resonance ^{13}C and ^1H , cw and pulsed and mass spectroscopy for the purpose of elucidating the structure of organic compounds. Three hours of lecture per week.

CHEM 4712 Biochemistry (3)

Same as BIOL 4712 Prerequisites: CHEM 2612 and either BIOL 1811 or CHEM 2622. Examines the chemistry and function of cell constituents, and the interaction and conversions of intracellular substances, Students may not receive credit for both BIOL 4712 and CHEM 4712.

CHEM 4722 Advanced Biochemistry (3)

Prerequisite: CHEM 4712. Selected advanced topics in the chemistry of life processes. Three hours of lecture per week.

CHEM 4733 Biochemistry Laboratory (2)

Prerequisite: 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 three and one-half hours of laboratory per week.

CHEM 4772 Physical Biochemistry (3)

Prerequisite: CHEM 3312 or CHEM/BIOL 4712. 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, electron transfer, and biological spectroscopy. Three hours of lecture per week.

CHEM 4797 Biochemistry and Biotechnology Seminar (1)

Prerequisites: Senior standing in the Biochemistry and Biotechnology program. Same as BIOL 4797. 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 4802 Curriculum and Methods of Teaching Physical Sciences (3)

Prerequisites: TCH ED 3310 and a near major in the subject matter. 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. To be taken prior to student teaching. This course must be completed in residence.

CHEM 4814 Special Topics in Chemistry (1-10)

Prerequisite: Consent of instructor. A reading and seminar course in selected advanced topics.

CHEM 4837 Chemistry / Physics Teaching Intern Seminar (1)

Same as PHYSICS 4837. Prerequisite: CHEM 4802 or Physics 4800. A seminar to accompany student teaching covering integration of physical science curricula and methods into the classroom setting. To be taken concurrently with Secondary Student Teaching, SEC ED 3290. One-hour discussion per week.

CHEM 4897 Seminar (1)

Prerequisites: CHEM 3022 and senior standing. Presentation of papers by students, faculty, and invited speakers. Chemistry majors must enroll during the semester in which they intend to graduate. Completion of a comprehensive examination is a course requirement. One hour of lecture and one hour of discussion per week.

CHEM 5394 Special Topics in Physical Chemistry (1-3)

Prerequisite: Consent of instructor. Selected topics in physical chemistry. May be taken more than once for credit.

CHEM 5396 Directed Readings in Physical Chemistry (1-3)

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 though the particular topic must be different in each case.

CHEM 5412 Typical Element Chemistry (3)

Prerequisite: CHEM 4412 or an equivalent course. Chemistry of the main group elements and their compounds

including such topics as electron deficient compounds, acids, bases and nonaqueous solvents, catenation and inorganic polymers, the solid state, organotypical element chemistry and energetics. Three hours of lecture per week.

CHEM 5422 Coordination Chemistry (3)

Prerequisite: CHEM 4412 or an equivalent course. Chemistry of the coordination compounds of the transition metals including such topics as kinetics and mechanisms of reaction, stereochemistry, ligand field theory, stability and electronic spectra. Three hours of lecture per week.

CHEM 5432 Spectroscopic Methods in Inorganic Chemistry (3)

Prerequisites: CHEM 4412 or an equivalent course. Study of modern spectroscopic characterization methods of particular importance to inorganic systems, with emphasis on such techniques as multinuclear NMR spectroscopy, UV/visible and EPR spectroscopy, IR/Raman spectroscopy, and Mossbauer spectroscopy. Application of such methods to questions of structure, bonding and reactivity. Three hours of lecture per week.

CHEM 5452 Organometallic Chemistry of the Main Group Elements (3)

Prerequisites: CHEM 4412 or an equivalent course. A systematic study of main group element compounds containing carbon-metal or carbon-metalloid bonds. Emphasis will be on preparative methods, structures and reactions of various classes of compounds. Three hours of lecture per week.

CHEM 5462 Organometallic Chemistry of the Transition Elements (3)

Prerequisites: CHEM 4412 or an equivalent course. A study of the 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)

Prerequisite: Consent of instructor. Selected topics in inorganic chemistry. May be taken more than once for credit.

CHEM 5602 Advanced Organic Chemistry I - Physical Organic (3)

Prerequisites: CHEM 2622 and 3322 Mechanism and theory of organic chemistry. Topics to include kinetics, transition state theory, reaction intermediates, and stereochemical analysis. Three hours of lecture per week.

CHEM 5612 Advanced Organic Chemistry II - Reactions and Synthesis (3)

Prerequisite: CHEM 2622. Examination of a variety of organic transformations typically utilized in organic synthesis. Topics will include carbon-carbon bond formation, pericyclic reactions, oxidation, reduction, and functional group interconversions. Mechanism and stereochemistry will be emphasized. Three hours of lecture per week.

CHEM 5694 Special Topics in Organic Chemistry (3)

Prerequisite: Consent of instructor. Advanced topics of special current interest. May be taken more than once for credit. Topics that may be offered include: methods of organic synthesis, organometallics in organic synthesis, topics in bio-organic chemistry, organic thermochemistry, natural products chemistry, stereochemistry, photochemistry, heterocyclic chemistry, medicinal chemistry.

CHEM 5774 Bioinformatics (3)

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, and molecular modeling and simulation.

CHEM 5794 Special Topics in Biochemistry (1-3)

Prerequisite: Consent of instructor. Selected topics in biochemistry. May be taken more than once for credit.

CHEM 6196 Advanced Reading in Chemistry (1)

Prerequisite: Admission to the Ph.D. degree program. Reading and examinations in the subdisciplines of chemistry. Enrollment must begin after completion of any course deficiencies.

CHEM 6687 Problem Seminar in Organic Chemistry (1)

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 program.

CHEM 6787 Problem Seminar in Biochemistry (1)

Prerequisites: 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)

Prerequisite: Consent of Graduate Adviser. Topics to be covered include: techniques of teaching of Chemistry in colleges and universities, methods of instruction and evaluation; and responsibilities of the Graduate Teaching Assistant in laboratory instruction; safety in the undergraduate laboratory, safety practices, emergency procedures; selection of research project and thesis adviser.

CHEM 6822 Introduction to Graduate Research in Chemistry (1)

Prerequisites: Consent of Graduate Adviser. Topics 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 6897 Chemistry Colloquium (1)

Presentation of papers by students, faculty, and invited speakers. One hour per week.

CHEM 6905 Graduate Research in Chemistry (1-10)

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Department of Criminology and Criminal Justice

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Faculty

Richard Rosenfeld, Curators' Professor and Chair

Ph.D., University of Oregon

Robert Bursik, Curators' Professor

Ph.D., University of Chicago

Finn Aage Esbensen, E. Des Lee Professor of Youth Crime And Violence, Chairperson

Ph.D., University of Colorado

Richard Wright, Curators' Professor

Ph.D., University of Cambridge

G. David Curry, Professor

Ph.D., University of Chicago

Janet L. Lauritsen, Professor

Ph.D., University of Illinois-Urbana

Jody Miller, Professor

Ph.D., University of Southern California

Beth Marie Huebner, Associate Professor, Ph.D. Director

Ph.D., Michigan State University

David Klinger, Associate Professor

Ph.D., University of Washington

Allen E. Wagner, Associate Professor Emeritus

Ph.D., Washington University

Kristin Carbone-Lopez, Assistant Professor

Ph.D., University of Minnesota

Andres Rengifo, Assistant Professor

Ph.D., City University of New York

Lee Ann Slocum, Assistant Professor

Ph.D., University of Maryland

Terrance J. Taylor, Assistant Professor

Ph.D. University of Nebraska

Timothy Maher, Associate Teaching Professor, Undergraduate Director

Ph. D., University of Missouri-St. Louis

Criminology and criminal justice faculty represent several academic disciplines. By integrating practice with theory, faculty members are able to present a comprehensive picture of crime and the justice system. This nexus of theory and application is found most directly in the department's emphasis on understanding policy in criminology and criminal justice. All components of crime and justice are represented in the curriculum including criminal behavior, delinquency, crime prevention, arrest, prosecution, defense, court processing, probation, prison, and parole. A special feature of the program is the cadre of local professionals who supplement the regular faculty.

General Information

Degrees and Areas of Concentration

The department offers courses leading to the Bachelor of Science, the Master of Arts, and Ph.D. in criminology and criminal justice.

Cooperative Programs

Faculty members in the criminology and criminal justice department hold appointments as fellows in the Center for International Studies and the Institute for Women's and Gender Studies. Workshops, projects, credit courses, and other social services are brought to the criminal justice community.

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.

Undergraduate Studies

General Education Requirements

Majors must satisfy the university and college general education requirements. Courses used to fulfill the social science or state requirement may not be taken from courses in the major. 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.

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 obtaining a signature from the adviser in criminology and criminal justice. All prerequisites must be satisfied prior to enrolling in a course.

Criminology majors may not take course numbers 1100, 2260, or 3345 offered through UM-Independent Studies to fulfill degree requirements in the major.

Expected Learning Outcomes

1. Acquire basic knowledge of the theories, methods and substance of issues in criminology and criminal justice.
2. Develop critical thinking skills through the application of criminological theory and social science research methods.
3. Develop fundamental understanding of interdisciplinary underpinnings (e.g., from sociology, psychology, political science, economics) of criminology and criminal justice issues and policies.
4. Acquire knowledge about the structure and functioning of the fundamental institutions (e.g., legislatures, police, punishment, supervisory) that are part of criminal justice systems.
5. Acquire understanding of the role of research and its application for informing policies about criminal justice issues.

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:

CRIMIN 1100, Introduction to Criminology and Criminal Justice
CRIMIN 1110, Theories of Crime
CRIMIN 1120, Criminal Law
CRIMIN 1130, 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

One of the following courses in Criminology and Criminal Justice:

CRIMIN 3305, Comparative Criminology and Criminal Justice
CRIMIN 3325, Violence Against Women
CRIMIN 4325, Gender, Crime, and Justice
CRIMIN 4340, Race, Crime, and Justice

Two courses from the following five:

CRIMIN 2230, Crime Prevention
CRIMIN 2240, Policing
CRIMIN 2250, The Courts
CRIMIN 2260, Corrections
CRIMIN 2270, Juvenile Justice and Delinquency

Two additional courses at the 3000, 4000, or 5000 level:

CRIMIN 3043, History of Crime and Justice
CRIMIN 3305, Comparative Criminology and Criminal Justice
CRIMIN 3310, Computers in Criminal Justice
CRIMIN 3320, The Death Penalty
CRIMIN 3325, Violence Against Women
CRIMIN 3330, White Collar Crime
CRIMIN 3345, Rights of the Offender
CRIMIN 4300, Communities and Crime
CRIMIN 4320, Forms of Criminal Behavior
CRIMIN 4325, Gender, Crime, and Justice
CRIMIN 4335, Probation and Parole
CRIMIN 4340, Race, Crime, and Justice
CRIMIN 4350, Victimology
CRIMIN 4380, Special Topics in Criminology and Criminal Justice

Elective Courses

1990, The City
2180, Alcohol, Drugs and Society
CRIMIN 2251, Youth Gangs
2265, Capital Punishment
3280, Internship in Criminology and Criminal Justice
3290, Special Readings

Candidates must also have a cumulative grade point average of 2.0 or better in the major.

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:

CRIMIN 1100, Introduction to Criminology and Criminal Justice

The candidate must then select from two of the following three courses:

CRIMIN 1110, Theories of Crime
CRIMIN 1120, Criminal Law
CRIMIN 1130, Criminal Justice Policy

Candidates must then complete 6 hours of criminology and criminal justice course work at the 2000 level or above.

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.

Graduate Studies

Master of Arts in Criminology and Criminal Justice

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 33 credit hours, at least 21 of which are required to be in courses housed in the Department of Criminology and Criminal Justice. 12 of these hours represent the core of the curriculum. Students may choose between a thesis and 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.

Expected Learning Outcomes

1. Develop a comprehensive understanding of the theories, methods and substance of issues in criminology and criminal justice and demonstrate an ability to synthesize knowledge in these areas.

2. Develop a comprehensive understanding of interdisciplinary underpinnings (e.g., from sociology, psychology, political science, economics) of criminology and criminal justice issues and policies.
3. Develop critical thinking and communication skills through the application of criminological theory and social science research methods.
4. Develop a comprehensive understanding of the structure and functioning of the fundamental institutions (e.g., legislatures, police, punishment, supervisory) that are part of criminal justice systems.
5. Develop comprehensive understanding of the role of research and its application for informing policies about criminal justice issues.

Plan of Study

Required Coursework

CRIMIN 6400, Proseminar: Criminology and Criminal Justice (3; core)

CRIMIN 6405, Methods (3; core)

CRIMIN 6410, Statistical Applications in Criminology and Criminal Justice (3; core)

Three additional Criminology and Criminal Justice seminars at the 6000 level (9; non-core)

Electives (12 hours)

Twelve 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 11 credit hours earned at other institutions can be credited toward the UMSL M.A. degree in Criminology and Criminal Justice.

Ph.D. Program in Criminology and Criminal Justice

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 recommendations, GRE scores 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. Twelve 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 for the Ph.D. are:

CRIMIN 6400, Proseminar

CRIMIN 6405, Methods

CRIMIN 6410, Statistical Applications in Criminology and Criminal Justice

CRIMIN 6420, Contemporary Criminological Theory

CRIMIN 6440, Nature of Crime

CRIMIN 6450, Criminal Justice Process and Policy

CRIMIN 6465, Qualitative Research Design

CRIMIN 6470, Quantitative Research Design

CRIMIN 6471, Evaluating Criminal Justice Interventions

CRIMIN 6480, Multivariate Statistics in Criminology

Students are also required to complete at least 9 hours from the following courses:

CRIMIN 5533, Philosophy of Law

CRIMIN 5555, Ethical and Legal Issues in Criminal Justice

CRIMIN 6431, The Nature of Punishment

CRIMIN 6434, Human Rights

CRIMIN 6435, Gender Crime and Criminal Justice

CRIMIN 6441, Juvenile Delinquency

CRIMIN 6442, Communities and Crime
CRIMIN 6443, Violent Crime
CRIMIN 6445, Property Crime
CRIMIN 6446, Sex Crime
CRIMIN 6447, Public Order Crime
CRIMIN 6448, Victimization
CRIMIN 6452, The Police
CRIMIN 6454, Corrections

Additional courses beyond the above requirements are taken as elective courses. These courses may be at the 5000 level. Students are also encouraged to take courses outside the Department of Criminology and Criminal Justice.

Comprehensive Examination

Graduate students in the Ph.D. program do not become recognized as Ph.D. candidates until they have passed the comprehensive examination. The goals of the comprehensive examination are to assess the student's familiarity with substantive literature, theory and methods of criminology and criminal justice and to evaluate the student's intellectual imagination and ability to apply knowledge to broad criminological questions.

Further information about the qualifying exam 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.

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 system of justice. Many prelaw 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.

Course Descriptions

Prerequisites may be waived by consent of the department or instructor.

CRIMIN 1100 Introduction to Criminology and Criminal Justice (3)

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. Course fulfills the state requirement for non-criminal justice majors.

CRIMIN 1110 Theories of Crime (3)

Prerequisite: CRIMIN 1100. Introduction to major theoretical approaches to the study of crime and justice.

CRIMIN 1120 Criminal Law (3)

Prerequisite: CRIMIN 1100. Analysis of substantive criminal law, evidence and judicial procedure.

CRIMIN 1130 Criminal Justice Policy (3)

Prerequisite: CRIMIN 1100. Introduction to criminal justice policy making, planning, and implementation.

CRIMIN 1150 Violence in America (3) [SS]

Prerequisites: CRIMIN 1100 or consent of instructor. Overview of patterns and correlates of violence in America. Emphasis on the variety of forms of violent crime, such as murder, assault, robbery, rape, and gang violence. Includes an examination of violence as a response to lawbreaking.

CRIMIN 1200 Foundations of Law: An Introduction to Legal Studies (3) [MI, V, SS]

Same as INTDSC 1200 and 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 2180 Alcohol, Drugs, and Society (3)

Same as SOC 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.

CRIMIN 2210 Research Methods in Criminology and Criminal Justice (3)

Prerequisite: CRIMIN 1100. Examination of basic methods of research design, measurement and data collection in criminology and criminal justice.

CRIMIN 2220 Statistical Analysis in Criminology and Criminal Justice (3)

Prerequisites: CRIMIN 2210 and the university math requirement. An introduction to techniques of quantitative data analysis. Both descriptive and inferential statistics are applied to problems in criminology and criminal justice.

CRIMIN 2230 Crime Prevention (3)

Prerequisite: CRIMIN 1100. Examination of situational, social, and legislative approaches to the prevention of crime and delinquency. Emphasis on theories, implementation and consequences of these approaches

CRIMIN 2240 Policing (3)

Prerequisite: CRIMIN 1100. Overview of current and historical perspectives on the function of American policing. Emphasis on the management of police organizations and relationships with the community.

CRIMIN 2250 The Courts (3)

Prerequisite: CRIMIN 1100. This course provides an overview of current and historical perspectives on the function of the American courts. 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)

Prerequisites: CRIMIN 1100 or consent of instructor. This course provides an overview of research and policy concerning youth gangs. Definitional and methodological issues will be examined, along with both qualitative and quantitative research. Topics include: the causes of gangs and gang involvement; crime, victimization, and drug involvement; and variations by race, gender, time period, and geography.

CRIMIN 2252 Philosophical Foundations of Criminal Justice (3)

Same as PHIL 2252. Addresses fundamental conceptual and ethical issues that arise in the context of the legal system. Questions may include: How does punishment differ from pre-trial detention? How, if at all, can it be justified? Is the death penalty ever justified? When is it morally permissible for juries to acquit defendants who are legally guilty? Is plea bargaining unjust? When might people be morally obligated to obey?

CRIMIN 2260 Corrections (3)

Prerequisite: CRIMIN 1100. Examination of correctional philosophies and practices. Emphasis on the history of correction, the formal and informal organization of correction facilities, inmate rights, and correctional alternatives.

CRIMIN 2265 Capital Punishment (3)

Prerequisites: CRIMIN 1100 or consent of instructor. Consideration of various aspects of the death penalty, including an examination of its history, ethics, application, and international setting.

CRIMIN 2270 Juvenile Justice and Delinquency (3)

Prerequisite: CRIMIN 1100. Examination of formal and informal responses to juvenile delinquency. Emphasis on theories of delinquency and the decision-making processes of police, court and probation officials.

CRIMIN 3043 History of Crime and Justice (3)

Same as HIST 2043. Prerequisites: Sophomore standing or consent of instructor. The analysis, development, and change in philosophies and responses to crime. Emphasis on major forms and definitions of crime, the emergence of modern policing, the birth of the prison, and the juvenile court.

CRIMIN 3209 Forensic Anthropology (4)

Prerequisites: ANTHRO 1005 or BIOL 1102 or consent of instructor. Same as ANTHRO 3209. 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 3280 Internship in Criminology and Criminal Justice (3)

Prerequisite: Junior standing. Internship under faculty supervision in a criminal justice setting. May be repeated once.

CRIMIN 3290 Special Readings (1-6)

Prerequisite: Consent of instructor. Individualized study, under regular faculty supervision, designed to meet particular educational needs of selected students.

CRIMIN 3305 Comparative Criminology and Criminal Justice (3)

Prerequisites: CRIMIN 1120, 1130, 2220 and ENGL 3100, or consent of instructor. Analysis of crime and criminal justice systems in selected cultures. Emphasis on the ways in which these cultures define and respond to criminal behavior. Fulfills Crimin diversity requirement.

CRIMIN 3310 Computers in Criminal Justice (3)

Prerequisites: CRIMIN 1120, 1130, 2220 and ENGL 3100 or consent of instructor. Use of computers, data base systems, and software applications in research and professional practice.

CRIMIN 3320 The Death Penalty (3)

Prerequisites: CRIMIN 1100. An examination of the history, application, and attitudes toward the death penalty.

CRIMIN 3325 Violence Against Women (3)

Prerequisites: Junior Standing, CRIMIN 1110, 1120, 1130, 2210, 2220, and ENGL 3100, or consent of instructor. Same as WGST 3325. 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. Fulfills Crimin diversity requirement.

CRIMIN 3330 White Collar Crime (3)

Prerequisites: Junior Standing, CRIMIN 1110, 1120, 1130, 2210, 2220, and English 3100, or consent of instructor. This course examines the physical and financial harm caused by crimes committed by corporations and business employees. Theoretical and empirical perspectives will be examined. Topics include: definitional issues and ethics; public perceptions; social, political and economic impact; and legal decision-making.

CRIMIN 3345 Rights of the Offender (3)

Prerequisites: CRIMIN 1120, 1130, 2220 and ENGL 3100, or consent of instructor. Analysis of the objectives of criminal law regarding the rights of persons suspected or convicted of crime. Emphasis on rights regarding the police, the court, and in correctional settings.

CRIMIN 4300 Communities and Crime (3)

Same as SOC 4300. Prerequisites: CRIMIN 1110, 1120, 1130, 2210, 2220, and ENGL 3100 or consent of instructor. Analysis of the sources, consequences, and control of crime within communities. 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)

Same as SOC 4320. Prerequisites: CRIMIN 1110, 1120, 1130, 2210, 2220, and ENGL 3100 or consent of instructor. Examination of major types of criminal behavior including violent, property, public order, and organizational offenses. Emphasis on theories of and responses to these crimes.

CRIMIN 4325 Gender, Crime, and Justice (3)

Same as SOC 4325. Prerequisites: CRIMIN 1110, 1120, 1130, 2210, 2220, and ENGL 3100 or consent of instructor. Analysis of the role of gender in crime and in the justice system. Emphasis on gender differences in crime commission, criminal processing, and the employment of women in criminal justice agencies. Fulfills Crimin diversity requirement.

CRIMIN 4335 Probation and Parole (3)

Prerequisites: CRIMIN 1110, 1120, 1130, 2210, 2220, 2260, and ENGL 3100 or consent of instructor. Analysis of alternatives to incarceration and postincarceration supervision. Emphasis on diversion, restitution, and community reintegration.

CRIMIN 4340 Race, Crime, and Justice (3)

Same as SOC 4340. Prerequisites: CRIMIN 1110, 1120, 1130, 2210, 2220, 2260 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 Crimin diversity requirement.

CRIMIN 4350 Victimology (3)

Prerequisites: CRIMIN 1110, 1120, 1130, 2210, 2220, and ENGL 3100 or consent of instructor. Analysis of major perspectives on victimization. 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 4380 Special Topics in Criminology and Criminal Justice (3)

Prerequisites: CRIMIN 1110, 1120, 1130, 2210, 2220, and ENGL 3100 or consent of instructor. In-depth study of a selected topic in criminology and criminal justice.

CRIMIN 4390 Seminar in Criminology and Criminal Justice (3)

Prerequisites: CRIMIN 1110, 1120, 1130, 2210, 2220, ENGL 3100, and senior standing, 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 research paper supervised by the instructor.

CRIMIN 4487 Philosophy of Law (3)

Prerequisite: CRIMIN 1100, and 3 hours of philosophy or consent of instructor. Same as PHIL 4920. An examination of typical problems raised by law, including the basis of legal obligations and rights, relations between law and morality, the logic of legal reasoning, and the justification for punishment. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

CRIMIN 4650 Forensic Issues in Mental Health (3)

Same as SOC WK 4650. This is an intensive issues course, investigating the intersection between the legal system and mental health. Students will explore issues involved in civil and criminal trial proceedings such as insanity defenses, diminished capacity, and competency to stand trial, civil commitment, battered women and rape trauma syndrome, sexual abuse of children, child custody, and domestic violence. In addition, the course will examine the roles of mental health practitioners as forensic evaluators, trial consultants and expert witnesses in a variety of mental health related cases.

CRIMIN 5533 Philosophy of Law (3)

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 5555 Ethical and Legal Issues in Criminal Justice (3)

Same as PHIL 5555. Prerequisite: Graduate standing or consent of instructor. Examination of the moral and legal aspects of the policies and practices of criminal justice agencies and agents. Issues may include treatment of offenders, the role of technology, and research and professional ethics.

CRIMIN 6400 Proseminar (3)

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)

Prerequisites: Graduate standing. Examination of basic methods for research design and data collection. Topics include participant observation and interviewing, survey research, aggregate data analysis, and experimental design.

CRIMIN 6410 Statistical Applications in Criminology and Criminal Justice (3)

Prerequisites: CRIMIN 6405. Examination of elementary principles of quantitative analysis and their application to crime and justice problems. Topics include univariate, bivariate and multivariate procedures for discrete and continuous data, and a comprehensive introduction to ordinary least squares regression.

CRIMIN 6420 Contemporary Criminological Theory (3)

Prerequisite: Graduate standing or consent of instructor. Examination of contemporary explanations of crime and criminal justice. Theories covered include strain, control, cultural, labeling, conflict, as well as more recent attempts at theoretical integration and multidisciplinary integration.

CRIMIN 6434 Human Rights (3)

Prerequisite: Graduate standing or consent of instructor. Examination of human rights from historical and cross cultural perspectives. Topics include capital and corporal punishment, political prisoners, rights of the accused, and rights of those imprisoned.

CRIMIN 6435 Gender, Crime and Criminal Justice (3)

Same as WGST 6435. Prerequisite: Graduate Standing. This course provides an analysis of theories of crime, crime processing and gender. Topics examined include the role of gender in criminal offending and victimization. The impact of gender on criminal/juvenile justice system processing and treatment will be addressed.

CRIMIN 6440 Nature of Crime (3)

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 typologies, and criminal careers.

CRIMIN 6441 Juvenile Delinquency (3)

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 United States

CRIMIN 6442 Communities and Crime (3)

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, fear of crime, neighborhood change, neighborhood responses to crime, and public policies.

CRIMIN 6443 Violent Crime (3)

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 6445 Property Crime (3)

Prerequisite: Graduate standing or consent of instructor. Examination of the sources and patterns of property offending across time and space. Topics include conceptions and typologies of property crimes and offenders, victim-offender relationships, and efforts to predict and control property offending.

CRIMIN 6446 Sex Crime (3)

Same as WGST 6446. Prerequisite: Graduate standing and consent of instructor. Examination of consensual and non-consensual sexual offending. Topics include historical development of laws regulating sexual conduct, controversies surrounding the application of these laws, and the nature and distribution of sexual offenses.

CRIMIN 6447 Public Order Crime (3)

Prerequisite: Graduate standing or consent of instructor. Examination of the nature of, prevalence of, and efforts to control public order crimes such as gambling, illicit drug use, prostitution, vagrancy, and disorderly conduct. The function of public order crimes as a means to control disruptive or threatening persons and groups is emphasized.

CRIMIN 6448 Victimization (3)

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 Process and Policy (3)

Prerequisite: Graduate standing. An analysis of criminal justice as a network of decisions and complex organizations. Topics include sources of criminal justice policy, policy agendas, implementation and evaluation.

CRIMIN 6452 The Police (3)

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 6454 Corrections (3)

Prerequisite: Graduate standing or consent of instructor. Examination of the history, forms, and functions of correctional philosophies, institutions, programs, and policies. Topics include the structure and functions of prisons and jails, community corrections, intermediate sanctions, and the growth of correctional control in modern society.

CRIMIN 6465 Qualitative Research Design (3)

Prerequisite: Graduate standing. 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)

Prerequisite: Graduate standing or consent of instructor. 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)

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)

Prerequisite: CRIMIN 6405 and CRIMIN 6470. Introduction to the general linear model with applications to multivariate problems in criminal justice and criminology. Topics include advanced ordinary least squares, modeling, time series analysis, simultaneous equations, and analysis of limited dependent variables.

CRIMIN 6485 Directed Readings/Research in Criminology and Criminal Justice (1-6)

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)

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)

Prerequisites: Graduate standing and consent of instructor.

CRIMIN 6500 Professional Proseminar: Criminology & Criminal Justice (3)

Prerequisite: Graduate Standing. (Must be taken in the first semester.) A critical examination of theoretical, methodological, and policy issues confronting criminal justice professionals. Focus is on nature of crime, policing, corrections and community supervision.

CRIMIN 6505 Research Methods for Criminal Justice Professionals (3)

Prerequisites: Graduate Standing. Examination of basic and applied methods for research design and data collection. Topics include participant observation and interviewing, surveys, aggregate data analysis, and program evaluation.

CRIMIN 7499 Ph.D. Dissertation Research (1-6)

Prerequisite: Graduate standing or consent of instructor. To be arranged.

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Faculty

David C. Rose, Professor, and Chairperson

Ph.D., University of Virginia

Sel Dibooglu, Professor

Ph.D., Iowa State University

Susan K. Feigenbaum, Professor

Ph.D., University of Wisconsin

Thomas R. Ireland, Professor Emeritus

Ph.D., University of Virginia

Sharon G. Levin, Professor Emeritus

Ph.D., University of Michigan

William E. Mitchell, Professor Emeritus

Ph.D., Duke University

Donald Phares, Professor Emeritus

Ph.D., Syracuse University

Robert L. Sorensen, Professor, Director of Undergraduate Studies

Ph.D., Virginia Polytechnic Institute

Lawrence H. White, Professor; Friedrich A. Hayek Professor in Economic History

Ph.D., University of California, Los Angeles

Anne E. Winkler, Professor Economics and Public Policy Administration

Ph.D., University of Illinois at Urbana-Champaign

Clinton A. Greene, Associate Professor

Ph.D., University of California-Davis

Donald J. Kridel, Associate Professor, Director of Graduate Studies

Ph.D., University of Arizona

Shirley L. Porterfield, Associate Professor, Economics and Social Work

Ph.D., University of Wisconsin-Madison

Herbert D. Werner, Associate Professor Emeritus

Ph.D., University of California-Berkeley

Lea-Rachel Kosnik, Assistant Professor

Ph.D., University of California, Los Angeles

William H. Rogers, Assistant Professor

Ph.D., Colorado State University

Donald C. Sweeney II, Teaching Professor, Economics and College of Business; Associate Director, Center for Transportation Studies

Ph.D., Washington University

Michael T. Allison, Associate Teaching Professor

A.B.D., University of Virginia

Kathleen Phares, Senior Lecturer Emeritus

M.A., University of Missouri-St. Louis

Brian Speicher, Senior Lecturer

A.B.D., Washington University

General Information

Degrees and Areas of Concentration

The economics department offers several degree programs. The B.A. in economics provides a flexible liberal arts orientation for students. The B.S. in economics places more emphasis upon developing the analytical and quantitative skills used in analysis. Both degrees can be tailored to meet the career interests of the student.

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.

The economics department also offers courses at the undergraduate level in geography.

A graduate program offers work leading to the M.A. degree in economics in preparation for careers in teaching, research, government, and industry. The program includes course work in microeconomic theory, macroeconomic theory, and econometrics, as well as elective courses in international trade, international finance, monetary theory, industrial organization, public finance, labor, urban, and natural resource economics. 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.

Departmental Honors

A student may earn departmental honors with a GPA of 3.6 in economics and the recommendation of the department.

Minor in Economics

A minor in economics is also available. See the following section for requirements.

Undergraduate Studies

Students completing the B.A. and B.S. in Economics are expected to have achieved the following learning outcomes:

1. Use economic reasoning to interpret and evaluate social, political and economic arguments, and policies.
2. Use mathematical methods to interpret and analyze economic models to assess their logical validity and to model economic phenomena.
3. Use statistical methods to interpret and analyze economic data and to assess the empirical validity of economic propositions.
4. Employ their understanding of key market institutions such as property rights and contracts and economic organizations such as the Federal Reserve System and the International Monetary Fund to analyze economic behavior and evaluate public policy.
5. Identify the causes and consequences of poverty and prosperity across and within societies.
6. 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.
7. Write a research paper that employs sound economic reasoning and, where appropriate, uses data and statistical methods to analyze an economic policy.

General Education Requirements

All undergraduate economics majors must meet the university and college general education requirements. 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.

Education majors specializing in economics must fulfill the requirements for the B.A. degree. These majors are responsible for obtaining an adviser in the Department of Economics.

All prerequisites for economics courses must be completed with a C- or better.

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.

Degree Requirements

Bachelor of Arts in Economics

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 required courses for the major must be completed with a grade of C- or better. The following courses are required:

ECON 1001, Principles of Microeconomics

ECON 1002, Principles of Macroeconomics

ECON 3001, Intermediate Economic Theory: Microeconomics

ECON 3002, Intermediate Economic Theory: Macroeconomics

ECON 3100, Economic Statistics

ECON 3200, Money, Banking, and Monetary Theory

ECON 3800, History of Economic Thought; or ECON 2800, History of American Economic Development

Bachelor of Science in Economics

Candidates for the B.S. degree must complete at least 36, but no more than 45, hours in economics. At least 30 hours must be at or above the 2000 level. All required courses for the major must be completed with a grade of C- or better. The following courses are required:

ECON 1001, Principles of Microeconomics
ECON 1002, Principles of Macroeconomics
ECON 3001, Intermediate Economic Theory: Microeconomics
ECON 3002, Intermediate Economic Theory: Macroeconomics
ECON 3100, Economic Statistics
ECON 3200, Money, Banking, and Monetary Theory
ECON 4100, Introduction to Econometrics
MATH 1800, Analytic Geometry and Calculus I, or **MATH 1100**, Basic Calculus

Also required are two of the following:

ECON 4040, Analysis of Business Cycles
ECON 4030, Managerial Economics
ECON 4110, Applied Econometrics
ECON 4120, Time Series Econometrics for Economics and Finance
ECON 4130, Econometric and Time Series Forecasting
ECON 4150, Mathematical Economics
ECON 4160, Geospatial Economic Analysis or any mathematics course numbered 1900 or above (with consent of adviser)

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. 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, Analytical Geometry and Calculus II
MATH 2000, Analytical Geometry and Calculus III
MATH 2020, Differential Equations
MATH 2450, Elementary Linear Algebra
MATH 4100, Advanced Calculus
MATH 4200, Mathematical Statistics I

General Business Preparation:

It is recommended that students interested in pursuing careers in business also take:

BUS AD 2400, Fundamentals of Financial Accounting
BUS AD 2410, Managerial Accounting
BUS AD 2900, Legal Environment of Business
BUS AD 3500, Financial Management
BUS AD 3700, Basic Marketing

Requirements for the Minor.

Candidates for a minor in economics must take a minimum of 18 hours in economics. At least 12 hours must be at or above the 2000 level. ECON 3100, Economic Statistics, cannot be counted towards the economics minor if the student has also taken MATH 1310, MATH 1320, MATH 1105, or the equivalent.

The following courses are required:

ECON 1001, Principles of Microeconomics
ECON 1002, Principles of Macroeconomics
ECON 3001, Intermediate Economic Theory: Microeconomics

It is also recommended that students take ECON 3002, Intermediate Economic Theory: Macroeconomics

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 1002 only.

Graduate Studies

Students completing the M.A. in Economics are expected to have achieved the following learning outcomes:

1. Interpret and analyze economic models and assess their validity.
2. Use theoretical and empirical tools to design effective business and government policies.
3. Use econometric methods to interpret and analyze economic data, to assess the empirical validity of

- economic propositions, evaluate business and government policies, and to forecast economic variables.
4. Develop at least one topic area of expertise through familiarity with the relevant scholarly and professional literatures, policy issues, institutions, and current data trends.
 5. 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.
 6. Write a professional quality research paper.
 7. Develop sufficient proficiency in the use of theoretical and empirical tools and in understanding of economic institutions to excel in a Ph.D. program.

B.S./M.A. Dual Degree Program in Economics

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, Microeconomics Analysis
ECON 5002, Macroeconomics Analysis
ECON 5100, Econometric Theory and Methods

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 Economics 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, 3002, 3100, 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.

Master of Arts in Economics

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.

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.

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
ECON 5002, Macroeconomic Analysis
ECON 5100, Econometric Theory and Methods

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.

Dual M.B.A./M.A. in Economics

For as few as 15 hours of additional course work in economics, a Master of Arts in Economics may be obtained along with your Master of Business Administration (M.B.A.) degree. Once accepted into the M.B.A. Program, you need only complete an on-page application form to gain admittance to the Economics program as well. Fulltime students can easily complete the M.A. degree in a year's time, while part-time students can be accommodated over a longer time period. The following course of study is recommended for dual degree-seekers. It is assumed that students have already completed at least one course in calculus.

I) Core requirements – 9 hours

ECON 5001, Microeconomic Analysis
ECON 5002, Macroeconomic Analysis
ECON 5100, Econometric Theory and Methods

II) Electives – 21 hours

Twelve hours of graduate-level business electives (excluding BUS AD 5000, BUS AD 5001, and BUS AD 5002, INFSYS 6800 and LOG OM 5300) to be incorporated from your M.B.A. degree program. Six additional graduate hours in economics, three hours of which may be at the 4000 level.

Applicants need not have an undergraduate degree in economics. However, students are expected to have taken, either at the baccalaureate or M.B.A. level: Intermediate Microeconomics (ECON 3001 or BUS AD 5001), Intermediate Macroeconomics (ECON 3002 or BUS AD 5002), Mathematical Economics (ECON 4150), Money and Banking (ECON 3200), Statistical Analysis for Management Decisions (LOG OM 5300) and Introductory Econometrics (ECON 4100). Students that do not have these courses will take these courses first; credits earned in these courses do not count towards the hours required for the M.A.

Students must take at least 30 hours to complete the M.A. in Economics degree-core requirements (I) and electives (II) – and these courses must be completed within a period of six years.

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 at 516-5562 or 516-5306. Regarding the graduate program, contact the Director of Graduate Studies at 516-5553. Additional information is also available at the [Department of Economics website](#).

Course Descriptions

Courses in this section are grouped as follows: Economics, Geography, and Home Economics. Prerequisites may be waived by consent of the department.

Economics

ECON 1000 Introduction to the American Economy (3) [V, SS]

Introduction to economic analysis and problems through an examination of the development and operations

of the American economy; study of its evolution, institutions, and principal problems. ECON 1000 does not substitute for ECON 1001 or 1002. Students who have already completed ECON 1001 or 1002 may not take ECON 1000 for credit.

ECON 1001 Principles of Microeconomics (3) [V, SS]

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 (3) [SS]

Prerequisite: 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 1003 Microeconomics in the News: A Virtual Classroom (1)

Prerequisites: ECON 1000 or ECON 1001 or equivalent (may be taken concurrently). This course uses a virtual chatroom to host one hour of discussion weekly about current news events with microeconomic content. News articles will focus on business, public policy, and individual choices that can be understood within a microeconomics framework. Chatroom can be accessed from any location-on or off-campus-within Internet access.

ECON 1004 Macroeconomics in the News: A Virtual Classroom (1)

Prerequisites: ECON 1002 or equivalent (may be taken currently). This course uses a virtual chatroom to host one hour of discussion, weekly, about current news events with macroeconomic content. News articles will focus on macroeconomic phenomena – e.g., interest rates, the global economy, the Federal Reserve and public policy decisions – that can be understood within a macroeconomics framework. Chatroom can be accessed from any location – on or off – campus – with Internet access.

ECON 1005 Family Economics and Household Development (3)

Prerequisites: None. Provides social service professionals that work with low income individuals and families with an understanding of the principles of personal financial management. Case studies are used to apply course content and to develop training strategies for clients to improve household financial management. The role of financial institutions and government policies as well as their impact on low income families is also examined. Resources to use with clients will be identified. Economics 1005 does not count toward a major or minor in Economics.

ECON 1500 Entertainment Economics: The Movie Industry (3) [SS]

This survey course examines the interrelationships between economics and the movie industry. It explores the impact of economic factors on the production, distribution and exhibition of movies, focusing on the rise and fall of the studio system, role of technological change in the evolution of cinematography and the movie marketplace, financing and market segmentation, globalization and changing industrial structure within which films are produced. To the extent that movies reflect and contribute to popular economic perspectives, this course also evaluates the soundness of the movie industry's depiction of a variety of economic doctrines. Classes will consist of lecture, discussion, and brief film screenings. This course does not count towards the hours required for an economics major.

ECON 2010 The Business Firm: History, Theory, and Policy (3) [V, SS]

Prerequisites: ECON 1000 or 1001 or consent of instructor. This course presents a history of development of modern business firms and examines the evolution of the economic theory of the firm. Special attention paid to the role that firms play in fostering social and economic development. Objective of course is to provide students with deeper understanding of firms so that they can make better policy decisions as owners, managers, lawmakers, regulators, and voters.

ECON 2410 Work, Families, and Public Policy (3) [MI, SS]

Prerequisite: ECON 1000 or 1001. Same as WGST 2410. This course compares the economic behavior of women and men in both the labor market and the household. Topics include: the family as an economic (production) unit, gender differences in labor force participation, occupations and earnings; the effectiveness of human capital theory and labor market discrimination in explaining the male-female wage gap; remedies for reducing the wage gap; family structure and economic well-being; and alternative policies to alleviate poverty. Students who have completed ECON 3400 may not take 2410 for credit.

ECON 2610 The Economics of Professional Sports (3) [V, SS]

Prerequisite: ECON 1000 or equivalent or consent of instructor. This course will survey the economic organization of professional sports team industries and the relationship of sports teams to their employees, fans, and governments. Economic issues relating to salaries and labor disputes, monopoly practices, cartels and pricing, team location decisions, and public subsidies for professional sports teams will be analyzed.

ECON 2650 Law and Economics (3)

Prerequisite: ECON 1001. Analysis of the economic role of property rights and contracts in the private for-profit and not-for-profit sectors of the economy. Considers economic incentives to form organizations as one

alternative and to form contracts as another. Considers the economic efficiency of the common law and judicial systems in use in the United States.

ECON 2800 History of American Economic Development (3) [MI, SS]

Prerequisites: ECON 1000 or 1001 or consent of instructor. Same as HIST 2800. Uses economic concepts to explain historical developments in American economy, beginning with hunter-gatherers who crossed the Bering land bridge around 12,000 B.C. Main topics include Native American economies, European exploration and conquest, colonial economies, indentured servitude, American Revolution, U.S. Constitution, westward expansion, transportation, Industrial Revolution, state banking and free banking, slavery, Civil War, post-bellum agriculture, rise of big business and antitrust, banking panics, Federal Reserve Act, First and Second World Wars, New Deal, and growth of government in postwar economy.

ECON 3001 Intermediate Economic Theory: Microeconomics (3)

Prerequisites: ECON 1001 and 1002. Analysis of prices in terms of equilibrium of the business firm and consumer demand in markets of varying degrees of competition.

ECON 3002 Intermediate Economic Theory: Macroeconomics (3)

Prerequisites: ECON 1001, 1002; ECON 3200 is recommended. Study of national income, expenditure, and the forces determining the level of economic activity. Special emphasis on the theory of income determination and its application to public policy.

ECON 3003 Game Theory and Strategic Decision Making (3)

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 3052 Microeconomics for the School Curriculum (1-3)

Prerequisite: Junior standing. Analysis of market forces, with emphasis on business firms, households, and productive-factor markets, price determination, and resource allocation. Special reference to topics included in elementary and secondary school social science curricula. ECON 3052 may not be used by economics majors to meet degree requirements.

ECON 3055 Economics Issues for the School Curriculum (3)

Prerequisites: Junior standing and consent of instructor. An analysis of selected economic issues appropriate to instruction in secondary and elementary schools. May be taken more than once for credit, provided the topic of the course is different each time. May not normally be used by economics majors to meet degree requirements. This course does not fulfill the undergraduate economics requirement for education majors.

ECON 3100 Economic Statistics (3)

Prerequisites: MATH 1030, ECON 1001, and ECON 1002. Introduction to economic data sources, data interpretation and statistical inference as used in economic analysis. Emphasizes the testing of economic hypotheses and the development and estimation of economic models. Introduces the use of statistical software used in economics.

ECON 3200 Money, Banking, and Monetary Theory (3)

Prerequisites: ECON 1001 and 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)

Prerequisite: ECON 1001. Introduction to the theories of international trade and finance including determinants of trade, the effects of trade on overall economic performance, trade restrictions, balance of payments, exchange rates, international economic integration and international financial crises. Discussion of current institutions and economic developments in the global economy.

ECON 3320 Economic Development (3)

Prerequisites: ECON 1001 and 1002. Survey of economic growth as applied to developed and underdeveloped countries. Analysis of development policies with emphasis on case studies. Case studies may include the United States, Western Europe, or Latin America.

ECON 3400 Labor Economics (3)

Prerequisite: ECON 1001. Examines the labor market in the economy. Considers the theories of labor supply, labor demand, and market determination of wages. Other topics include noncompetitive markets, internal labor markets, the theory of human capital, compensating wage differentials, labor market discrimination, unions and collective bargaining, unemployment, and poverty and the distribution of income.

ECON 3500 Public Finance (3)

Prerequisite: ECON 1002 and ECON 3001. Analysis of the role of government expenditures and taxation. Topics include: (1) analysis of public goods and externalities, models of collective choice, elements of benefit-cost analysis, the theory of bureaucracy, governments as agents in markets; and (2) analysis of the economic

role of governments, subsidies and taxes in the federal system, criteria for tax evaluation, the nature of tax legislation, private decision making under different tax institutions, and government borrowing.

ECON 3600 Industrial Organization (3)

Prerequisite: ECON 1001. A theoretical and empirical analysis of the actions of firms under alternative forms of market organization. The role of economics 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 3700 Urban and Regional Economics (3)

Prerequisites: ECON 1001 and 1002. A survey of factors affecting the location of economic activity, industrial diversity, determinants of urban growth, the role of urban public economy, and the management of the urban environment.

ECON 3750 The Political Economy of Health Care (3)

Prerequisite: ECON 1001. The course provides an economic perspective on the working of the health care market, focusing on the effects of government regulation, tax policy, and entitlement programs. There will be a detailed review of existing U.S. health care financing programs (e.g., Medicare, Medicaid), as well as financing systems of other developed countries. Health care policy will be evaluated according to its impact on quality, cost, and access to medical care and, ultimately, the overall health status of our population.

ECON 3800 History of Economic Thought (3)

Prerequisites: ECON 1001 and 1002. The evolution of economic thought from the ancients through post-Keynesian theory.

ECON 3900 Selected Topics in Economics (3)

Prerequisites: ECON 1001 and 1002. Analysis of a selected economic topic. 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.

ECON 4030 Managerial Economics (3)

Prerequisite: ECON 3001 or equivalent; MATH 1800 or 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 Analysis of Business Cycles (3)

Prerequisites: ECON 3200; 3002; 3100. This course focuses on the empirical regularities in macroeconomics commonly referred to as the business cycle. It examines the variability and co-movements of aggregate economic variables and explores alternative theoretical explanations of these phenomena.

ECON 4100 Introduction to Econometrics (4)

Prerequisites: ECON 1001 and 1002; ECON 3100; MATH 1800 or MATH 1100; or consent of instructor. 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 4105 Quantitative Methods and Modeling in Economics, Business and the Social Sciences (3)

Prerequisites: MATH 1030; ECON 1001 or junior standing. This course focuses on the application of mathematical techniques to model building. The course reviews various mathematical techniques and shows students how they can be used for describing various social and business phenomena. Specific examples from the business, economics, criminology and other social sciences will be employed to reinforce the mathematical tools and concepts discussed. Students who have previously completed ECON 4150 or MATH 1800 or MATH 1100 may not take this course for credit.

ECON 4110 Applied Econometrics (4)

Prerequisite: ECON 4100 or equivalent. Concepts, techniques, and 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)

Prerequisites: ECON 4100 or equivalent and a solid foundation in statistics. Introduction to application of econometric methods to time-series data. Emphasis on model specification as it applies to macroeconomic or financial data. Topics include: Stationary and non-stationary 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 4130 Business and Economic Forecasting (4)

Prerequisite: 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)

Prerequisites: MATH 1800 or 1100, ECON 3001, or BUS AD 5000 or 5001. 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.

ECON 4160 Geospatial Analysis in the Social Sciences(3)

Prerequisites: Junior standing, ECON 1001 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)

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 4210 Financial Markets and Institutions (3)

Prerequisite: ECON 3200. Demand, supply, and flow of funds in the macrofinancial system, including money, capital, futures, and foreign exchange markets. Examines types and historical development of domestic and international financial intermediaries operating within these markets, decision-making within individual intermediaries, their regulatory environment, and how their portfolio decisions affect flows in the financial system.

ECON 4500 Public Finance: State and Local (3)

Prerequisites: ECON 1001 and 1002 and junior standing. A study of expenditure, taxation, and financial administration of state and local governments, with emphasis on problems of current interest. Special attention given to research methods, as well as financial relations between various levels of government.

ECON 4510 Public Choice (3)

Prerequisite: ECON 3001 or consent of instructor. Public choice is the analysis of government and governmental institutions through the logic of economics. It assumes the same principles that economists use to analyze actions in the marketplace, and applies them to actions made in collective decision-making. Topics covered include: the efficiency of democracy, voting methods, the incentives of legislators, bureaucrats and lobbyists, political competition, and public institutions and economic growth.

ECON 4550 Natural Resource Economics (3)

Prerequisite: 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 4720 The Economics of Real Estate and Land Use Policy (3)

Prerequisites: ECON 3001 and ECON 4100. This course will introduce economic theory and analysis of the real estate market's micro and macro characteristics. Public policy impacting both the residential and commercial property markets will be discussed using the models developed in the course. Topics include price and location theory, growth and growth patterns, urban sprawl, migration, regulation of land and capital, provision of public goods, and non-market valuation econometric modeling. Hands on applications of various non-market econometric models will be provided.

ECON 4900 Advanced Topics in Economic Analysis (3)

Prerequisites: ECON 3001 or 3002 or consent of instructor. Study of a specific topic in Economics that may vary from semester to semester. May be taken for credit more than once if the topics are different.

ECON 4980 Special Readings (1-6)

Prerequisites: 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 (2-6)

Prerequisites: Junior standing, ECON 3001, and consent of instructor. Independent study involving work with appropriate private firm or public agency. Maximum of 6 hours may be earned, only 3 of which may be applied to economics major.

ECON 5001 Microeconomic Analysis (3)

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)

Prerequisites: ECON 3200; ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; 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 5010 Microeconomics for Policy Analysis (3)

Prerequisites: Graduate Student Standing. Same as P P ADM 6080. This course introduces microeconomic analysis of consumers, firms, and government, with an emphasis on policy applications. It assumes no prior training in economics and is appropriate for graduate students in public policy administration, nonprofit management, political science, gerontology, criminology and criminal justice, and other related fields. This course may not be used by economics students to meet M. A. degree requirements.

ECON 5052 Microeconomics for the School Curriculum (1-3)

Prerequisite: Bachelor's degree from an accredited institution or consent of instructor. Analysis of market forces, with emphasis on business firms, households, productive factor markets, price determination and resource allocations. Special reference to topics included in the elementary and secondary school social science curricula.

ECON 5055 Economic Issues for the School Curriculum (1-3)

Prerequisites: Junior standing and consent of instructor. An analysis of selected economic issues appropriate to instruction in secondary and elementary schools. May be taken more than once for credit, provided the topic of the course is different each time. May not normally be used by economics majors to meet degree requirements.

ECON 5100 Econometric Theory and Methods (3)

Prerequisites: ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; ECON 4150; ECON 4100 or LOG OM 5300; MATH 2450 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 single and multiple equation estimation and hypothesis testing. Topics include ordinary and generalized least squares, robust regression, and simultaneous equations estimation.

ECON 5110 Topics in Applied Econometrics (3)

Prerequisites: ECON 4100, or ECON 5100 or LOG OM 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)

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 non-stationary 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)

Prerequisites: ECON 3001 or BUS AD 5001, ECON 3002 or BUS AD 5002, ECON 4150, ECON 4100 or LOG OM 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 5140 Seminar in Economic Research (3)

Prerequisites: ECON 3200; ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002. Research methods applied to economics. Develops efficiency and skill in conducting research and communicating the results with written reports and oral presentations. This course must be taken within the first year of study after completion of the prerequisites.

ECON 5200 Monetary Theory and Policy (3)

Prerequisites: ECON 3200; ECON 3001 or BUS AD 5001; ECON 3002 or BUS AD 5002; ECON 4150. An examination of how monetary policy has affected the economy in the past and how it can improve economic performance in the future. Topics include: the origins of money, money supply, money demand, the determinants of real and nominal interest rates, the term structure of interest rates, the impact of discretionary monetary policy on the domestic economy and foreign exchange markets, and the domestic economy and foreign exchange markets, and the relationship between monetary policy and federal government deficits.

ECON 5210 Financial Markets (3)

Prerequisites: ECON 3200; ECON 3001 or BUS AD 5001; ECON 3002. Demand, supply, and flow of funds in allocating credit and distributing risk in the macrofinancial system. The saving investment process, the rationale for financial markets, and the role of financial intermediaries are studied within the framework of the flow of funds accounts. Special attention is given to the operation of money, capital, futures, and foreign financial markets and the impact of public policy on the structure and performance of financial markets.

ECON 5300 International Trade (3)

Prerequisite: ECON 3001 or BUS AD 5001. Survey of the modern theories of international trade and their applications including factor endowments and other, trade restrictions, foreign investment, trade and economic development, and balance of payments and exchange rates. Discussion of current institutions and economic developments in the global economy.

ECON 5301 International Finance (3)

Prerequisite: ECON 3200, ECON 3001 or BUS AD 5002. Application of economic theory to international financial issues and discussion of current financial institutions and developments in the global economy. Topics include the international payments mechanism, the balance of payments, foreign exchange markets, international linkages, world inflation, capital flows, and macroeconomic policy in open economies.

ECON 5400 Labor Economics: Theory and Public Policy (3)

Prerequisite: ECON 3001 or BUS AD 5001. This course examines labor supply, labor demand, and market determination of wages. Topics covered include the effect of technological change on employment, trends in labor force participation, the impact of government taxes and transfers on labor supply, poverty, and its economic consequences, the human capital model and its implications for investment in education and on-the-job training, and theories of economic discrimination and empirical measurement issues. Throughout the course, current public policy debates are examined using the theoretical models developed.

ECON 5500 Public Sector Microeconomics (3)

Prerequisite: ECON 3001 or BUS AD 5001, or P P ADM 6080. Same as P P ADM 6210. Application of tools of intermediate microeconomics to address public sector issues. Special emphasis is placed on critically analyzing current public policy debates using the models developed. Topics covered include: cases in which competitive market fails to allocate resources efficiently (e.g., externalities and public goods), importance of property rights, incentive effects of the tax and transfer system, and the fundamentals of cost-benefit analysis.

ECON 5510 Public Choice (3) Prerequisites: ECON 3001 or consent of instructor. Public choice is the analysis of government and governmental institutions through the logic of economics. It assumes the same principles that economists use to analyze actions in the marketplace, and applies them to actions made in collective decision-making. Topics covered include: the efficiency of democracy, voting methods, the incentives of legislators, bureaucrats and lobbyists, political competition, and public institutions and economic growth.

ECON 5600 Structure and Performance of United States Industry (3)

Prerequisites: ECON 3001 or BUS AD 5001; ECON 4150. An analysis of the functioning of business firms under alternative market arrangements. Topics include: the theory and measurement of monopoly power and the role of economies of scale, product differentiation, and entry conditions in affecting this power; the impact of market power on the price-setting behavior, advertising and promotional strategies, and technological innovation of firms; the role of government policy in promoting or preventing competition among firms.

ECON 5630 Economics of Telecommunications (3) Prerequisites: ECON 3001, BUS AD 5000 or BUS AD 5001 and ECON 4150. Application of economic theory and techniques to the telecommunications industry.

Topics include demand theory for telephone access and use, consumer surplus models for subscription choice, nonlinear pricing strategies including pure and mixed bundling and multi-part tariffs, the incentives of the firm under various regulatory regimes, a comparison of rate-of-return regulation and incentive (price cap) regulation, and the impact of carrier-of-last-resort responsibilities.

ECON 5640 Transportation Economics (3)

Prerequisites: ECON 3001 or BUS AD 5000. This course makes use of range of economic concepts to examine the nature of markets in which transport services are provided. This course is designed for future transportation professionals who wish to explore the fundamentals of economics in their field and for graduate students in public policy and economics wishing an economics-based understanding of transportation issues. Basic concepts covered include the theory of transportation demand, transportation costs and investment

planning, and current topics in transportation economics such as regulation-deregulation and social cost pricing.

ECON 5700 Regional and Urban Economics (3)

Prerequisites: ECON 3001. Investigate the spatial aspects of urban and regional economics: location theory, market areas, and agglomerations. The focus is on the description and explanation of the spatial allocation of economic activity with particular attention paid to the role of cities. Topics will include regional development and regional development strategies, the growth of cities, firm location decision, spatial externalities, sprawl, and firm location.

ECON 5720 Real Estate Economics (3)

Prerequisites: ECON 3001 and ECON 4100. This course will introduce economic theory and analysis of the real estate market's micro and macro characteristics. Public policy impacting both the residential and commercial property markets will be discussed using the models developed in the course. Topics include price and location theory, growth and growth patterns, urban sprawl, migration, regulation of land and capital, provision of public goods, and non-market valuation econometric modeling. Hands-on applications of various non-market econometric models will be provided.

ECON 5750 The Political Economy of Health Care (3)

Prerequisite: ECON 3001 or BUS AD 5000 or consent of instructor. This course investigates the impact of government policy on health care provision and financing, focusing on the effect of entitlement programs, tax policy, and government regulation. Applying standard economics techniques, students will analyze incentives facing the decision makers in the health care system and ways in which they are altered by government policy. Attention will also be given to rationales for government intervention and roles of interest groups in the formulation of U.S. health care policy. The course will provide a detailed review of specific federal and state government financing programs, primarily focusing on Medicare and Medicaid, and will include discussion of the economic aspects of current health finance reform proposals.

ECON 5760 Health Economics (3)

Prerequisites: ECON 3001 or BUS AD 5001. This course applies microeconomic theory and statistical techniques to understand decision making in health care markets. The effects of government policies on the health care choices of consumers and providers are identified and quantified; attention is given to federal and state entitlement programs, regulations, tax policies and antitrust enforcement. The role of insurance as a risk-sharing device is explored, along with its implications for pricing and health care utilization.

ECON 5900 Advanced Topics in Economic Analysis (3)

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)

Prerequisite: Consent of instructor. Independent study through readings, reports, research projects, and conferences.

Geography

GEOG 1001 Introduction to Geography (3) [MI, SS]

Prerequisite: None. An introduction to geography as a social science. The identification and explanation of order in the human landscape. A survey of the social, political, economic, and psychological factors which influence geographic patterns.

GEOG 1002 World Regions (3)

Prerequisite: None. 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)

Prerequisite: None. 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. Satisfies cultural diversity requirement.

GEOG 2900 Special Readings in Geography (3)

Prerequisite: Consent of instructor. This course will provide a more in-depth analysis of the various factors which influence geographic patterns. 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.

Home Economics

HOME EC 1110 Nutrition in Health (3)

A study of dietary nutrients essential for health, proper selection of foods to provide them, and current issues affecting them.

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Faculty

Richard M. Cook, Professor and Chairperson
Ph.D., University of Michigan

Joseph Carroll, Curators' Professor
Ph.D., University of California-Berkeley

Eamonn Wall, Jefferson Smurfit Professor Of Irish Studies and Professor
Ph.D., City University of New York

Peter Wolfe, Professor, Curators' Professor
Ph.D., University of Wisconsin

David Carkeet, Professor Emeritus
Ph.D., Indiana University

Sylvia J. Cook, Professor
Ph.D., University of Michigan

Charles Dougherty, Professor Emeritus
Ph.D., University of Toronto

Sally Barr Ebest, Professor
Ph.D., Indiana University

Francis Grady, Professor
Ph.D., University of California-Berkeley

Howard Schwartz, Professor
M.A., Washington University

James E. Tierney, Professor Emeritus
Ph.D., New York University

Jane Zeni, Professor Emerita
Ed.D., University of Missouri-St. Louis

Deborah Aldrich-Watson, Associate Professor
Ph.D., Columbia University

Suellynn Duffey, Associate Professor
Ph.D., The Ohio State University

Kathy Gentile, Associate Professor
Ph.D., University of Oregon

Bruce L. Liles, Associate Professor Emeritus
Ph.D., Stanford University

Steven Schreiner, Associate Professor
Ph.D., Wayne State University

Nanora Sweet, Associate Professor
Ph.D., University of Michigan

Mary Troy, Associate Professor
M.F.A., University of Arkansas

Jane Williamson, Associate Professor Emerita
Ph.D., Bryn Mawr College

John Dalton, Assistant Professor
M.F.A., University of Iowa

Kurt Schreyer, Assistant Professor
Ph.D., University of Pennsylvania

Nancy Robb Singer, Assistant Professor
Ph.D., University of Missouri-St. Louis

Benjamin Torbert, Assistant Professor
Ph.D., Duke University

Eric Turley, Assistant Professor
Ph.D., University of Nebraska

Nancy Gleason, Teaching Professor

M.A., University of Missouri-St. Louis
William Klein, Teaching Professor
Ph.D., Michigan Technological University
Susan Grant, Associate Teaching Professor
M.A., Southern Illinois University-Edwardsville
David Rota, Teaching Professor
Ph.D., Southern Illinois University-Carbondale
Jennifer MacKenzie, Associate Teaching Professor
M.A., Purdue University
William Mayhan, Associate Teaching Professor
Ph.D., Washington University
Scott McKelvie, Associate Teaching Professor
M.A., University of Missouri-St. Louis
Barbara Van Voorden, Associate Teaching Professor
M.A., Washington University
Deborah Maltby, Assistant Teaching Professor
Ph.D., University of Missouri-Kansas City
Lynn Staley, Assistant Teaching Professor
Ph.D., St. Louis University
Drucilla Mims Wall, Assistant Teaching Professor
Ph.D., University of Nebraska-Lincoln
Ellie Chapman, Senior Lecturer Emerita
M.A., Murray State University
Judy Gurley, Senior Lecturer Emerita
M.A., University of Arkansas
Judith Linville, Senior Lecturer Emerita
M.A., University of Arkansas
Terence Martin, Senior Lecturer Emeritus
Ph.D., Southern Illinois University-Carbondale
Allison, Jeanne, Lecturer
M.A., University of Missouri-St. Louis
Paula Coalier, Lecturer
MA, University of Missouri-St. Louis

General Information

Degrees and Areas of Concentration

The English department offers or participates in offering the B.A. in English, the B.A. in English with certification for secondary teaching, and the B.S. in secondary education with an emphasis area in English. The department also offers a minor in English. Additionally, students with any major in the university may earn a Certificate in Writing so that they may demonstrate evidence of training in creative, journalistic, or technical writing.

The department has a graduate program leading to the Master of Arts degree. Students may pursue a literature track where they acquire a broad coverage in British and American writers or a writing track where half of the course work deals with composition and writing theory. The department also offers the Master of Fine Arts in creative writing, in which half of the courses are writing workshops and independent writing projects. In addition, the department of English participates in a Graduate Certificate in the Teaching of Writing.

Learning Outcomes

Recipients of the undergraduate degree will demonstrate the following outcomes:

- Demonstrate advanced skills in reading and analyzing texts and a knowledge of literary and rhetorical terms and concepts.
- Demonstrate mastery of content in at least three specific fields in language, literature, and written literacy.
- Demonstrate knowledge of historical and critical context for these fields and the relevance to them of a variety of critical approaches.
- Understand the role played by gender, race, class, and ethnicity (where appropriate) in language, literature, and literacy.
- Demonstrate the ability to write clear analytical essays incorporating both primary textual evidence and secondary scholarly and critical sources.

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.

Undergraduate Studies

General Education Requirements

English courses may be used to meet the university's humanities requirement, **except** the following:

ENGL 1100, Freshman Composition
ENGL 1110, Freshman Composition for International Students
ENGL 2120, Topics in Writing
ENGL 2810, Traditional Grammar
ENGL 3090, Practical Criticism: Writing About Literature
ENGL 3100, Advanced Expository Writing
ENGL 3110, Advanced Expository Writing for International Students
ENGL 3120, Business Writing
ENGL 3130, Technical Writing
ENGL 3140, News Writing
ENGL 3150, Feature Writing
ENGL 3160, Writing in the Sciences
ENGL 3180, Reporting
ENGL 4860, Editing
ENGL 4870, Advanced Business and Technical Writing
ENGL 4880, Writing for Teachers
ENGL 4885, The Curriculum and Methods of Teaching English
ENGL 4890, Independent Writing Project

The college's foreign language requirement may be met in any language.

Satisfactory/Unsatisfactory Option

A maximum of 6 satisfactory/unsatisfactory hours may be taken in the department. Majors must complete at least 18 graded (i.e., not satisfactory/unsatisfactory) hours in English courses at the 3000 level or above with a grade point of 2.0 or better in these courses.

English majors may take any English course on a satisfactory/unsatisfactory basis except the following:

ENGL 1100, Freshman Composition
ENGL 1110, Freshman Composition for International Students
ENGL 3090, Practical Criticism: Writing About Literature
ENGL 3100, Advanced Expository Writing
ENGL 3110, Advanced Expository Writing for International Students
ENGL 3120, Business Writing
ENGL 3130, Technical Writing
ENGL 3140, News Writing
ENGL 3150, Feature Writing
ENGL 3160, Writing in the Sciences
ENGL 3180, Reporting
ENGL 4860, Editing
ENGL 4870, Advanced Business Writing
ENGL 4880, Writing for Teachers
ENGL 4885, The Curriculum and Methods of Teaching English
ENGL 4890, Independent Writing Project

Degree Requirements

Bachelor of Arts in English

English majors must complete at least 39, but no more than 48, hours in English exclusive of ENGL 1100, Freshman Composition; ENGL 1110, Freshman Composition for International Students; and ENGL 3090, Practical Criticism: Writing About Literature.

1) Students majoring in English must take:

ENGL 2310, English Literature I
ENGL 2320, English Literature II
ENGL 2710, American Literature I
ENGL 2720, American Literature II
Plus one of the following:
ENGL 2280, Contemporary World in Literature
ENGL 2330, Introduction to Poetry
ENGL 2340, Introduction to Drama
ENGL 2350, Introduction to Fiction

Work in 2000-level course provides background in literary history and forms, as well as the means for discussing literary issues, on paper and orally. Thus:

- ENGL 2310 or consent of instructor is a prerequisite or corequisite for all 4000-level courses in British

literature before 1790.

- ENGL 2320 or consent of instructor is a prerequisite of corequisite for all 4000-level courses in British Literature after 1790.
- ENGL 2710 or consent of instructor is a prerequisite or corequisite for all 4000-level courses in American Literature to 1865
- ENGL 2720 or consent of instructor is a prerequisite or corequisite for all 4000-level courses in American literature after 1865.
- Both ENGL 2710 and ENGL 2720 or consent of instructor are prerequisites or corequisites for ENGL 4650.

All survey courses should be taken before the major has completed 90 hours toward a degree.

2) ENGL 2810, Traditional Grammar (Students with sufficient background may gain exemption from the English 2810 requirement by passing the English-Education Test of Basic Grammar. This test may be taken only twice.)

3) ENGL 3090, Practical Criticism: Writing About Literature. (For English majors, this course is a prerequisite or corequisite for 4000-level courses in English.)

4) Upper Division Courses

a. Five courses (15 hours) are required at the 4000 level. Students majoring in English must take at least 12 of these 15 hours in residence and maintain a GPA of 2.0 or better, or receive special consent of the department.

b. Within the five courses listed above, three courses must fulfill distribution requirements: one course (3 hours) in British literature before 1790, one course (3 hours) in British literature after 1790, and one course (3 hours) in American literature.

c. If a student elects to pursue an emphasis area (EA) or areas, 3 courses (9 hours) at the 3000/4000 level are required within each emphasis area (EA).

d. A student may not use the same course to satisfy both a distribution requirement and an emphasis area (EA).

e. In the list of 3000/4000-level courses, those courses that count in one or another emphasis area are indicated with an asterisk*.

Distribution Requirements:

Distribution Requirement: British Literature to 1790 (choose one)

- ENGL 4260** Chaucer
- ENGL 4270** Medieval English Literature
- ENGL 4320** Elizabethan Poetry and Prose
- ENGL 4340** Early Seventeenth-Century Poetry and Prose
- ENGL 4350** Milton
- ENGL 4360** Tudor and Stuart Drama
- ENGL 4370** Shakespeare: Tragedies and Romances
- ENGL 4380** Shakespeare: Comedies and Histories
- ENGL 4420** Age of Dryden and Pope
- ENGL 4450** The Eighteenth-Century English Novel
- ENGL 4931** English Women Writers, 1300-1750

Distribution Requirement: British Literature after 1790 (choose one)

- ENGL 4510** Early romantic Poetry and Prose
- ENGL 4520** Later Romantic Poetry and Prose
- ENGL 4540** The Nineteenth-Century English Novel
- ENGL 4550** Novels into Film: The Nineteenth Century
- ENGL 4560** Prose and Poetry of the Victorian Period
- ENGL 4580** Literature of the Late Nineteenth and Early Twentieth Centuries
- ENGL 4750** Modern British Fiction
- ENGL 4934** Austen and the Brontes
- ENGL 4935** Women Heroes and Romantic Tales

Distribution Requirement: American Literature (choose one)

- ENGL 4610** Selected Major American Writers (I)
- ENGL 4620** Selected Major American Writers (II)
- ENGL 4640** American Fiction to World War I
- ENGL 4650** Modern American Fiction
- ENGL 4740** Poetry since World War II

Emphasis Areas (EA) (*denotes course listed in two emphasis areas)

British Literature Emphasis Area:

- ENGL 4260** Chaucer

ENGL 4270 Medieval English Literature
ENGL 4320 Elizabethan Poetry and Prose
ENGL 4340 Early Seventeenth-Century Poetry and Prose
ENGL 4350 Milton
ENGL 4360 Tudor and Stuart Drama
ENGL 4370 Shakespeare: Tragedies and Romances
ENGL 4380 Shakespeare: Histories and Comedies
ENGL 4420 Age of Dryden and Pope
ENGL 4450 The Eighteenth-Century English Novel
ENGL 4510 Early Romantic Poetry and Prose
ENGL 4520 Later Romantic Poetry and Prose
ENGL 4540 The Nineteenth-Century English Novel
ENGL 4550 Novels into Film: The Nineteenth Century
ENGL 4560 Prose and Poetry of the Victorian Period
ENGL 4580 Literature of the Late Nineteenth and Early Twentieth Centuries
ENGL 4750 Modern British Fiction
***ENGL 4770** Modern Poetry (also American EA)
***ENGL 4930** Studies in Gender and Literature (also Women's/Gender EA)
ENGL 4931 English Women Writers, 1300-1750
***ENGL 4932** Female Gothic (also Women's/Gender EA)
ENGL 4935 Women Heroes and Romantic Tales
***ENGL 4936** Tales of the Islamic East (also Ethnic/World EA)
ENGL 4950 Special Topics in Literature (with at least 50% British emphasis)

American Literature Emphasis Area

***ENGL 4060** Adolescent Literature (also Ethnic World EA)
ENGL 4610 Selected Major American Writers (I)
ENGL 4620 Selected Major American Writers (II)
***ENGL 4630** African American Literature prior to 1900 (also Ethnic/World EA)
ENGL 4640 American Fiction to World War I
ENGL 4650 Modern American Fiction
ENGL 4740 Poetry since World War II
***ENGL 4770** Modern Poetry (also British EA)
***ENGL 4910** Studies in African/African American Literature, Criticism, & Diaspora (also Ethnic/World EA)
***ENGL 4937** Irish & Irish-American Women Writers (also Women/Gender EA)
***ENGL 4938** American Women Poets of 20th/21st Centuries (also Women/Gender EA)
ENGL 4950 Special Topics in Literature (with at least 50% American emphasis)

Ethnic and World Literature Emphasis Area

***ENGL 4060** Adolescent Literature (also American EA)
***ENGL 4630** African American Literature prior to 1900 (also American EA)
ENGL 4760 Modern Drama
***ENGL 4910** Studies in African/African American Literature, Criticism, & Diaspora (also American EA)
ENGL 4920 Major Works of European Fiction
***ENGL 4933** Female Novel of Development (also Women's/Gender EA)
***ENGL 4936** Tales of the Islamic East (also British EA)
ENGL 4950 Special Topics in Literature (with at least 50% Ethnic/World emphasis)

Women's and Gender Studies Emphasis Area

ENGL 3800 Topics in Women and Literature
***ENGL 4930** Studies in Gender and Literature (also British EA)
***ENGL 4932** Female Gothic (also British EA)
***ENGL 4933** Female Novel of Development (also Ethnic/World EA)
ENGL 4934 Austen and Brontes
***ENGL 4937** Irish & Irish-American Women Writers (also American EA)
***ENGL 4938** American Women Poets of 20th/21st Centuries (also American EA)

Language and Writing Emphasis Area

ENGL 3140 News Writing
ENGL 3150 Feature Writing
ENGL 3160 Writing in the Sciences
ENGL 3180 Reporting
ENGL 3280 Public Relations Writing
ENGL 4160 Special Topics in Writing (with at least 50% writing studies emphasis)
***ENGL 4800** Linguistics (also Theory/Criticism EA)
ENGL 4810 English Grammar
ENGL 4820 History of the English Language
ENGL 4850 Topics in Teaching of Writing
ENGL 4860 Editing
ENGL 4870 Advanced business & Technical Writing

ENGL 4880 Writing for Teachers

Creative Writing Emphasis Area

- ENGL 3030** Poetry Writing Workshop: Lyric and Form
- ENGL 3040** Fiction Writing Workshop: Narrative Techniques
- ENGL 4130** Advanced Poetry Writing Workshop
- ENGL 4140** Advanced Fiction Writing Workshop
- ENGL 4160** Special Topics in Writing (with at least 50% creative writing emphasis)
- ENGL 4895** Editing Litmag

Theory and Criticism Emphasis Area

- ENGL 4030** Contemporary Critical Theory
- ENGL 4050** Forms and Modes of Poetry
- ENGL 4080** Narrative, Cognition, and Emotion
- ENGL 4160** Special Topics in Writing (with at least 50% theory/criticism emphasis)
- *ENGL 4800** Linguistics (also Language/Writing EA)

Students should consult with faculty advisers to determine which upper-level courses best satisfy their major needs and interests.

Bachelor of Arts in English with Certification for Secondary Education

All candidates for certification to teach English must enroll in a program in the College of Education involving Level I, Level II, and Level III coursework plus student teaching. See the Division of Teaching and Learning in this *Bulletin* for information.

In addition to the requirements for the B.A. in English, students must meet the following requirements for secondary certification:

1) Two courses in American literature. This requirement may be met by courses counted for the major.

- a. American literature must include a unit or course in the literature of ethnic groups.
- b. American literature must include a unit or course in literature for adolescents.

2) Twelve hours in composition and rhetoric:

- ENGL 1100**, Freshman Composition, may be counted.
 - ENGL 3090**, Practical Criticism: Writing About Literature, is required.
 - ENGL 4880/SEC ED 4880**, Writing For Teachers, is required.
- Recommended courses include creative writing, journalism, and business writing.

3) English language requirements

- a. **ENGL 2810**, Traditional Grammar Students with sufficient background may gain exemption from the ENGL 2810 requirement by passing the English-Education Test of Basic Grammar. This test may be taken only twice. Certification candidates must pass ENGL 2810 or the Test of Basic Grammar before applying for student teaching.
- b. **ENGL 4810**, English Grammar
- c. **ENGL 4800**, Linguistics, or **ENGL 4820**, History of the English Language

Bachelor of Science in Secondary Education with an Emphasis Area in English

All candidates for certification to teach English must enroll in a program in the College of Education involving Level I, Level II, and Level III coursework plus student teaching. See the Division of Teaching and Learning in this *Bulletin* for information.

The required courses in English and professional education are the same as those for the B.A. with certification for secondary education. However, students fulfill the general education requirements of the College of Education rather than those of the College of Arts and Sciences. For example, students seeking the B.S. in Education are not required to study a foreign language.

Certification to Teach Secondary Speech and Drama

All candidates for certification to teach Speech and Drama must enroll in a program in the College of Education involving Level I, Level II, and Level III coursework plus student teaching. See the Division of Teaching and Learning in this *Bulletin* for information.

In addition, undergraduates who wish to be certified to teach Speech and Drama must meet the requirements for a major in Communication as well as requirements set by the Theatre faculty.

Minor in English

A student may minor in English by taking at least 18 hours of English courses exclusive of Basic Writing, ENGL 1100, Freshman Composition, and ENGL 1110, Freshman Composition for International Students. ENGL 3090 is required, and 12 of the 18 hours must be in literature courses, 9 of which must be in courses at the 3000

or 4000 level. Every student taking a minor in English must consult with an adviser in the English department to ensure a coherent program of studies. The GPA in courses for the minor must be 2.0 or better. Nine of the 18 hours must be taken in residence at UMSL. No more than 3 hours taken on a satisfactory/unsatisfactory basis may be counted toward the 18-hour minimum.

Professional Writing Certificate

Students earn the Professional Writing Certificate by completing 18 hours in selected writing courses with a grade point average of 3.0 or better. 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.

MEDIA ST 2212, Broadcast Writing and Reporting

MEDIA ST 2217, Script Writing for Business and Industry

ENGL 2810, Traditional Grammar

ENGL 2030, Poetry Writing

ENGL 2040, Short Story Writing

ENGL 2080 or **MEDIA ST 2080**, Advertising Copywriting

ENGL 2120, Topics in Writing

ENGL 3030, Intermediate Poetry Writing

ENGL 3040, Intermediate Fiction Writing

ENGL 3090, Practical Criticism: Writing About Literature

ENGL 3100, Advanced Expository Writing

ENGL 3110, Advanced Expository Writing for International Students

ENGL 3120, Business Writing

ENGL 3130, Technical Writing

ENGL 3140 or **MEDIA ST 3214**, News Writing

ENGL 3150, Feature Writing

ENGL 3160, Writing in the Sciences

ENGL 3180, Reporting

ENGL 3280 or **MEDIA ST 2228**, Writing for Public Relations

ENGL 4130, Advanced Poetry Writing

ENGL 4140, Advanced Fiction Writing

ENGL 4160, Special Topics in Writing

ENGL 4810, English Grammar

ENGL 4850, Topics in Teaching Writing

ENGL 4860, Editing

ENGL 4870, Advanced Business and Technical Writing

ENGL 4880, Writing for Teachers

ENGL 4890, Writing Internship (This course is required. It is to be taken as the last course a student will take in the program, and it is to be used to generate an extensive final project or internship.)

ENGL 4892, Independent Writing Project

ENGL 4895, Editing Litmag

HONORS 3100, Writing the City

Creative Writing Certificate

Students earn the Certificate in 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' efforts toward producing original fiction or poetry and can include other literary endeavors such as writing creative nonfiction, editing, 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 Writing Certificate Coordinator. If the student elects to complete English 4890 as one of the courses for the certificate, he or she should schedule a meeting with the coordinator to make arrangements for the internship.

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 Certificate in Writing 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 Certificate in Writing will receive the certificate in the mail and will have the certificate entered on their official transcripts.

To receive this certificate, the student must take 18 hours chosen from the courses listed below. Students must take at least two of the following: 3030, 3040, 4130, 4140, 4895, 4890 and at least one must be a 4000-level course.

2000-Level Courses (Students may take no more than two 2000-level courses)

ENGL 2030, Beginning poetry writing workshop (CW)

ENGL 2040, Beginning fiction writing workshop (CW)

ENGL 2330, Introduction to poetry (Lit)

ENGL 2340, Introduction to fiction (Lit)

ENGL 2350, Introduction to drama (Lit)

Creative Writing and Literature Courses

ENGL 3030, Poetry workshop: lyric and form
ENGL 3040, Fiction workshop: narrative structure
ENGL 3090, Practical criticism: writing about literature
ENGL 3100, Advanced expository writing
ENGL 4130, Advanced poetry writing
ENGL 4140, Advanced fiction writing
ENGL 4160, Special topics in writing
ENGL 4890, Writing Internship
ENGL 4892, Independent Writing Project
ENGL 4895, Editing Litmag

Professional Writing Courses (Students are encouraged to take at least one professional writing course, but no more than two.)

ENGL 2080, Advertising Copywriting (or **MEDIA ST 2080**)
ENGL 3150, Feature Writing (or **MEDIA ST 3150**)
ENGL 4860, Editing

This capstone course may be 4895, 4890, 4140, or 4130. If 4890 is used, it will be an internship in literary publishing, feature writing, or advertising copywriting. To use 4130 or 4140, the student must obtain the teacher's permission and do extra work in the course. The editing Litmag course, 4895, may also be used as the final course for this certificate.

Technical Writing Emphasis

The technical writing emphasis provides a more career-specific strategy for students enrolled in the Writing Certificate program. The technical writing emphasis is composed of **three required** courses:

ENGL 3130, Technical Writing
ENGL 4860, Editing
ENGL 4870, Advanced Business and Technical Writing or
ENGL 4890, Writing Internship

In addition, students take **three electives** for a total of 18 hours chosen from the following:

Business Administration

INFSYS 1800, Computers and Information Systems
BUS AD 3100, Contemporary Business Communication

Media

MEDIA ST 1065, Introduction to Information Technology

Computer Science

CMP SCI 1250, Introduction to Computer Science (Prerequisite: MATH 1030, College Algebra)

English

ENGL 3120, Business Writing
ENGL 3140, News Writing
ENGL 3150, Feature Writing
ENGL 3160, Writing in the Sciences
ENGL 3280, Public Relations Writing
ENGL 4870, Advanced Business and Technical Writing (if **4890** is taken as requirement)
ENGL 4890, Independent Writing Project (if **4870** is taken as requirement)

Graduate Studies

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

Master of Arts in English

In addition to the Graduate School requirements, students must complete at least 36 hours, 24 hours of which must be in 5000-level courses. Twelve 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

18 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)

18 hours in writing studies courses (including ENGL 5840).

If students choose the thesis option (6 hours) they will take 15 hours in literature and 15 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.

Master of Fine Arts in Creative Writing

The application process is identical to that for the master of arts degree, 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: (a) 18-21 hours in creative writing courses: 15 hours of workshops (at least one course outside the genre), and 3-6 hours of ENGL 6010; (b) 15 hours of courses in literature, language, writing theory or literary journal editing offered by the department; (c) 3-6 hours of electives: another workshop or literature/language/writing theory/literary journal editing course or a relevant offering in another discipline. Students may not take a 4000-level writing course in their genre for graduate credit. At least two of the writing workshops and ENGL 6010 must be taken at UMSL. Complete information may be found in *The Master of Fine Arts in Creative Writing*, available from the English department.

Graduate Certificate in the Teaching of Writing, Gateway Writing Project.

Jointly housed in the Division of Teaching and Learning and the Department of English, this Graduate Certificate prepares teachers at all levels (K-12, college, adult) to improve their students' performance in writing. The program also emphasizes using writing as a means to promote learning in all content areas. All courses provide opportunities for teachers to write, revise, share feedback, and reflect on their own writing development. Based on the National Writing Project's core belief that teachers of writing must themselves be writers, the Graduate Certificate in the Teaching of Writing brings together sound pedagogy, composition theory, and writing practice.

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 12 semester-hour core of courses developed by the Gateway Writing Project: The GWP invitational institute (6 hrs), a designated "topics" course (3 hrs.), and an exit course (3 hrs.). The Certificate requires a minimum of 12 semester hours at the 5000 or 6000 level or above. Electives (6 hrs.) may be chosen from approved offerings in English or Education.

Admission:

Applicants must be admitted to Graduate School and be selected by the faculty admissions committee for the Gateway Writing Project's Certificate in the Teaching of Writing. The committee will review candidates on the basis of 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.

Prerequisites:

- **ENGL/SEC ED 4880**, "Writing for Teachers" or an equivalent course in teaching writing
- Coursework or competency in basic computer application.

Required Core Courses (12 semester hours)

- **ENGL 4850/TCH ED 5850**, Topics in the Teaching of Writing (designated topics, 3 sem. hrs.)
- **ENGL 6880/SEC ED 6880**, Gateway Writing Project (6 sem. hrs.)
- **TCH ED 6890**, Seminar in Professional Writing for Teachers (exit course, 3 sem. hrs)

Electives (6 sem. hrs.)

Electives may be chosen from other Gateway Writing Project offerings **or** from courses offered by the appropriate academic department with advisor's approval. These electives must include at least one more 5000-6000 level course.

Suggested electives applicable to an MA in English with writing emphasis:

- **ENGL 5800**, Modern Linguistics
- **ENGL 5840**, Theories of Writing
- **ENGL 5860**, Writing/Reading Theory
- **ENGL 5870**, Composition Research
- **ENGL 5890**, Teaching College Writing

Suggested electives applicable to an M.Ed. in Elementary or Secondary Education

- **ELE ED 6387**, Literacy Acquisition and Learning for Urban Students
- **ELE ED 6482**, Problems & Research in Elementary Reading
- **ED REM 6714**, Action Research in Education

Courses in adult and higher education may also be appropriate. For complete information, see ***The Gateway Writing Project's Graduate Certificate in Teaching Writing***, available from the English Department, the Division of Teaching and Learning, and the GWP Director.

Career Outlook

In addition to traditional employment as teachers at the primary, secondary, and community-college levels, recent UMSL graduates in English are working in journalism, editing, advertising, public relations, and other fields that place a premium upon creation and interpretation of the written word. Numerous recent English majors have successfully entered law school.

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Department of Foreign Languages and Literatures

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Faculty

Pamela Ashmore, Associate Professor, Chairperson
Ph.D., Washington University

Roland A. Champagne, Professor Emeritus, French,
Ph.D., Ohio State University

Lorna V. Williams, Professor, Spanish
Ph.D., Indiana University

Jeanne Morgan Zarucchi, Professor, French and Art History
Ph.D., Harvard University

Albert J. Camigliano, Associate Professor Emeritus, German
Ph.D., University of Wisconsin

Ingeborg M. Goessl, Assistant Professor Emerita, German
Ph.D., University of Kansas

Deborah Baldini, Teaching Professor, Spanish
Ph.D., University of Missouri-St. Louis

Anne-Sophie Blank, Associate Teaching Professor, French
M.A., Washington University

Martha Caeiro, Associate Teaching Professor, Spanish
M.A., Washington University

Donna Cays, Associate Teaching Professor, Spanish
M.A., Saint Louis University

Elizabeth Eckelkamp, Associate Teaching Professor, Japanese, Director of Language Programs
M.A., Washington University

Nancy Mayer, Associate Teaching Professor, ESL
M.A.T., Webster University

Denise Mussman, Associate Teaching Professor, ESL
M.A., University of Illinois-Chicago

Margaret B. Phillips, Associate Teaching Professor, Latin
Ph.D., Saint Louis University

Kimberley Sallee, Associate Teaching Professor, Spanish
M.A., University of New Mexico

Sandra Trapani, Associate Teaching Professor, French
M.A., University of Missouri-Columbia

Susan Yoder-Kreger, Associate Teaching Professor, Spanish
M.A., University of Virginia, Charlottesville

Maria Teresa Balogh, Assistant Teaching Professor, Spanish
M.A., Southern Illinois University, Carbondale, MFA, University of Missouri-St. Louis

Suzanne Hendrickson, Assistant Teaching Professor, French
Ph.D., Washington University

Kersten Horn, Assistant Teaching Professor, German
M.A., University of Texas, Austin

Elizabeth Landers, Assistant Teaching Professor, French
M.A., Washington University

Maria Snyder, Assistant Teaching Professor, French and German
Ph.D., Washington University

Andrew Bennett, Lecturer, Spanish
M.A., Arizona State University

Jennifer Kellog, Lecturer, Greek
M.A., Indiana University

Fushun, Le, Lecturer, Chinese
M.A., Iowa State University

Rosalinda Mariles, Lecturer, Spanish

M.S., Southern Illinois University, Edwardsville

Laura Reid, Lecturer, Spanish

M.A., Indiana University

General Information

Degrees and Areas of Concentration

The Department of Foreign Languages and Literatures offers course work in French and Spanish, leading to the B.A. degree, and a field of concentration in each of these languages for students seeking the B.S. degree in education. In addition, the department offers courses in English as a Second Language, Arabic, Chinese, German, Ancient Greek, Modern Greek, Japanese, and Latin.

A minor in French, German, or Spanish may also be earned in the department. For details, see specific requirements for the minor, which appear later in this section.

The department maintains a language resource center where books, journals, magazines, and other foreign language realia are available to students, along with audiovisual and computer materials.

Cooperative Study

Courses in other languages are available to UMSL students through Washington University, Saint Louis University, Harris-Stowe State College, and SIU-Edwardsville. For information, consult the UMSL registrar's office.

Study Abroad

Language students who have been at the University of Missouri-St. Louis at least one semester and have studied the language at least one year may receive credits for formal study abroad during the summer. Prior consent of the department must be obtained for summer courses abroad, and the student must present a transcript for evaluation. Exchange programs are available with several universities in foreign countries. For information, contact the study abroad office.

Alumni Scholarship

Qualified junior and senior language majors may apply for the Foreign Language Alumni Scholarship, which is renewable each semester on a competitive basis. For information, contact the department.

Baldini Family Scholarship

Qualified full-time UMSL students pursuing a foreign language and literature 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, contact the department.

Community College Scholarship

Qualified community college students may apply for the Foreign Language Community College Scholarship to be applied for educational fees toward the enrollment in third semester or higher courses in French, German, or Spanish. This scholarship must be used within one semester of the award. For information, contact the department.

German Scholarships

Students of German may apply for UMSL Summer Abroad scholarships that will partially finance their summer studies abroad. Other scholarship money is available for students with advanced standing in the language. For information, contact the department.

Departmental Honors

Candidates for departmental honors in French or Spanish 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.
- 3) Successfully complete an honors thesis or project.

Undergraduate Studies

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.

Satisfactory/Unsatisfactory Option

Students who have fulfilled the language requirement (13 hours: Language Courses 1001, 1002, and 2101) may enroll in a second language on a satisfactory/ unsatisfactory basis.

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. All three sections must be completed with a grade of C- or better, to satisfy the foreign language requirement.

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 reduce the number of hours required for the major. Native speakers of a foreign language should consult with the department concerning appropriate placement.

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

Students electing to major in the department must have completed the 1002 course in the language selected with a grade of C- or better. Any major who receives a grade of D in any course required for the major must repeat that course. No course required for the major may be taken on a satisfactory/ unsatisfactory (s/u) basis.

Bachelor of Arts

All students seeking a B.A. in a foreign language must meet the departmental requirement of a minimum of 33 hours (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 foreign language who desire a teaching certificate must also take Course 3264 (same as SEC ED 3274), Curriculum and Methods of Teaching Foreign Languages, Course 4364 (same as SEC ED 4374), Foreign Language Teaching Seminar, and fulfill the professional secondary education requirements of the College of Education.

Bachelor of Science in Education

Those students seeking the B.S.Ed. degree, with a concentration in a foreign language, are required to complete 30 hours of work (excluding credit for Language 1001 and 1002) of which 12 hours must be on the 4000 level. Students working toward a degree in elementary education, with related work in a foreign language, should consult the College of Education concerning their program.

Transfer Students

Transfer students majoring in one of the foreign 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 these courses.

Native Speakers

Native speakers must complete at least two courses at the 3200 level and four courses at the 4300 level to obtain a major in their native language.

Specific Requirements for the Major

French

Each major in French must complete the following courses:

FRENCH 2101, Intermediate French Language and Culture, or the equivalent

FRENCH 2102, Intermediate French Language and Culture II

FRENCH 2180, Readings in French

FRENCH 3200, Advanced Grammar

FRENCH 3211, Contemporary French Civilization

FRENCH 3280, French Literature I: Middle Ages to Eighteenth Century

FRENCH 3281, French Literature II: Nineteenth and Twentieth Centuries

and four courses at the 4000-level.

The following courses are also strongly recommended:

SPANISH 2110, Spanish Literature in Translation

HIST 4351, Contemporary France : Since 1870

Spanish

Each major in Spanish must complete the following courses:

SPANISH 2101, Intermediate Spanish Language and Culture, or **SPANISH 2105**, Commercial Spanish, or the equivalent

One of the following two:

SPANISH 2171, Spanish Conversation and Pronunciation

SPANISH 2172, Spanish Composition

SPANISH 2180, Readings in Spanish

SPANISH 3200, Syntax of the Spanish Language

SPANISH 3210, Hispanic Culture and Civilization: Spain, or **SPANISH 3211**, Hispanic Culture and Civilization: Spanish America

SPANISH 3280, Introduction to Hispanic Literature: Spain

SPANISH 3281, Introduction to Hispanic Literature: Spanish America

and four courses at the 4000-level, **one of which must be: SPANISH 4399**, Seminar on Hispanic Literature

The following courses are also strongly recommended:

FRENCH 2110, Modern French Literature in Translation, or **2150**, European Literature in Translation: Special Topics

HIST 4355, History of Spain

HIST 4371, History of Latin America : to 1808

HIST 4372, History of Latin America : Since 1808

POL SCI 3253, Political Systems of South America

POL SCI 3254, Political Systems of Mexico, Central America, and the Caribbean

Learning outcomes for Majors

The Bachelor of Arts in French and Bachelor of Arts in Spanish prepare students to become knowledgeable about the cultures and cultural patterns that identify the speakers of these languages, and to study the literatures that have been recorded by these peoples as their reflections on values and views of the human condition.

Upon completion of the lower division courses, students will:

- Speak, understand, read, and write the foreign language well enough to function competently in everyday situations
- Appreciate foreign cultures and cultural diversity
- Improve understanding of their own language and culture by comparing it to the target language and culture
- Be able to interact appropriately with native speakers of the target language

Upon completion of the upper division courses, students will:

- Communicate effectively in the target language
- Reflect critically on the literature and values of other cultures
- Have knowledge about social, political, and philosophical ideas in their cultural context
- Demonstrate a solid foundation for graduate study in the foreign language or a professional career in applied or related fields

Specific Requirements for the Minor

A minor in French, German, 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.

French

FRENCH 2102, Intermediate French Language and Culture II

FRENCH 2180, Readings in French

Plus two French courses on the 3000-level or above.

German

GERMAN 2170, Composition and Conversation

GERMAN 2180, Readings in German

Plus two German courses on the 3000-level or above.

Spanish

Two of the three

SPANISH 2171, Conversation and Pronunciation

SPANISH 2172, Composition

SPANISH 2180, Readings in Spanish

Plus two Spanish courses on the 3000-level or above.

Students pursuing a graduate degree in secondary education may select an emphasis area in French, German, or Spanish. These required eighteen hours may be selected from 3000 and 4000 level courses in these languages.

Certificate in Foreign Language and Study Abroad

Students seeking the certificate must complete language courses at UMSL and abroad. The Center for

International Studies and the Department of Foreign Languages and Literatures cooperate in offering the Certificate.

1) Foreign language study at UMSL

Students must select one of the following languages and complete the required courses at UMSL. Total: 6 credit hours.

A. French

FRENCH 2102, Intermediate French Language and Culture II

FRENCH 2180, Readings in French

B. German

GERMAN 2170, Composition and Conversation

GERMAN 2180, Readings in German

C. Spanish

SPANISH 2172, Spanish Composition

SPANISH 2180, Readings in Spanish

2) Foreign language study abroad

Students must complete two additional three credit hour courses, in language or literature, taught in the same target language selected above, at a foreign university that is affiliated with the UMSL Study Abroad Program, towards the goal of increasing competence in the target language. Total: 6 credit hours. All courses must be approved by the Department of Foreign Languages and Literatures.

Students should consult the study abroad advisor in the Center for International Studies to select a site for their study abroad experience. Then, students should consult their advisor in the Department of Foreign Languages and Literatures to select appropriate courses.

Minor in Applied Spanish

An applied minor in Spanish may be earned by completing five courses in Spanish beginning with Spanish 2101 or its equivalent. These courses need to be completed with a C- or better. Transfer students must complete at least two courses for the Applied Minor at UMSL. After Spanish 2101, students must complete the following courses in Spanish:

SPANISH 2171, Conversation and Pronunciation

SPANISH 2172, Composition

One of the following courses:

SPANISH 3200, Syntax, of the Spanish Language

SPANISH 3210, Hispanic Culture and Civilization: Spain

SPANISH 3211, Hispanic Culture and Civilization: Spanish America

SPANISH 3271, Advanced Spanish Conversation

Plus

SPANISH 3215, Practicum in Spanish

Career Outlook

Graduates with a foreign language degree may elect to enter the fields of teaching, business, journalism, communications, or government, or to pursue advanced degrees in their specialty. It is especially recommended that students consider a double major or another discipline and a language. A language then becomes an asset that makes graduates more adaptable to the demands of international communication in their second major discipline and hence more competitive and marketable upon completion of the B.A. degree.

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Department of History

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Faculty

Andrew J. Hurley, Professor, Chairperson

Ph.D., Northwestern University

John R. Gillingham, Curators' Professor

Ph.D., University of California, Berkeley

Richard H. Mitchell, Curators' Professor Emeritus

Ph.D., University of Wisconsin

Jay Rounds, E. Desmond Lee Professor of Museum Studies and Community History

Ph.D., University of California, Los Angeles

Carlos A. Schwantes, Saint Louis Mercantile Library Professor of Transportation Studies

Ph.D., University of Michigan

Mark A. Burkholder, Professor

Ph.D., Duke University

Jerry M. Cooper, Professor Emeritus

Ph.D., University of Wisconsin

Paul Corby Finney, Professor Emeritus

Ph.D., Harvard University

Louis Gerteis, Professor

Ph.D., University of Wisconsin

Steven C. Hause, Professor Emeritus

Ph.D., Washington University

Charles P. Korr, Professor Emeritus

Ph.D., University of California, Los Angeles

William S. Maltby, Professor Emeritus

Ph.D., Duke University

James Neal Primm, Curators' Professor Emeritus,

Ph.D., University of Missouri-Columbia

Steven W. Rowan, Professor

Ph.D., Harvard University

Blanche M. Touhill, Professor, Chancellor Emerita

Ph.D., Saint Louis University

Robert M. Bliss, Associate Professor, Dean of Pierre Laclède Honors College

Ph.D., University of Wisconsin

Priscilla Dowden-White, Associate Professor

Ph.D., University of Indiana-Bloomington

J. Frederick Fausz, Associate Professor

Ph.D., William and Mary

Kevin J. Fernlund, Associate Professor, Executive Director of Western History Association

Ph.D., University of New Mexico

Winston Hsieh, Associate Professor

Ph.D., Harvard University

Adell Patton Jr., Associate Professor

Ph.D., University of Wisconsin

Gerda W. Ray, Associate Professor

Ph.D., University of California, Berkeley

John A. Works Jr., Associate Professor Emeritus

Ph.D., University of Wisconsin

Laura Westhoff, Associate Professor

Ph.D., Washington University

Deborah Cohen, Assistant Professor

Ph.D., University of Chicago

Minsoo Kang, Assistant Professor

Ph.D., University of California, Los Angeles
Peter Acsay, Associate Teaching Professor
Ph.D., Saint Louis University
Robert Archibald, Adjunct Professor President, Missouri Historical Society
Ph.D., University of New Mexico
John Hoover, Adjunct Professor Director of St. Louis Mercantile Library
M.A., University of Missouri-Columbia
Robert D. Ubrico, Adjunct Assistant Professor
Ph.D., University of Illinois

General Information

Degrees and Areas of Concentration

The department offers work in Asian, African, and African American, European, Latin American, Mexican, World, and United States history from ancient to modern times. At the bachelor's level, the department offers the B.A. in history, and, in cooperation with the College of Education, the B.A. in history with teacher certification and the B.S. in education with an emphasis in social studies.

At the graduate level, the department offers an M.A. in history with work in Metropolitan, Regional, National, and Transnational history. The department also offers the option of an M.A. in history with a concentration in museum studies.

Departmental Honors

Students majoring in history may be awarded departmental honors upon graduation if they 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.

Undergraduate Studies

General Education Requirements

History majors must meet the university and college general education requirements. History courses that will satisfy the university's state requirement are:

HIST 1001, American Civilization
HIST 1002, American Civilization
HIST 1003, African-American History
HIST 1004, The History of Women in the United States
HIST 2007, The History of Missouri
HIST 3002, United States History: Revolution and the New Nation, 1763 to 1815
HIST 3041, Topics in American Constitutional History

Students may take any language that fulfills the college's foreign language requirement. 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.

Degree Requirements

Bachelor of Arts in History

Students are encouraged to move from introductory courses at the 1000 to more advanced content-oriented courses at the 2000 level then to skill oriented courses at the 3000 and 4000 levels.

All the 1000 level, majors must take one course in U.S. History:

HIST 1001, American Civilization to 1865
HIST 1002, American Civilization 1865 to present
HIST 1003, African-American History
HIST 1004, The History of Women in the United States

Plus one course in European History:

HIST 1030, The Ancient World
HIST 1031, Topics in European Civilization: The Emergence of Western Europe to 1715
HIST 1032, Topics in European Civilization: 1715 to the Present

Plus One course in African, Asian, or Latin American History:

HIST 1041, East Asian Civilization
HIST 1042, East Asian civilization
HIST 1051, Latin American Civilization
HIST 1061, African Civilization to 1800
HIST 1062, African Civilization Since 1800

HIST 1064, The African Diaspora Since 1800

Plus two additional courses at the 1000 level on any subject

2000 level courses offer in-depth historical content. At the 2000-level, students may count between one and three 3-credit courses toward their major. At least one of the course at this level must be in the fields of African, Asian, or Latin American History .

In addition, all students must take: 2999 Introduction to Historical Inquiry (4 credit hours)

3000 level courses are designed primarily for majors and focus on developing historical writing and thinking skills. At the 3000 level, students may count between two and four 3-credit courses toward their major.

4000 level courses allow history majors to demonstrate mastery over historical thinking, writing, and research skills. Courses at this level should be taken once students have completed all other requirements for the major. Students must take:

4004, Senior Seminar (five credit hours)

Majors must complete at least 39, but not more than 45, hours in history with no grade below C. Courses 4011 and 4012 do not count toward the major. After fulfilling the general education and specific major degree requirements, students take the remaining 30 hours required to complete the B.A. or B.S. degrees from courses, from one or more of the following or their-quality equivalents at other institutions, if the appropriate department has evaluated them as being of university-level quality: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history , mathematics/computer science, music (appreciation, history, performance), philosophy, physics and astronomy/geology, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary. Undergraduate majors must complete a residency minimum of 15 hours of 2000/3000 level History courses including History 4004) (5 credit hours) at UMSL.

Learning Outcomes

The following learning outcomes are anticipated in the successful completion of a Bachelor of Arts in History

Communication: Write clearly and coherently and listen to oral presentations, summarize the arguments made and discuss them in the context of other oral presentations or conversations.

Valuing/Ethics/Integrity: Understand and articulate the diversity of identities and political and social systems that have shaped human behavior over time. Understand and articulate one's own identity in terms of race, gender and class, and to locate that identity in the wider world, both past and present.

Critical Thinking: Listen to oral presentations, summarize the arguments made and discuss them in the context of other oral presentations or conversations. Accurately summarize an argument and discuss it in the context of other arguments.

Content Knowledge: Embedded in Other Outcomes

Minor in History

Students may minor in history by taking **19** hours of history courses as follows:

- 1) **One** course numbered 1001-1099 in each of the following areas: United States history, European history, and either Asian, African, Latin American or World history (9 credits)
- 2) **Two** courses numbered 2000-2998 (6 credits)
- 3) History 2999 (4 credits)

No course in which a grade below a C is received shall count toward a minor.

Related Areas

Since history is a broad discipline, it can be combined with serious work in any other discipline. Courses in the humanities, social sciences, languages, and the natural sciences may complement the history program. Students should consult with faculty advisers to select courses suited to their individual interests.

Bachelor of Arts in History with Teacher Certification

Students majoring in History may earn Social Studies Teacher Certification as follows:

Social Studies

Teacher certification students must complete the major and meet these minimum social science requirements:

- American history, 12 hours including HIST/SEC ED 4013
- European or world history, 9 hours including HIST/SEC ED 4014
- United States and/or state government, 6 hours including POL SCI/SEC ED 4090

- behavioral science, 6 hours
- economics, 3 hours
- geography, 3 hours
- 2 hours of elective social studies credit.

Social science methods courses are HIST/SEC ED 4011

For emphasis area advising, **you must see a History/Social Studies advisor. You must also see an advisor in the College of Education regarding Education requirements.**

For more information, refer to the Secondary Education in this Bulletin.

Bachelor of Science in Education: Emphasis in Social Studies The history requirements are the same as for the B.A. degree except students fulfill the College of Education general education requirements rather than those of the College of Arts and Sciences. For information, refer to the College of Education section in this *Bulletin*.

Graduate Studies

2+3 B.A. and M.A. in History

(Note: Due to recent changes in the undergraduate and graduate curriculum, the 2+3 program is currently undergoing revision. Please consult with the chair of the History Department to find out how these upcoming changes will affect your course of study.) 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 5000-5304 for graduate readings courses numbered 6101-6115. 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 6 of which must be at the senior level (HIST 4001 and 4004) and 37 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 37 credit hours at the graduate level.

The semester they will complete 60 undergraduate credit hours, 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 3.1 or higher 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 30 credit hours in History 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 in the 2+3 program begin to pay graduate credit hour fees for all courses applied to the graduate degree after they have earned 107 undergraduate hours. 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

A. The following requirements must be completed prior to enrolling in the 2+3 Program:

Two of the following courses numbered 1001-1004:

HIST 1001, American Civilization

HIST 1002, American Civilization

HIST 1003, African American History

HIST 1004, The History of Women in the United States

Plus two of the following:

HIST 1030, The Ancient World

HIST 1031, Topics in European Civilization: the Emergence of Western Europe to 1715

HIST 1032, Topics in European Civilization: 1715 to the Present

One three hour Non-Euro-American survey course, 1041-1064.

The following UNDERGRADUATE courses are required for majors in the 2+3 program

HIST 4001, Special Readings (1)

HIST 4004, Senior Seminar (5)

NOTE: B.S.-Ed. students must also take History 4012, 4013 and 4014.

Graduate History Requirements For Students in the 2+3 Program

The following GRADUATE courses are required

Courses 5000 level

Three courses in three of the following fields: Metropolitan History; Regional History; National History, Transnational History (9 hours)
Three additional courses (9 hours)

Courses 6000 level (selected from the Metropolitan History; Regional History; National History, Transnational History):

The prerequisite for each 6000 level course for 2+3 program students is one or more 5000-5999 level courses in the field as part of the B.A. (or B.S. Ed.) program.

1) Two 6000 level courses (one of 3 credit hours, one of 5 credit hours) in the first field: total 8 hours.
Prerequisite: two 5000-5999 level courses in the same field (6 hours)

2) Two 6000 level courses (one of 3 credit hours), in the second field: total 8 hours.
Prerequisite: one 5000-5304 level course in the second field (3 hours)

3) One 6000 level course of 3 credit hours in the third field.
Prerequisite: one 5000 level course in the third field 3 hours

To fulfill the 6000 requirements, students enroll in 8-10 hours one semester and 9-11 hours the other

With prior approval of the Graduate Studies Director, a student may write a M.A. thesis (6 credit hours). Students writing M.A. theses may substitute three three-hour 5000-level courses for the two five-credit hour courses in 1) and 2) above.

Regular M.A. Degree Requirements

The Department of History offers two regular options for graduate study, the Master of Arts in History and the Master of Arts in History with Concentration in Museum Studies. These options are described below.

Master of Arts in History

The Department of History offers students two ways of completing the Master of Arts degree: one path of study emphasizes depth of knowledge and research competence acquired through writing a substantial master's thesis; the second emphasizes breadth of historical knowledge acquired through graduate course work and the writing of research papers. Both paths include a core of substantive courses in history (see Core) to which the student adds either a thesis (see Thesis) or additional research papers and seminars (see Research Papers).

The M.A. program offers all students intermediate training preparatory to doctoral programs, advanced training leading to teaching and other careers, and disciplined advanced work.

The History M.A. program offers study in Metropolitan History, Regional History, National History and Transnational History. Students should consult with the Director of Graduate Studies to be sure that they have properly selected their fields of study.

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. Normally, only students with a 3.2 grade point average in their undergraduate major are admitted; most successful applicants have higher grades.

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.

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 select three fields of study, the first with a minimum of four courses (each at 3 credit hours or more), the second and third with a minimum of two courses each (at 3 credit hours or more).

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. 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.

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.

Online Masters Program

In conjunction with Missouri Southern State University, the department of History at UMSL offers a route to the MA degree through online coursework. The requirements for the degree remain the same as in the conventional program. Students who wish to pursue the online Master's degree must apply specifically for this option by way of a note to that effect in the Comments section on the [graduate application form](#). Students pursuing this path are expected to take one course per semester. Missouri K-12 teachers are given preference in the admission process. Some online courses may require students to visit either the U.M.-St. Louis or Missouri Southern State campus once per semester. At least one-third of total credit hours must be taken with instructors at each institution. Normally, only students with a 3.3.5 grade point average in their undergraduate major are admitted to this track.

Master of Arts in History (Museum Studies) and Graduate Certificate in Museum Studies

These options are intended for students planning to pursue professional careers in museums. In addition to the core requirement of substantive courses in history, the Museum Studies program includes intensive training in the theory and practice of museology. This innovative program is a collaboration between the Departments of History, Anthropology, and Art and Art History, the Missouri Historical Society and the St. Louis Mercantile Library. It is taught by a combination of professors and practicing professionals from St. Louis-area museums. Recognizing that the museums field is in a period of rapid change, the program is designed to train students for leadership in the emergence of a new paradigm of museology that focuses on relationships between museums and the people and communities that they serve.

For most students this will be a terminal master of arts degree, fully preparing graduates for immediate entry into museum careers in a variety of positions. While the core requirement focuses on history studies, the museological training is applicable to employment in any type of museum.

Admission Requirements

Applicants wishing to enter the Museum Studies concentration must apply specifically for that concentration on the graduate application; successful application for the general M.A. program in history does not automatically provide access to the Museum Studies program. Applications for the Museum Studies concentration will be accepted only for the fall semester. Because of the prescribed sequence of course work, no midyear entry into the program will be allowed.

In addition to the general criteria of the Graduate School, applicants for the Museum Studies concentration must meet several additional criteria of the Department of History and the museum studies program. Applicants' undergraduate studies need not have been in history, but they must demonstrate high academic potential. Normally, the history department admits only students with a 3.2 grade point average in their undergraduate major; most successful applicants have higher grades. Applicants must submit three letters of recommendation, preferably from former teachers and/or employers, and a sample of their written work. The sample may or may not be academic work, and length is not a consideration. Besides these departmental requirements, applicants must submit the [Museum Studies Supplemental Application](#). The supplemental application includes a statement of intent for pursuit of a museum career.

The departmental Graduate Committee and the director of the museum studies program will base their admissions decisions upon the undergraduate transcript, the letters of recommendation and the sample of written work.

Applications for the museum studies program must be received by the university no later than March 1.

Museum Studies Curriculum--39 hours total

All candidates for the M. A. in History with a Concentration in Museum Studies must complete HIST 6134, 6135, 6136, and 6137. These courses are cross listed under the same numbers in the Anthropology Department and the Art and Art History Department. Students may enroll through the department of their choice. All candidates must also complete ART HIS 5588 Museum Education and Visitor Research and ANTHRO 6139 Practicum in Exhibit and Program Development. Together, these courses provide a solid foundation in the theory and history of museology and in practical skills for museum work. As a final requirement, candidates must complete HIST or ANTHRO or ART HIS 6138. This exit project will be the capstone demonstration of competence in museum studies. The specific nature of this demonstration will be customized to the interests and career aspirations of each student. It may take the form of a traditional thesis, an exhibit project, or some other appropriate form, as approved in advance by the candidate's advisory committee.

In addition to these requirements, all candidates must complete 15 hours of elective history course work, with no more than 6 hours of history at the 3000 level. Museum Studies students will take courses distributed in any proportion between the fields of "United States to 1865" and "United States Since 1865." Both the director of the Museum Studies Program and the graduate director of the History Department must approve in advance any exceptions to this requirement (e.g., selections of courses from another field, such as European or African history).

Graduate Certificate in Museum Studies (19 hours)

A very limited number of positions may be available for students who wish to pursue only the Graduate Certificate in Museum Studies without seeking the M.A. in History. In most cases, these will be students who already hold an advanced degree and are currently working or planning to work in a museum but who have had no formal training in museum studies. Candidates for the Graduate Certificate must complete HIST 6135, 6136, 6137, and 6138, ART HIS 5588, and ANTHRO 6139. Contact the director of the Museum Studies Program for availability and special application procedures.

Career Outlook for B. A. and M. A. graduates

An important rationale for the discipline of history is its centrality to the university curriculum and to the life experience. The ability to put events or developments into the context of the past is useful as well as pleasurable. Responses to a questionnaire sent to history graduates have indicated that alumni in a wide variety of fields are as conscious of and appreciative of their training in history as those who have chosen it as a profession. Men and women in business, lawyers, bankers, librarians, and foreign service officers have all found it relevant to their careers. Study and research in history sharpens organizational and writing skills important to success in business and the legal profession. A growing interest in local history has created employment opportunities in museum, archival, and preservation work.

Career Outlook for M. A. with Concentration in Museum Studies

There are more than 8,000 museums in the United States. History museums constitute more than half of that total and employ approximately one-third of the 150,000 paid staff working in U. S. museums. While job requirements vary widely among individual museums and specific professional roles, the M.A. degree offered by this program qualifies graduates for a wide range of career opportunities, in history museums and in other types of museums as well. The Museum Studies Program provides students with placement assistance and counseling and with access to a wide range of information on career opportunities in the field, and program faculty use their extensive networks in the field to help identify opportunities and to place students.

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Interdisciplinary Studies

Course Descriptions |

UMSL Home

The College of Arts and Sciences offers a number of interdisciplinary programs and courses. Below are descriptions of these interdisciplinary offerings:

- Bachelor of Liberal Studies degree;
- Bachelor of Interdisciplinary Studies degree;
- Interdisciplinary undergraduate certificates;
- Interdisciplinary minors;
- Interdisciplinary courses.

Interdisciplinary certificates for international or areas studies are housed in the Center for International Studies.

Bachelor of Liberal Studies (BLS)

The Bachelor of Liberal Studies is a degree program that enables students to combine structured academic emphases 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 minor and certificate) at the time they declare that BLS is their intended degree. The plan of study should be approved at the beginning of the program.

To obtain a Bachelor of Liberal Studies (BLS), a student must complete:

- UMSL General Education Requirements
General Education (consult General Education section of course listings)
 - Communication Skills 6 credit hours
 - Managing Information 3 credit hours
 - Valuing Skills 3 credit hours
 - Social and Behavioral Sciences 9 credit hours
 - Humanities 9 credit hours
 - Math/Science 12 credit hours
 - (for a total of 42 credit hours)

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 - Freshman Composition
ENGL 3100 - Advanced Expository Writing
- The university requirement of proficiency in Mathematics (to be completed in first 24 hours at the university)
- A Liberal Studies Concentration (33-41 hours) to consist of designated (identified) BLS Minors in participating departments or other units (minimum of 15 hours each) **or**
- A designated minor and a designated multi-disciplinary certificate (minimum of 15 hours in each). **No course may be used more than once AND**
- A capstone course (minimum of 3 hours) selected from one of the minors that make up the identified BLS score.

Note: (Not all Departments have designated BLS capstone course so students must be careful to pair minors and certificates so that they have a capstone course.)

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 with minimum GPA of 2.0 with a minimum **grade of C in all courses used in BLS combination areas**
- 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

The College of Arts and Sciences (CAS), Fine Arts and Communication (CoFAC), Business Administration (BA), and the Pierre Laclède Honors College (PLHC) have joined together to make available Liberal Studies combinations involving the following units:

Department of Anthropology, (CAS)
Department of Art and Art History, (CoFAC):
Minor in Art History or Studio Art
Department of Biology, (CAS)
College of Business Administration, (BA):
Minor in Business Administration only
Department of Chemistry and Biochemistry, (CAS)
Department of Communication, (CoFAC)
Department of Criminology and Criminal Justice, (CAS)
Department of Economics, (CAS)
Department of English, (CAS)
Department of Foreign Languages and Literature, (CAS)
Department of History, (CAS)
Pierre Laclède Honors College (PLHC) *
Department of Mathematics and Computer Science, (CAS)
Department of Music, (COFAC)
Department of Philosophy, (CAS)
Department of Physics and Astronomy, (CAS)
Department of Political Science, (CAS)
Department of Psychology, (CAS)
Department of Sociology, (CAS)
Department of Theatre, Dance and Media Studies, (COFAC)
Institute of Women's and Gender Studies, (CAS)

Bachelor of Liberal Arts: Capstone and Other Restrictions

A. The School of Social Work, as well as the Colleges of Education, Nursing, and the Joint Engineering Program are not participants in the BLS program.

B. The College of Business is participating, but only the General Business Minor may be used. **No** capstone course will be available for the business minors. Students selecting the Business Minor as one of the components for the BLS **must** select the other minor from or a department that does offer a capstone.

C. The Studio Arts minors in the Department of Art and Art History will not have a capstone. Students selecting a Studio Art Minor will have to pair it with a minor that does have a capstone.

D. Undergraduate certificates and Interdisciplinary Minors may be paired with a minor to form a BLS core; however, since certificates and interdisciplinary minors will not have capstone courses, they must be paired with a minor that does have a capstone. Students admitted to the Pierre Laclède Honors College 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 to work demonstrably relevant to their BLS program. Students should consult the BLS faculty advisor in the Honors College about this requirement.

E. Either the theatre minor or media studies minor may be used from the Department of Theatre, Dance and Media Studies; however the department offers no capstone at this time. These minors will need to be paired with a minor in a department that does not have a capstone.

F. The capstone will be 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.

G. 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.

H. The following departments have identified a Capstone:

Anthropology

ANTHRO 4301, Ideas and Explanations in Anthropology

Art & Art History

One additional 4000 level topics course in Art History

Biology

BIOL 4889, Senior Seminar

Chemistry/Biochemistry

CHEM 3022, Introduction to Chemical Literature (1) **and** CHEM 3905-Chemical Research (1) **and** CHEM 4897-Seminar (1)

Communication

COMM 3330, Research Methods I

Criminology & Criminal Justice

An additional 4000 level course in Criminology and Criminal Justice, not used as part of the minor.

Economics

ECON 4100, Introduction to Econometrics [If this course is used to complete the minor, the students must take an additional 4000 level Economic course.]

English

Additional 4000 level English Literature course [Student must identify themselves as using the additional 4000 level course as a Capstone so additional requirements can be assigned.]

Foreign Languages and Literatures

FRENCH 3211, Contemporary French Culture

GERMAN 3210, German Culture and Civilization

SPANISH 3210 Hispanic Culture and Civilization: Spain [or]

SPANISH 3211, Hispanic Culture and Civilization: Spanish America

History

HIST 4004, Senior Seminar (5 credits)

Honors College

HONORS 4100, (1 or 2 credit hours) and three to six credit hours of HONORS 4900 or 4910 are required.

Mathematics/Computer Science:

Computer Science: 4000 Level Course in Computer Science not counted as elective in the minor.

Mathematics: 4000 Level Course in Mathematics not counted as elective toward the minor.

Statistics: There is no capstone course in Statistics. The student will have to choose a capstone course from the other area of concentration.

Music:

M H L T 4000, Directed Studies (3 credits)

THRY COM 4000, Directed Studies (3 credits)

PDGOGY 4000, Directed Studies (3 credits)

PRACTM 4000, Directed Studies (3 credits)

Philosophy

PHIL 4491, Senior Seminar

Physics

PHYSICS 4381, Directed Readings in Physics

Political Science

POL SCI 3950, Senior Seminar in Political Science

Psychology

An additional 4000 level Psychology course beyond Psychology courses presented for the Minor

Sociology

An additional 4000 level course in Sociology excluding SOC 4350 (Special Study) or SOC 4385 (Internship)

Bachelor of Interdisciplinary Studies

The **Bachelor of Interdisciplinary Studies** degree (B.I.S.) provides a flexible, individualized program of study for the self-directed adult learner. Each student develops the area of study with faculty advisement.

Oversight of the B.I.S. degree is the responsibility of the Interdisciplinary Studies committee, composed of faculty from Arts and Sciences (Humanities, Social Sciences, and Natural Sciences), Business, Education,

Engineering, Fine Arts and Communication, and Nursing. 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 and determines the appropriate college to grant the student's degree.

- 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 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 of A, A-, B+, B, B-, C+, C, C-, D+, D, D-.

Regardless of the focus, theme, or purpose, the area of study should contribute to an advanced level of academic competence and achievement.

The faculty adviser, and Interdisciplinary Studies Committee must approve the program. Students and advisers will periodically review the program and make appropriate modifications when necessary.

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 18 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.

Interdisciplinary Certificates

Disaster and Risk Management Certificate

The undergraduate certificate program on Disaster and Risk Management offers a multi-disciplinary course of study focusing on the key challenge of developing resilience against disaster—preventing, preparing for, and responding to disasters and catastrophes. It brings together a range of disciplines to provide students with theoretical and practical insights into managing risks posed by natural, accidental, and intentional threats confronting urban communities. The certificate program emphasizes social psychological, organizational, legal, and political relationships brought to bear on the socio-technical systems designed to prevent, prepare for, or respond to disasters and catastrophes. It provides educational and practical opportunities for students planning careers in public safety, counterterrorism, community and research planning, public policy making, emergency management, leadership in the public sector, and the mass media. The certificate program aims to guide students in learning to manage efforts of public and private institutions to build resilience in their own socio-technical systems and in the community. Each discipline participating in the certificate program brings a distinct perspective to bear on the key issues involved in developing resilience in homeland security. Sociology offers a framework on the relationship of socio-technical systems and community organization that will prove conducive to students gaining both theoretical and practical insights into threats posed by disaster and catastrophe.

Undergraduate students earn a certificate on Disaster and Risk Management by completing 18 hours with a GPA of 2.0 or better from the following courses:

- COMM 3150**, Crisis, Disaster, and Risk Communication (3 hrs)
- ECON 4160**, Geospatial Analysis in the Social Sciences (GIS) (3 hrs)
- POL SCI 3200**, Constitutional Law (3 hrs)
- PSYCH/WGST 2232**, Psychology of Victims (3 hrs) OR

SOC 3250 Sociology of Victimization (3 hrs)

SOC 4414, Social Perspectives on Catastrophes and Homeland Security Policies (3 hrs)

Special topic courses relevant to disaster and risk management may be included in the certificate program when approved in advance by the Coordinator of the Disaster and Risk Management 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 credit courses offered over a three-semester period.

HIST 2219, U.S. Labor History

ECON 3900, Selected Topic in Economics

POL SCI 1450, Introduction to Labor Studies

POL SCI 3220, Labor Law

POL SCI 3430, Union Leadership and Administration

Studies in Religions Certificate

A certificate in studies in religions requires the completion of 18 hours with a grade of C or better.

Courses must be chosen from two or more departments (interdisciplinary offerings excluded), and the program must include two or more courses that focus on different major religious traditions. (Courses that fulfill this requirement are marked with an asterisk [*] in the list below.)

In addition, students are encouraged to broaden their understanding of religions and religious experience by enrolling in several courses in which these subjects are studied in philosophical or cultural contexts.

Students must obtain the approval of the coordinator of studies in religions before completing 12 hours toward this certificate.

Requirements

Students must take 18 hours chosen from the following list in accordance with the guidelines above:

Anthropology

ANTHRO 2173, Archaeology and Cultures of the Biblical World

ANTHRO 3244, Religion, Magic, and Science

Art

***ART HS 2214**, Early Christian and Byzantine Art

ART HS 2225, Medieval Art

English

***ENGL 1130**, Topics in Literature

***ENGL 2240**, Literature of the New Testament

***ENGL 2250**, Literature of the Old Testament

***ENGL 4950**, Special Topics in Literature

*Note: **ENGL 1130** and **ENGL 4950** should only be taken when Religious Literature is the topic.

History

***HIST 3082**, History of the Church: The Middle Ages

Philosophy

PHIL 1120, Asian Philosophy

PHIL 1185, Philosophy of Religion

PHIL 3302, Medieval Philosophy

PHIL 4485, Topics in Philosophy of Religion

Political Science

POL SCI 2610, Ancient and Medieval Political Thought

POL SCI 2650, American Political Thought

Trauma Studies Certificate

The trauma studies certificate is designed for students who are interested in a focused specialty in trauma studies or victim services in addition to their own major. It is appropriate for students in the College of Arts and Sciences or any of the schools of the university. It is particularly appropriate for students wishing to pursue careers in psychology, social work, sociology, criminology, law, public health, or nursing.

Requirements

A student may earn a trauma studies certificate by completing 18 hours with a GPA of 2.0 or better from at least three departments from the following courses:

Students must complete at least 12 hours from the following group:

Criminology and Criminal Justice

CRIMIN 1120, Criminal Law

CRIMIN 4300, Communities and Crime

CRIMIN 4350, Victimology

Psychology

PSYCH 2232, Psychology of Victims

PSYCH 3295, Selected Projects in Field Placement: Helping Victims of Crime (for three credits only toward certificate).

PSYCH 3390, Directed Studies, if trauma-related topic (for three credits only toward certificate). Please seek approval of the Coordinator of the Trauma Studies Certificate in advance

Social Work

SOC WK 3100, Introduction to Interventive Strategies for Social Work Practice

SOC WK 4601, Abused and Neglected Children

SOC WK 4602, Child Welfare Practicum Seminar

Sociology

SOC 3250, Sociology of Victimization

Students may count up to 6 hours from the following group toward the trauma studies certificate:

Criminology and Criminal Justice

CRIMIN 2230, Crime Prevention

CRIMIN 2240, Policing

CRIMIN 4340, Race, Crime, and Justice (same as SOC 4340)

Political Science

POL SCI 2400, Public Administration

POL SCI 2420, Introduction to Public Policy

POL SCI 4940, Leadership and Management in Nonprofit Organizations (same as SOC WK 4940 and SOC 4940)

Psychology

PSYCH 2160, Social Psychology (same as SOC 2160)

PSYCH 2230, Psychology of Women

PSYCH 2245, Abnormal Psychology

PSYCH 4235, Community Psychology

Social Work

SOC WK 4630, Women's Social Issues

SOC WK 4940, Leadership and Management in Nonprofit Organizations (same as POL SCI 4940 and SOC 4940)

Sociology

SOC 2102, Introduction to Women's and Gender Studies

SOC 2160, Social Psychology (same as PSYCH 2160)

SOC 3268, The Sociology of Conflict

SOC 4340 Race, Crime, and Justice (same as CRIMIN 4340)

SOC 4940, Leadership and Management in Nonprofit Organizations (same as POL SCI 4940 and SOC WK 4940)

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.

Interdisciplinary Minors

Minor in American Studies

American Studies is an internationally recognized academic field that involves an interdisciplinary approach to the study of the culture(s) of the United States, its colonial antecedents, and its indigenous peoples.

Students interested in this minor should contact the coordinator of American Studies for advice and information.

Candidates must have a cumulative grade point average of 2.0 or better in the 18 credit hours required for the minor. Three hours of the minor may be taken on a satisfactory/unsatisfactory basis. Candidates wishing to take American Studies courses from the Honors College (see below) must be members of the Honors College or must have a 3.0 cumulative grade point average.

Requirements for the Minor

Completion of the American Studies minor requires at least 18 semester credit hours, including at least two courses (six hours) from Section A and at least two courses (six hours) from Section B. The other six hours may be chosen from Section A, B, and/or C. Please read the special requirements below.

A. Core courses in American Studies (all courses are three credits except where otherwise indicated).

At least two of the following core courses are required to qualify for the minor. Of this minimal requirement,

one course must be chosen from either American Studies or English and the other from either History or Political Science. Students may take up to two additional courses from this group, and these may be chosen from any department or discipline.

Anthropology

ANTHRO 2120, Native Peoples of North America

Art and Art History

ART HS 1104, Indigenous Arts of North America

ART HS 2270, American Art to 1876

ART HS 2279, American Architecture

English

ENGL 1170, American Literary Masterpieces

ENGL 1700, African-American Literature

ENGL 1710, Native American Literature

ENGL 2710, American Literature I

ENGL 2720, American Literature II

History

HIST 1001, American Civilization to 1865

HIST 1002, American Civilization 1865 to Present

HIST 1003, African-American History

HIST 1004, The History of Women in the United States

Honors

HONORS 1230, American Traditions: Social and Behavioral Sciences

HONORS 1310, Non-Western Traditions: Humanities

HONORS 1330, Non-Western Traditions: Social Sciences

Admission to these Honors Seminars requires consent of the dean of the Honors College: note that depending on instructor and content, HONORS 1210 can fulfill the requirements from this group in literature/American Studies and HONORS 1230 can fulfill the History/Political Science requirement. HONORS 1310-1330 can qualify as additional Group A choices when their focus is on Native American traditions.

Music

M H L T 1060, Introduction to African American Music

M H L T 1070, Introduction to Jazz

Philosophy

PHIL 3307, American Philosophy

Political Science

POL SCI 1100, Introduction to American Politics

POL SCI 2300, State Politics

POL SCI 2350, Introduction to Urban Politics

POL SCI 2650, American Political Thought

POL SCI 2900, Studies in Political Science (when appropriate).

B. Optional courses in American Studies (all courses are 3 credits except where otherwise indicated). To complete the American Studies minor, students must choose at least two courses from this group, from any department or discipline, and may choose up to four courses in this group. Courses chosen from this group must be chosen from at least two departments.

Anthropology

ANTHRO 3250, American Folklore

ANTHRO 3291, Current Issues in Anthropology (when appropriate).

Art and Art History

ART HS 3360, Photography and Society

ART HS 4475, Topics in American Art

ART HS 4481, Topics in Contemporary Art (when appropriate)

Communication

COMM 1050, Introduction to Mass Communication

COMM 2243, Communications in American Politics

COMM 3352, Mass Media in Society

Economics

ECON 2800, History of American Economic Development (same as HIST 2800)

English

- ENGL 3800**, Topics in Women and Literature (when appropriate)
- ENGL 4610**, Selected Major American Writers I
- ENGL 4620**, Selected Major American Writers II
- ENGL 4640**, American Fiction to World War I
- ENGL 4650**, Modern American Fiction
- ENGL 4930**, Studies in Gender and Literature (when appropriate) (same as WGST 4930)
- ENGL 4950**, Special Topics in Literature (when appropriate)

History

- HIST 2012**, The Indian in American History, 1600 - 1900
- HIST 2016**, African-American History: From Slavery to Civil Rights
- HIST 2017**, African-American History: From Civil Rights to Black Power
- HIST 2043**, History of Crime and Justice (same as CCJ 3043)
- HIST 2219**, U.S. Labor History
- HIST 2800**, History of American Economic Development (Same as ECON 2800)
- HIST 3000**, Selected Topics in History (when appropriate)
- HIST 3022**, Comparative Urban History
- HIST 3031**, History of Women in the United States (same as WGST 3031)
- HIST 4004**, Senior Seminar (5 credits: when appropriate)
- HIST 4013**, United States History for the Secondary Classroom

Honors College

(When topics are appropriate, any of the seminars below can qualify as an "option" course for the American Studies minor. Admission to these courses requires the consent of the dean of the Honors College.)

- HONORS 2010**, Inquiries in the Humanities
- HONORS 2020**, Inquiries in the Fine and Performing Arts
- HONORS 2030**, Inquiries in the Social Sciences
- HONORS 2070**, Inquiries in Education
- HONORS 3010**, Advanced Seminar in the Humanities
- HONORS 3020**, Advanced Seminar in the Fine and Performing Arts
- HONORS 3030**, Advanced Seminar in the Social Sciences
- HONORS 3070**, Advanced Seminar in Education
- HONORS 3530**, Research Seminar: Social and Behavioral Sciences

Philosophy

- PHIL 4410**, Significant Figures in Philosophy (when appropriate)

Political Science

- POL SCI 2280**, Judicial Politics and Policy
- POL SCI 2320**, African Americans and the Political System
- POL SCI 2380**, The Politics of Gender in the United States (same as WGST 2380)
- POL SCI 3200**, Constitutional Law
- POL SCI 3210**, Civil Liberties
- POL SCI 3300**, The American Presidency
- POL SCI 3331**, Congressional Politics
- POL SCI 3340**, Politics and the Media
- POL SCI 3350**, Political Parties and Elections
- POL SCI 3390**, Studies in American Politics (when appropriate)

Sociology

- SOC 1040**, Social Problems
- SOC 3268**, The Sociology of Conflict
- SOC 4316**, Power, Ideology and Social Movements
- SOC 4360**, Sociology of Minority Groups (same as WGST 4360)
- SOC 4380**, Selected Topics in Social Policy (when appropriate)

C. American Studies elective courses (courses are three credit hours unless otherwise indicated).
Up to two courses from this group may be used for the American Studies minor. When two courses are chosen from this group, they must be chosen from different departments.

Anthropology

- ANTHRO 2126**, Archaeology of Greater St. Louis
- ANTHRO 2131**, Archaeology of Missouri
- ANTHRO 2132**, Archaeology of North America
- ANTHRO 2138**, African-American Archaeology

Art and Art History

ART HS 2281, Art Since 1960

Communication

COMM 3332, Intercultural Communications

Criminology and Criminal Justice

CRIMIN 2240, Policing

CRIMIN 4340, Race, Crime and Justice (same as SOC 4340)

English

ENGL 4060, Adolescent Literature

ENGL 4740, Poetry since World War II

ENGL 4760, Modern Drama

ENGL 4770, Modern Poetry

History

HIST 2001, United States History: Colonial America to 1763

HIST 2003, United States History: Nationalism and Sectionalism, 1815 to 1860

HIST 2004, United States History: 1860-1900

HIST 2005, The Modernization of the United States

HIST 2006, Recent United States History

HIST 2014, American Foreign and Military Affairs, 1900-Present

HIST 2041, Topics in American Constitutional History

HIST 3031, History of Women in the United States

Media Studies

MEDIA ST 2218, Public Policy in Telecommunication

MEDIA ST 3355, Media law and Regulation

Political Science

POL SCI 2290, Gender and the Law

POL SCI 2420, Introduction to Public Policy

POL SCI 2820, United States Foreign Policy

POL SCI 3330, Introduction to Political Behavior

POL SCI 3460, The Politics of Poverty and Welfare

Social Work

SOC WK 2200, Social Welfare as a Social Institution

SOC WK 3210, Social Issues and Social Policy Development

Sociology

SOC 1040, Social Problems

SOC 2180, Alcohol, Drugs and Society

SOC 3202, Urban Sociology

In addition, courses with variable topics such as Topics in..., Studies in..., and seminars may be taken when the topics are appropriate. When in doubt, see the coordinator of American Studies; such courses must be approved for inclusion in your American Studies minor **before the semester registration deadline**.

Minor in Classical Studies

The minor in Classical Studies is an interdisciplinary course of studies intended to encourage undergraduates in various disciplines to come to a fuller awareness of the cultures of ancient Greece and Rome and of the classical tradition that underlies much of modern Western civilization. In addition to appealing to any student's curiosity about the early stages of society in the West, the minor provides an especially valuable supplement to those who are majoring in many liberal arts areas including history, literature, philosophy, foreign languages, and art.

Students pursuing the minor will acquire a foundation in either Greek or Latin. They may choose to use either sequence to fulfill the foreign language requirement in the College of Arts and Sciences.

Requirements

Candidates for the minor must complete 19 credit hours of course work including:

LATIN 1001

LATIN 1002 or GRK ANC 1001

GRK ANC 1002

and three courses from the following list and any other course approved by the coordinator:

ART HS 2211, Art and Archaeology of the Ancient World

ART HS 2212, Greek Art and Archaeology

ART HS 2213, Roman Art and Archaeology

ART HS 4411, Topics in Ancient Art and Archaeology

ENGL 1200, Myth
GRK ANC 2001, Intermediate Ancient Greek Language and Culture
HIST 2081, Rome: The Republic and Empire
LATIN 2101, Intermediate Latin Language and Culture
PHIL 3301, Ancient Philosophy
PHIL 4401, Plato
PHIL 4402, Aristotle

Minor in Legal Studies

The minor in Legal Studies is open to all undergraduate students at UMSL, whatever their major field. It offers a secondary field of concentration in one of the most important areas of social life. Students may use the minor as a complement to their major, as an additional qualification for career opportunities, or as general education.

This interdisciplinary minor coordinates liberal arts courses related to law. A faculty member in Legal Studies will advise students and will work with their major advisers in planning appropriate courses.

Candidates must take:

Six courses from the following list. At least three courses must be taken at the 3000 level and above. No more than two courses from a single discipline may be included in the minor.

CRIMIN 1100, Introduction to Criminology and Criminal Justice
CRIMIN 1130, Criminal Justice Policy
CRIMIN 3345, Rights of the Offender
HIST 2085, Medieval England
MEDIA ST 3355, Media Law and Regulation
PHIL 4487, Philosophy of Law (same as CRIMIN 4487)
POL SCI 2280, Judicial Politics and Policy
POL SCI 2290, Gender and the Law (same as WGST 2290)
POL SCI 3200, Constitutional Law
POL SCI 3210, Civil Liberties
POL SCI 3260, The Supreme Court
POL SCI 3290, Studies in Public Law
POL SCI 4850, International Law

Minor in Public Affairs Journalism

The minor in Public Affairs Journalism provides students with an overview of media operations, including basic writing and reporting skills, as well as a specialty area of advanced study. Ordinarily the specialty or cognate area focuses on a particular field, such as consumer affairs, economics, or political science -- areas in which a journalist would specialize. Cognate areas are proposed by students seeking the minor and approved by a faculty committee.

A minimum grade point average of 2.0 is required in the minor. No more than 3 hours credit may be taken on a satisfactory/unsatisfactory basis. A total of 18 hours is required for the minor. At least 12 of the 18 required hours must be taken at UMSL.

Requirements

A. Nine hours in communication/English professional training:

ENGL 3140 or MEDIA ST 3214, News Writing
ENGL 3180, Reporting or **MEDIA ST 2212**, Broadcast Writing and Reporting
ENGL 4890, Writing Internship, or **MEDIA ST 3394, 3396 or 3397**, Internship

B. Nine hours in public affairs at the 3000 level or above

1. Students earning a writing certificate or majoring in communication with a mass communication emphasis must take 15 hours (at least 9 of these at the 3000 level or above) in economics, political science, or sociology.

2. Students majoring in economics, political science, or sociology must take nine hours (in addition to the required English/communication courses) at the 3000 level or above in addition to English/communication courses chosen from those listed above and/or in the two cognate areas outside their major (i.e., economics, political science, or sociology).

A list of courses applicable to the minor is available from the coordinator.

Minor in Urban Studies

A minor in urban studies includes 18 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 relevant to urban studies may be included in the minor when

approved in advance by the coordinator of the urban studies minor.

Requirements

Students must take:

Six courses selected from the following list, at least **three courses at the 3000 level or above**. No more than two courses from a single discipline may be included in the minor.

Courses Applicable to the Minor

ANTHRO 3250, American Folklore
ART HS 2279, American Architecture
ART HS 3365, The Artist and the City
CRIMIN 2230, Crime Prevention
CRIMIN 4300, Communities and Crime
ECON 3700, Urban and Regional Economics
HIST 3000, Selected Topics in History (when urban or St. Louis history)
POL SCI 2350, Introduction to Urban Politics
POL SCI 3450, Urban Administration
PSYCH 3256, Environmental Psychology
PSYCH 4235, Community Psychology
SOC 1040, Social Problems
SOC 3202, Urban Sociology
SOC 4344, Problems of Urban Community

Course Descriptions

In addition to regular departmental offerings, the College of Arts and Sciences also offers several interdisciplinary courses, listed below. These courses bring together the resources of two or more disciplines to focus on topics that benefit from being studied from the point of view of more than one discipline. In many cases faculty from several departments teach an interdisciplinary course together, giving students the opportunity to experience faculty dialogue on issues in a cross-disciplinary fashion. Most interdisciplinary courses have no prerequisites. Freshman and sophomore students are especially encouraged to take these courses.

The following course fulfills Humanities breadth of study requirement: 1000.

Interdisciplinary Studies (INTDSC)

INTDSC 1000 Special Topics (3)

Topics may vary from semester to semester, however, material will be selected which will focus in the social, economic, historical or political institution of Great Britain.

INTDSC 1002 Freshman Success Seminar (1)

An introduction to technologies and knowledge required in navigating the terrain of higher education, to improve their academic performance, to help determine their strengths and goals, and to encourage them to implement strategies to enhance their personal, academic, and career success. Topics will include study skills, time management, test taking skills, library skills, career development, financial management, health issues, and diversity awareness.

INTDSC 1010 Information Research & Success (1)

Students will gain knowledge and develop critical thinking skills to succeed academically by learning to frame meaningful questions; developing an understanding of the structure and content of library and electronic information resources; evaluating information; and using library and information resources as learning tools.

INTDSC 1600 Monday Noon Cultural Seminar (2)

An interdisciplinary examination of topics in the Humanities. Students will attend the Monday Noon Cultural Series program of the Center for the Humanities each week and meet as a group to explore the nature and background of each presentation, e.g., fiction reading, musical event, presentation of scholarly research in the arts or culture, or social and historical analysis.

INTDSC 1990 The City (3) [MI, V, SS]

Same as SOC 1999 and POL SCI 1990. An interdisciplinary course. Consideration of economic factors, urban institutions, historical developments in urbanization, problems of the inner city, suburbia and the metropolitan area, ethnic groups, stratification, and Psychological implications of urban living. This course is primarily for freshmen and sophomores. It is open to juniors and seniors with the instructor's permission.

INTDSC 2170 Aging in America: Concepts and Controversies (3)

Same as SOC 2170, SOC WK 2170, and 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 is appropriate for

students in the arts and sciences, business, communication, education, and nursing.

INTDSC 3220 Science for the Middle School Teacher I (5)

Prerequisites: CHEM 1111, BIOL 1811 and either CHEM 1011 or BIOL 1202. This course is intended to provide science content and pedagogical methods to students preparing to teach science at the middle school level. Science content in the first semester may include investigations of the properties of solids and solutions, chemical changes and conservation of matter, forces and simple machines, food webs, the environment and ecosystems, heat and radiation, waves and diffraction, static electricity and currents, but other topics from the middle school science curriculum could be substituted. Students will be expected to develop grade appropriate teaching materials, and complete individual and group investigations. Two hours of lecture, one hour of discussion, and two two-hour laboratory sessions per week.

INTDSC 3352 Independent Studies in Women's and Gender Studies (1-3)

Prerequisite: Junior standing; two courses in Women's and Gender Studies, including 2102; and consent of the instructor and the Institute. Directed independent work in selected Women's and Gender Studies topics through readings, research, reports and/or conferences. Course may satisfy the distribution requirement for the Humanities, Social Sciences or Math/Science depending on topic.

INTDSC 5350 Topics in Women's and Gender Studies (3)

Prerequisite: Junior standing and one Women's and Gender Studies course. This course will focus on a particular aspect of women's conditions (to be announced prior to registration) and will draw upon recent theoretical and methodological work in the field of women's and gender studies from a variety of disciplines. Course may satisfy the distribution requirement for Humanities or Social Sciences depending on the topic.

INTDSC 5353 Internship in Women's and Gender Studies (3)

Prerequisite: 90 hours. 2.5 GPA, 12 WGST hrs. Internship would place the student in a profit or nonprofit setting for approximately ten hours a week in an internship structured and supervised by the Institute; consent of Director required; may include biweekly seminar. Student must present appropriate course background for either option, plus the above pre/co-requisites.

INTDSC 6452 Special Readings in Women's Studies/Gender Studies (3)

Prerequisite: Admission to Graduate Certificate program and consent of instructor. Directed independent work on a selected Women's and Gender Studies topic through readings, research, reports, and/or conferences.

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Faculty

Haiyan Cai, Associate Professor, Chairperson

Ph.D., University of Maryland

Charles Chui, Curators' Professor

Ph.D., University of Wisconsin

Raymond Balbes, Professor Emeritus

Ph.D., University of California, Los Angeles

William Connett, Professor Emeritus

Ph.D., University of Chicago

Richard Friedlander, Professor, Associate Chairperson

Ph.D., University of California, Los Angeles

Qingtang Jiang, Professor

Ph.D., Peking University

Wayne L. McDaniel, Professor Emeritus

Ph.D., Saint Louis University

A Prabhakar Rao, Professor,

Ph.D., University of California, Berkeley

Stephen Selesnick, Professor Emeritus

Ph.D., University of London

Jerrold Siegel, Professor Emeritus

Ph.D., Cornell University

Grant V. Welland, Professor Emeritus

Ph.D., Purdue University

Sanjiv K. Bhatia, Associate Professor

Ph.D., University of Nebraska-Lincoln

Uday K. Chakraborty, Associate Professor

Ph.D., Jadavpur University

Ronald Dotzel, Associate Professor

Ph.D., Rutgers University

Wenjie He, Associate Professor

Ph.D., University of Georgia

Cezary Janikow, Associate Professor

Ph.D., University of North Carolina at Chapel Hill

Hyung Woo Kang, Assistant Professor

Ph.D. Korea Advanced Institute of Science and Technology (KAIST)

Martin Pelikan, Associate Professor

Ph.D., University of Illinois at Urbana-Champaign

Frederick Wilke, Associate Professor Emeritus

Ph.D., University of Missouri-Columbia

Shiying Zhao, Associate Professor

Ph.D., University of South Carolina

Adrian Clingher, Assistant Professor

Ph.D., Columbia University

John Antognoli, Teaching Professor

M.A., University of Missouri-St. Louis

Shahla Peterman, Teaching Professor

M.S., University of Wisconsin-Madison

Galina N. Piatnikskaia, Teaching Professor

Ph.D., Moscow Physical-Technical Institute

Donald E. Gayou, Associate Teaching Professor

Ph.D., Iowa State University

Michael Schulte, Associate Teaching Professor

M.S., Florida Institute of Technology
Qiang Sun Dotzel, Assistant Teaching Professor
M.A., University of Missouri-St. Louis
Nazire Koc, Assistant Teaching Professor
M.S., Southern Illinois University, Carbondale
Emily Ross, Assistant Teaching Professor
M.A., Saint Louis University
Jennifer Shrensker, Lecturer
M.A., Washington University
Albert Stanger, Academic Coordinator and Lecturer
M.A., University of Missouri-St. Louis
Joyce Langguth, Teaching Associate
B.S. Ed., Southeast Missouri State University

General Information

Degrees and Areas of Concentration

The Department of Mathematics and Computer Science offers work leading to the B.A. in mathematics, the B.S. in mathematics, the B.S. in computer science, and, in cooperation with the College of Education, the B.S.Ed. in secondary education with an emphasis in mathematics. The department also offers minors in computer science, mathematics, and statistics.

At the graduate level, the department offers a Master of Arts (M.A.) degree in mathematics, a Master of Science (M.S.) degree in computer science and a Ph.D. in applied mathematics.

The program leading to the B.A. in mathematics provides a broad grounding in different areas of mathematics, giving students the depth necessary to pursue various aims such as graduate studies or other career choices.

The B.S. in mathematics provides a substantial background in mathematics, statistics and computer science to produce graduates who can work as mathematicians. Both the B.A. and the B.S. in mathematics allow optional courses that enable the student to focus on areas of interest like pure or applied mathematics. Students pursuing the B.A. or the B.S. in mathematics will graduate with analytic and writing skills in mathematics and will have knowledge of content in core areas of the subject. They will have been exposed to applications of mathematics and they will possess critical thinking and quantitative skills.

The B.S.Ed. in secondary education with an emphasis in mathematics introduces students to those branches of mathematics most relevant to the teaching of secondary school mathematics.

The B.S. in computer science prepares students for employment in modern computing technology and careers in computer science. Students pursuing this degree will learn current programming practices and paradigms. They will learn the fundamentals of the supporting areas of mathematics and statistics and they will learn how computer hardware interacts with software. Students will study software development technologies like operating systems and compilers, and will gain knowledge of the theory behind applications like databases and networks.

Students pursuing the M.A. degree in mathematics may choose an emphasis in either pure or applied mathematics. The pure mathematics emphasis is well suited for students preparing to teach at the high school, junior college, or four year liberal arts college level. Those who concentrate on applied courses in the M.A. program build a foundation for the application of mathematics in industry and the continuation of their education in the Ph.D. program in applied mathematics. Our graduates will have abilities in the basic areas of algebra and analysis, and a breadth of knowledge in core subjects at the graduate level. They will study at least one area of mathematics or statistics in depth and will understand some of the contemporary research in applied mathematics and statistics. They will develop the ability to prepare and deliver oral and written presentations and the ability to pursue mathematical knowledge independently.

The M.S. degree in computer science emphasizes practical aspects of the field. Our graduates will develop expertise in at least one modern programming language. They will possess a breadth of knowledge of core areas in computer science, and will develop depth of knowledge in one area of the subject. They will be prepared to independently learn and adapt new technology and they will develop the ability to read current research in some areas. They will have the capability to prepare and deliver oral and written presentations on topics in computer science.

The Ph.D. in applied mathematics prepares students for a leadership role involving research and development in both industrial and academic settings. Students in this program will develop abilities in the basic areas of algebra and analysis and will possess breadth of knowledge in core subjects at the graduate level. They will study at least one area of mathematics or statistics in depth and will understand contemporary research in applied mathematics and statistics. They will develop the ability to prepare and deliver oral and written presentations, and they will possess the ability to pursue and produce mathematical knowledge independently.

Students may enroll in any of these graduate programs on a part-time basis.

Career Outlook

A degree in mathematics or computer science prepares well-motivated students for interesting careers. Our graduates find positions in industry, government, and education. The demand for individuals well trained in statistics, computer science, and applied 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 computer science and 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, and scientific positions in the armed services. Others have careers in education, especially at secondary and higher levels.

Department Scholarships

The Department of Mathematics and Computer Science offers four scholarships for students who are majoring in mathematics or computer science.

The Mathematical Sciences Alumni Scholarship is a monetary award for outstanding undergraduates at the junior or senior level.

The Edward Z. Andalaft Memorial Scholarship is a monetary award for outstanding undergraduate students at the sophomore level or higher. Applicants for each of these two scholarships must have a grade point average of 3.5 or higher in at least 24 hours of graded course work at the University of Missouri-St. Louis, and show superior achievement in courses in the mathematical sciences.

The Raymond and Thelma Balbes Scholarship in Mathematics is a monetary award for 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 mathematics majors. Application forms for these scholarships may be obtained from the Department of Mathematics and Computer Science.

The deadline for application for all of these scholarships is March 15, and the scholarships must be used for educational fees or for books at UMSL starting in the fall semester following the application.

Undergraduate Studies

General Education Requirements

All majors must satisfy the university and appropriate school or college general education requirements. 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

Majors in mathematics and computer science 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 mathematical sciences courses 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. The dates on which this test is administered are given on the department's website. 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.

Similarly, students who are ready to begin their computer science studies with CMP SCI 2250, Programming and Data Structures, will be granted credit for CMP SCI 1250, Introduction to Computing, once they complete CMP SCI 2250 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

1) The following courses are required:

- CMP SCI 1250**, Introduction to Computing
- MATH 1320**, Applied Statistics I
- 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
- MATH 2450**, Elementary Linear Algebra
- MATH 3000**, Discrete Structures
- MATH 4100**, Real Analysis I

2) The related area requirements as described below must be satisfied.

Students seeking a double degree, either within this department or with another department, do not have to fulfill the related area requirements.

Bachelor of Arts in Mathematics.

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 **4400**, Introduction to Abstract Algebra

B.S.Ed. in Secondary Education with emphasis in mathematics.

In addition to the core requirements and the required education courses, three mathematics/statistics courses at the 4000 level or higher must be completed. Of these, one must be

- MATH 4400**, Introduction to Abstract Algebra, and one must be chosen from:
- MATH 4660**, Foundations of Geometry or **MATH 4670**, Introduction to Non-Euclidean Geometry

Bachelor of Science in Mathematics

In addition to the core requirements, the B.S. in Mathematics degree requires:

1) Completing all of the following:

- MATH 4160**, Complex Analysis I
- MATH 4400**, Introduction to Abstract Algebra
- MATH 4450**, Linear Algebra

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.

Degree Requirements in Computer Science

Candidates for the **Bachelor of Science in Computer Science** degree must complete the following work:

1) Computer Science

- CMP SCI 1250**, Introduction to Computing
- CMP SCI 2250**, Programming and Data Structures
- CMP SCI 2260**, Object-Oriented Programming with C++
- CMP SCI 2700**, Computer Systems: Architecture and Organization
- CMP SCI 2710**, Computer Systems: Programming
- CMP SCI 2750**, Advanced Programming with Unix
- CMP SCI 3000**, Discrete Structures
- CMP SCI 3130**, Design and Analysis of Algorithms
- CMP SCI 4250**, Programming Languages
- CMP SCI 4280**, Program Translation Techniques
- CMP SCI 4760**, Operating Systems

2) Mathematics and Statistics

- MATH 1320**, Applied Statistics I
- MATH 1800**, Analytic Geometry and Calculus I

MATH 1900, Analytic Geometry and Calculus II
MATH 2000, Analytic Geometry and Calculus III
MATH 2450, Elementary Linear Algebra

3) Philosophy

PHIL 4458, Ethics and the Computer

4) Five more elective courses, numbered above 3000 if in computer science, and above 2010 if in mathematics or statistics. At least three of these elective courses must be in computer science, and at least one must be in mathematics or statistics.

5) Satisfy the related area requirements as described below.

Related Area Requirements

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, B.S. in Mathematics and B.S. in Computer Science must satisfy the requirements in two of the groups below with a grade of C- or better.

Candidates for the B.S. in Computer Science may not choose group 1. Candidates for the B.A. in Mathematics, B.S.Ed. in Mathematics, or B.S. in Mathematics may not choose group 2 or 3. If candidates for any of these three latter degrees choose group 4, 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:

Two courses from the following list:

CMP SCI 2250, Programming and Data Structures
CMP SCI 2700, Computer Systems: Architecture and Organization
CMP SCI 3130, Design and Analysis of Algorithms
CMP SCI 4140, Theory of Computation
CMP SCI 4410, Computer Graphics
CMP SCI 4440, Digital Image Processing

2) Mathematics (Analysis):

Two courses from the following list:

MATH 2020, Introduction to Differential Equations
MATH 4030, Applied Mathematics I
MATH 4100, Real Analysis I
MATH 4160, Complex Analysis I
MATH 4230, Numerical Analysis I

3) Mathematics (Algebra):

Two courses from the following list:

MATH 4350, Theory of Numbers
MATH 4400, Introduction to Abstract Algebra
MATH 4450, Linear Algebra
MATH 4550, Combinatorics

4) Statistics:

MATH 4200, Mathematical Statistics I
MATH 4210, Mathematical Statistics II

5) Biology:

BIOL 2102, General Ecology
BIOL 2103, General Ecology Laboratory

6) Biology:

BIOL 2012, Genetics
BIOL 4182, Population Biology

7) Chemistry:

CHEM 1111, Introductory Chemistry I
CHEM 1121, Introductory to Chemistry II

8) Chemistry:

CHEM 3312, Physical Chemistry I

and another 3000-level, or above, chemistry course

9) Economics:

ECON 1001, Principles of Microeconomics

ECON 1002, Principles of Macroeconomics

ECON 4100, Introduction to Econometrics

10) Philosophy:

PHIL 3360, Formal Logic

PHIL 3380, Philosophy of Science

PHIL 4460, Advanced Formal Logic

11) Physics:

PHYSICS 2111, Physics: Mechanics and Heat

PHYSICS 2112, Physics: Electricity, Magnetism, and Optics

12) Physics:

PHYSICS 3221, Mechanics

and another 3000 level, or above, physics course

13) Business Administration:

LOG OM 3320, Introduction to Operations Management

and one of the following courses:

LOG OM 4321, Production and Operations Management

LOG OM 4326, Quality Assurance in Business

LOG OM 4330, Business - Logistics Systems

LOG OM 4350, Management Science Methods

14) Engineering:

ENGR 2310, Statics

ENGR 2320, Dynamics

Minor Requirements

The department offers minors in computer science, mathematics, and statistics. All courses presented for any of these minors must be completed with a grade of C- or better.

Minor in Computer Science

The requirements for the minor are:

CMP SCI 1250, Introduction to Computing

CMP SCI 2250, Programming and Data Structures

CMP SCI 2700, Computer Systems: Architecture and Organization

and two additional computer science courses numbered above 2700 with the exception of CMP SCI 3000.

A minimum of two computer science courses numbered above 2700 must be taken in residence in the Department of Mathematics and Computer Science at UMSL.

Minor in Mathematics

The requirements for the minor are:

MATH 1800, Analytic Geometry and Calculus I

MATH 1900, Analytic Geometry and Calculus II

MATH 2000, Analytic Geometry and Calculus III

and two additional three-hour mathematics courses numbered above 2400, excluding 2510. A minimum of two mathematics courses numbered 2000 or above must be taken in residence in the Department of Mathematics and Computer Science at UMSL.

Minor in Statistics

The requirements for the minor are:

MATH 1320, Applied Statistics I

MATH 4200, Mathematical Statistics I

and two additional courses in statistics numbered above 4200. A minimum of two statistics courses numbered above 2000 must be taken in residence in the Department of Mathematics and Computer Science at UMSL.

Graduate Studies

The Department of Mathematics and Computer Science offers an M.A. degree in mathematics, a Ph.D. degree in applied mathematics, and an M.S. degree in computer science.

Admission

Applicants must meet the general admission requirements of the Graduate School, described elsewhere in this *Bulletin*. Additional admission requirements for specific programs are listed below.

Mathematics Programs

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, 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 to concentrate in either **pure** or **applied** mathematics. A student in the M.A. program may petition the department for transfer to the Ph.D. program upon successful completion of 15 credit hours and fulfillment of additional requirements as listed below.

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.

Computer Science Program

Applicants to the Graduate Program in Computer Science must meet the general graduate admission requirements of the Graduate School, described in the UMSL *Bulletin*. Students seeking admission to the program must formally apply for admission to the Graduate School either online or by traditional means. Additional requirements are listed below.

Applicants must have at least a bachelor's degree, preferably in computer science or in a related area. Applicants with bachelor's degrees outside of computer science must demonstrate significant proficiency in computer science, either by taking the GRE subject area examinations or by explicitly showing competence in the following areas:

- C programming (CMP SCI 1250 and CMP SCI 2250).
- An object oriented programming language (C++ or Java) (CMP SCI 2260).
- A course in data structures (CMP SCI 2250).
- A course in assembly language programming, computer architecture, or computer organization (CMP SCI 2700).
- A course in design and analysis of algorithms (CMP SCI 3130).
- Programming with Unix, including shell scripts and tools (CMP SCI 2750).

Students must also have satisfactorily completed mathematics courses equivalent to the following UMSL courses:

- Two semesters of calculus (MATH 1800 and 1900).
- A course in elementary linear algebra (MATH 2450).
- A course in discrete mathematics (MATH 3000).
- An elementary course in probability or statistics (MATH 1320).

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 demonstrate proficiency to the satisfaction of the Graduate Director. Special regulations of the Graduate School that apply to students on restricted status are described elsewhere in this *Bulletin*.

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.

Degree Requirements

Master of Arts in Mathematics

Candidates for the M.A. degree must complete 30 hours of course work. All courses numbered below 5000 must be completed with grades of at least B. The courses taken must include those listed below in group A together with additional courses discussed in B.

Students who have already completed courses equivalent to those in A) may substitute other courses numbered above 4000. All substitutions of courses for those listed in A) require the prior approval of the graduate director.

A) Mathematics core:

MATH 4100, Real Analysis I

MATH 4160, Complex Analysis I

MATH 4450, Linear Algebra

B) M.A. candidates must also complete 15 hours of course work numbered 5000 or above, chosen with the prior approval of the graduate director. Courses may be chosen to develop expertise in either pure or applied mathematics.

Thesis Option Part of B) 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.

Doctor of Philosophy in Applied Mathematics

The program has two options:

- 1) Mathematics Option**
- 2) Computer Science 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.

At most 9 hours of a student's enrollment in MATH 7990 (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 MATH 7990, Ph.D. Dissertation Research.
- 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, 4160, 4450).

Computer Science Option:

Topics from the theory of programming languages, operating systems, analysis of algorithms, and computer systems (CMP SCI 4250, 4760, 5130, 5700).

Additional Requirement

After fulfilling the basic requirement above, the student must meet one of the following:

- a. 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.

b. 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 a) and b), 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 MATH 7990, Ph.D. Dissertation Research. A maximum of 9 hours in MATH 7990 can be used toward the required hours of work in courses numbered 5000 or above.

Master of Science in Computer Science

Candidates for the M.S. degree in Computer Science must complete 30 hours of course work, subject to the Graduate School regulations. Of these, at least 18 hours must be numbered 5000 or above, with at least one course numbered 6000 or above, chosen with the prior approval of the Graduate Director. All courses numbered below 5000 must be completed with grades of at least B-. Outside computer science, up to 6 hours of related course work is allowed upon permission of the Graduate Director.

Students must satisfy all of the following core requirements:

- Operating Systems, CMP SCI 4760
- Programming Languages, CMP SCI 4250
- Computer Systems, CMP SCI 5700
- Software Engineering, CMP SCI 5500
- Advanced Data Structures and Algorithms, CMP SCI 5130

Waiving or substituting for a specific requirement can be done on the basis of prior course work or experience at the discretion of the Graduate Director, but it will not reduce the total hours required for the degree.

Additionally, students must attend at least five different seminars or colloquium presentations in the department.

Thesis Option

Students may choose to write an M.S. thesis 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 CS 6900, Thesis. Students writing an M.S. thesis must defend their thesis in an oral exam administered by a committee of three department members which includes the thesis director.

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.

Career Outlook

Graduates from the Department of Mathematics and Computer Science have little difficulty in finding positions in industry, government, and education. The demand for individuals well-trained in statistics, computer science, and applied mathematics is greater than the available supply. In addition, a number of graduates in mathematics have elected careers in business and other related fields where they have found their logical and analytical skills to be well-rewarded.

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Department of Philosophy

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Faculty

Stephanie Ross, Professor, Chairperson
Ph.D., Harvard University

Ronald Munson, Professor
Ph.D., Columbia University

Berit Brogaard, Associate Professor
Ph.D., SUNY-Buffalo

Lawrence Davis, Associate Professor
Ph.D., University of Michigan

Jon McGinnis, Associate Professor
Ph.D., University of Pennsylvania

Eric Wiland, Associate Professor
Ph.D., University of Chicago

Anna Alexandrova, Assistant Professor
Ph.D., University of California-San Diego

John Brunero, Assistant Professor
Ph.D., Columbia University

Robert Northcott, Assistant Professor
Ph.D., The London School of Economics and Political Science

Gualtiero Piccinini, Assistant Professor
Ph.D., University of Pittsburgh

Andrew Black, Teaching Professor
Ph.D., University of Massachusetts-Amherst

David Griesedieck, Teaching Professor
M.A. Princeton University

Donald Mertz, Teaching Professor
Ph.D., Saint Louis University

Waldemar Rohloff, Assistant Teaching Professor
Ph.D., University of California-Irvine

Irem Kurtsal Steen, Assistant Teaching Professor
Ph.D., Syracuse University

John E. Clifford, Associate Professor Emeritus
Ph.D., University of California-Los Angeles

Peter Fuss, Professor Emeritus
Ph.D., Harvard University

Robert M. Gordon, Research Professor
Ph.D., Columbia University

Henry L. Shapiro, Assistant Professor Emeritus
Ph.D., Columbia University

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 American Council of Learned Societies and the National Endowment for the Humanities.

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.

General Information

Degrees and Areas of Concentration

The department offers two options leading to the B.A. degree in philosophy. The first is for students intending to enter graduate school in philosophy; the second is for students seeking a general liberal arts education as their ultimate academic objective or preparing for professional degrees such as law. Each option offers a balance of training in the techniques of logical analysis, study of philosophical classics, and examination of selected problems in philosophy. The department also offers a minor in philosophy for students wishing to pursue a particular interest in philosophy in an organized way.

Undergraduate Studies

General Education Requirements

Majors must meet the university and college general education requirements. PHIL 1120: Asian Philosophy and PHIL 1125: Islamic Philosophy satisfy the college cultural diversity requirement. Majors may not count philosophy courses taken on a satisfactory/unsatisfactory basis toward the degree requirements.

Expected Learning Outcomes

1. Acquire basic knowledge of traditional philosophical issues in the western tradition.
2. Develop critical thinking skills based on knowledge of the standards governing logical reasoning.
3. Acquire familiarity with philosophical issues that arise in some other disciplines (e.g. biology, art, education, etc.).
4. Acquire a basic understanding of ethical and social-political principles and their role in resolving ethical disputes and in evaluating social practices and institutions.
5. Become acquainted with current philosophical debates in the areas of epistemology, metaphysics, and value theory and with the arguments and proposals made to resolve them.

Degree Requirements

Bachelor of Arts in Philosophy

Students must complete one of the following programs. At least 30, but not more than 45, hours are required for a major. A minimum of 18 hours including all courses for the major at or above the 3000 level must be taken in residence in the UMSL Department of Philosophy.

Option One: The Major in Philosophy

30 hours of course work are required:

1) PHIL 3360: Formal Logic

2) History of Philosophy

Twelve hours in history of philosophy, at least 6 hours of which must be at the 4000 level. Choose from PHIL 3301-3307 and PHIL 4401- 4421.

3) Normative Philosophy

One course from the following:

PHIL 4430: Social and Political Philosophy

PHIL 4435: Classical Ethical Theories

PHIL 4438: Recent Ethical Theory

PHIL 4474: Topics in Aesthetics

PHIL 4474 cannot be used to satisfy both the normative requirement and requirement 5), the "other disciplines" requirement.

4) Core Requirement

One course from the following:

PHIL 4440: Theories of Knowledge

PHIL 4445: Metaphysics

5) Philosophy and Other Disciplines

Choose one course from the PHIL 4470 - 4487 sequence.

6) PHIL 4491: Senior Seminar

7) Other than the courses specified above, not more than SIX credits at the 1000 level may be used to satisfy the remaining nine hours of coursework requirements for the major. Video courses cannot be used to satisfy course requirements for this program.

When appropriate, PHIL 4451: Special Topics in Philosophy may be used to satisfy the requirement of number 3), 4), or 5).

Students in this program should take Greek, Latin, French, or German to satisfy the foreign language requirement.

Option Two: The Double Major

The Double Major is intended for students who plan to complete a major in another discipline as well as in philosophy. Thirty hours of course work in philosophy are required:

1) Logic

PHIL 3360: Formal Logic

2) History of Philosophy

Six hours in history of philosophy, at least three hours of which must be at the 4000 level. Choose from the sequences PHIL 3301-3307 and PHIL 4401-4421.

3) Core Requirement

One course from the following:

PHIL 4440: Theories of Knowledge

PHIL 4445: Metaphysics

4) 4000-level Courses

A total of nine hours or more at the 4000 level other than courses used to satisfy 2), 3) and 5). Video courses cannot be used to satisfy course requirements for this program.

5) PHIL 4491: Senior Seminar

6) Electives

Other than the courses above, courses at any level may be used to satisfy the remaining six hours of course requirements for the double major.

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 completing at least six hours, but not more than nine, of PHIL 4450: Special Readings in Philosophy, submitting an acceptable thesis before the end of the senior year, and passing an oral examination.

In such cases, the thirty hours required for the major will include the credit earned in PHIL 4450: Special Readings, for the senior thesis.

Related Area Requirements

Majors are urged to acquire a familiarity with some other field above the introductory level.

Transfer students planning to major in philosophy should consult the Department's undergraduate advisor as soon as possible in order to have their transcripts evaluated and plan a program of study.

The Minor

15 hours of course work in philosophy are required:

1) PHIL 3360: Formal Logic

2) A total of twelve hours at or above the 3000 level, at least six of which must be at the 4000 level. Video courses cannot be used to satisfy course requirements for this program.

Minors are strongly encouraged, though not required, to take PHIL 4491: Senior Seminar.

All course work for the minor except PHIL 3360 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.

Graduate Studies

Expected Learning Outcomes

1. Acquire advanced knowledge of traditional philosophical issues in the western tradition.
2. Develop critical thinking skills based on knowledge of the standards governing logical reasoning.
3. Acquire familiarity with philosophical issues that arise in some other disciplines (e.g. biology, art, education, etc.).
4. Acquire a basic understanding of ethical principles and their role in resolving ethical disputes.
5. Acquire the knowledge and skills required to write a paper identifying a philosophical issue and presenting arguments supporting a thesis for resolving it.

Master of Arts in Philosophy

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

2+3 B.A. and M.A. in Philosophy

The Combined B.A./M.A. 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. 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. With a carefully designed program, a student can earn both degrees within as few as ten semesters.

The Combined Program requires a minimum of 138 credit hours, of which at least 30 must be at the upper division level course numbers in the 4000-5999 range (excluding 5495 and 5595). 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 described above. Students will normally take PHIL 3360: Formal Logic and two courses in the 3301-3307: History of Philosophy sequence in their junior years, along with electives. Any courses still needed to satisfy college foreign language and expository writing requirements would also be taken during this year. PHIL 4491: Senior Seminar and more specialized courses are taken in the senior year. In the fifth year, students take advanced electives and such required courses as are needed to fulfill remaining university, Graduate School, and departmental requirements for the M.A. This includes satisfactory completion of 30 graduate credit hours, at least 18 of which must be in courses numbered above 5000 and among which must be at least three in each of the four subject areas listed for the regular M.A. program, and one of which must be PHIL 5400: Proseminar in Philosophy. Up to 12 graduate credit hours may be applied simultaneously to both the B.A. and M.A. requirements. In addition to the above coursework, students must also write a thesis, in which case at least three hours must be taken in PHIL 5495 and/or 5595. Students should apply to the Graduate Committee for admission to the Combined B.A./M.A. Program in Philosophy the semester they will complete sixty 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.

Students should apply to the Graduate Committee for admission to the Combined B.A./M.A. Program in Philosophy the semester they will complete sixty 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.

Students will be admitted to the Combined Program under provisional status until they have completed fifteen credit hours in it with a grade point average of 3.0 or higher. After the completion of the provisional period, and with the recommendation of the Graduate Committee, students can be granted full admission into the 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.

Philosophy Requirements for Students in the 2+3 Program

A. To be taken in the junior year:

Choose four courses (12 credit hours) from the following:

1) PHIL 3360: Formal Logic

2) Two courses in the History of Philosophy, each at the 2000 level or above.

3) One additional Philosophy course, at the 2000 level or above.

B. To be taken in the senior year:

Choose six courses (18 credit hours) from the following:

PHIL 4491: Senior Seminar

Either

PHIL 4445: Metaphysics or

PHIL 4440: Theories of Knowledge.

Two History courses, each at the upper division

One course from the PHIL 4470-PHIL 4487 sequence

Choose one of the following:

PHIL 4430: Social and Political Philosophy

PHIL 4435: Classical Ethical Theory

PHIL 4438: Recent Ethical Theory

C. To be taken in the final year of the program:

Six courses (18 credit hours)

1) At least five of these courses must be at or above the 5000 level.

2) Courses must be selected so that the student has taken at least one and preferably two courses from each of the four subject areas in the course of completing the 2 + 3 program:

- Value Theory
- History of Philosophy
- Logic/Philosophy of Science
- Epistemology/Metaphysics

3) PHIL 5400: Proseminar in Philosophy

Cooperative arrangement with Saint Louis University.

The strengths of the UMSL Philosophy Department 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.

Course Descriptions

Prerequisites may be waived by consent of the department.

PHIL 1120, 1125 fulfill the Cultural Diversity requirement [CD]. Courses marked [CV] or [H] fulfill the valuing and humanities requirements, respectively.

PHIL 1090 Telecourse: Philosophy and Other Disciplines (3) [V, H]

Video course offering. General introduction to philosophy examines its connections to works of art and related areas. Course does not satisfy any requirements for philosophy major or minor.

PHIL 1091 Telecourse: Significant Figures in Philosophy [V, H]

Video course introduces philosophy through a survey of the ideas of some of the important figures in the history of the discipline. Course cannot be used to satisfy any requirements for philosophy major or minor.

PHIL 1110 Western Philosophy I: Antiquity to the Renaissance (3) [V, H]

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) [V, H]

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) [CD, V, H]

Critical study of selected philosophical classics of India and China.

PHIL 1125 Islamic Philosophy (3) [CD, V, H]

Introduction to Arabic philosophy in the Islamic classical period (roughly from mid-9th through 12th centuries). Considers philosophical and theological background and examines the thought of such notable Islamic philosophers as al-Kindi, Ibn Sina, al-Ghazali, and Ibn Rushd. Topics 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 distinction between essence and existence.

PHIL 1130 Approaches to Ethics (3) [V, H]

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 Major Questions in Philosophy (3) [V,H]

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 1160 Logic and Language (3) [V, H]

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 1175 Arts and Ideas (3) [H]

ST ART 1175, ENGL 1175, HIST 1175, M H L T 1175, TH DAN 1175. An Interdisciplinary course tied to the semester's offerings at the Blanche Touhill Performing Arts Center as well as other events on campus featuring the visual arts, literature, music, and film. Each semester the course will provide background on the arts in general and will critically examine particular performances and offerings. Special themes for each semester will be selected once the Touhill schedule is in place. Students will be expected to attend 6-8 performances or exhibitions. Can be repeated once for credit.

PHIL 1185 Philosophy of Religion (3) [V, H]

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 2250 Philosophy and Current Issues (3)

A careful examination of such current social controversies as women's liberation, the ethics of abortion, public accountability of holders of high offices, and the subtler forms of racism and other prejudices. Although there is no formal prerequisite, it is recommended that students have taken, or be concurrently enrolled in, at least one other philosophy course.

PHIL 2252 Philosophical Foundations of Criminal Justice (3) [V, H]

Same as CRIMIN 2252. Addresses fundamental conceptual and ethical issues that arise in the context of the legal system. Questions may include: How does punishment differ from pre-trial detention? How, if at all, can it be justified? Is the death penalty ever justified? When is it morally permissible for juries to acquit defendants who are legally guilty? Is plea bargaining unjust? Why might people be morally obligated to obey the laws? Are laws restricting civil liberty (e.g., laws against abortion, homosexuality, or drug use) permissible?

PHIL 2253 Philosophy and Feminism (3) [V, H]

Same as WGST 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) [V, H]

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)

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) [V, H]

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 2258 Medicine, Values, and Society (3) [V, H]

Social, conceptual, and policy issues connected with medicine form the focus of the course. Topics may include: role played by race and gender in design of research and distribution of care; whether diseases are socially constructed categories reflecting the values of society; development of social policies that offer

universal access to health care; the legitimacy of using Psychotropic drugs to enhance life, rather than treat 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)

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, honest in engineering, and risk, safety, and liability.

PHIL 2274 Philosophy and Literature (3)

Critical reading and discussion of selected literary works in terms of the philosophical problems they present.

PHIL 2280 Minds, Brains, and Machines (3) [V, H]

Introduction to basic philosophical issues in cognitive science. General topics include minds as computers; computers as minds, or the possibility of artificial intelligence that is truly intelligent; relationship between mental function and brain function. Some areas of current research, such as reasoning, vision, and emotion.

PHIL 2281 Darwinism and the Philosophy of Biology (3)

Prerequisites: Six hours of philosophy graduate standing, or consent of instructor. Examines Darwin's theory of evolution by natural selection and its philosophical consequences. Besides the theory itself, topics may include (but are not limited to): how we can test evolution and what the evidence is for it; the design argument; adaptationism; evolutionary psychology; evolution and morality; the fact-value distinction; nature versus nurture; differences between humans and other animals; evolution and human history; genetic engineering and possible futures.

PHIL 3301 Ancient Philosophy (3)

Freshmen admitted by consent of department. The principal 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)

A critical study of the important philosophies of the period from Augustine 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)

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 Kant and Nineteenth-Century Philosophy (3)

A study of Kant and such major nineteenth-century figures as Hegel and Nietzsche, Mill, and Peirce. Although there is no formal prerequisite, it is recommended that students have taken at least one other philosophy course.

PHIL 3305 Twentieth-Century Philosophy (3)

Representative topics in contemporary philosophy, with readings selected from pragmatism, logical positivism, linguistic analysis, and existentialism. Although there is no formal prerequisite, it is recommended that students have taken at least one other philosophy course.

PHIL 3307 American Philosophy (3)

Prerequisite: Six hours of philosophy or consent of instructor. A study of selected American philosophers.

PHIL 3360 Formal Logic (3)

An introductory study of logical truth and deductive inference, with emphasis on the development and mastery of a formal system.

PHIL 3369 The Marxist Heritage (3)

Same as POL SCI 3690. Study of Marx and leading Marxists. Designed to evaluate their influence on recent political, economic, and social thought and institutions.

PHIL 3374 Philosophy of Art (3)

Same as ART HS 3374. A study of issues concerning the definition of art, meaning and truth in the arts, aesthetic experience, and criticism.

PHIL 3378 Philosophy of Mind (3)

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)

An examination of science: what makes science special? Topics may include (but are not limited to): empiricism and scientific method; confirmation and the problem 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)

Prerequisite: 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)

Prerequisite: 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 4405 The Rationalists (3)

Prerequisites: Six hours of philosophy, a course in Ancient Philosophy recommended, graduate standing, or consent of instructor. An examination of the philosophies of such major figures as Descartes, Spinoza, and Leibniz.

PHIL 4407 Kant (3)

Prerequisite: 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 4408 Hegel (3)

Prerequisite: Six hours of philosophy, PHIL 3304 or equivalent recommended, graduate standing, or consent of instructor. A critical study of the writings and influence of Hegel.

PHIL 4410 Significant Figures in Philosophy (3)

Prerequisite: Nine hours of philosophy, graduate standing, or consent of instructor. Examination of the work of an important twentieth-century philosopher or philosophical movement. The philosopher or movement to be studied will be announced prior to registration. This is a variable content course that may be taken again for credit with approval of instructor and department chair.

PHIL 4420 Topics in Non-Western Philosophy (3)

Prerequisites: PHIL 1120, graduate standing, or consent of instructor. An extensive exploration of issues in some particular non-Western traditions (Islamic, Indian, or Chinese). This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 4421 The Analytic Tradition I: Origins to Logical Positivism (3)

Prerequisites: Six hours of philosophy, graduate standing, or consent of instructor. PHIL 3305 and PHIL 3360 strongly recommended. Course studies in depth the development of analytic philosophy through about 1950. Topics include key philosophical writings in this tradition beginning with Frege, Moore, and Russell and concluding with basic texts in logical positivism, with emphasis on Carnap, Schlick, Neurath and Hempel.

PHIL 4430 Social and Political Philosophy (3)

Prerequisites: Six hours of philosophy, graduate standing, or consent of instructor. An analysis of some fundamental concepts and assumptions involved in the theory and practice of social and political organization.

PHIL 4435 Classical Ethical Theories

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 4438 Recent Ethical Theory (3)

Prerequisite: 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 4439 Topics in Ethical Theory (3)

Prerequisite: PHIL 4435, 4438, nine hours of philosophy, graduate standing, or consent of instructor. Formulation and evaluation of major theories in normative ethics, metaethics, and axiology. Topics include egoism, moral realism, act and rule utilitarianism, and varieties of naturalism and non-naturalism in ethics. This is a variable content course and can be taken again for credit with consent of instructor and department chair.

PHIL 4440 Theories of Knowledge (3)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: Special consent required. Independent study through readings, reports, and conferences. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 4451 Special Topics in Philosophy (3)

Prerequisite: 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 department chair.

PHIL 4457 Media Ethics (3)

Same as MEDIA ST 4357. Prerequisite: nine hours of philosophy or nine hours of communication or consent of instructor. This course is concerned with some of the issues that arise from the intersection of ethics and modern media communications. Attention is given to some of the more specific concerns of media ethics, such as truth, honesty, fairness, objectivity and bias; personal privacy and the public interest; advertising; conflicts of interest; censorship and offensive or dangerous content (pornography, violence). Particular attention will be given to problems posed by the development of personal computer communications through bulletin boards, on-line services, and the Internet.

PHIL 4458 Ethics and the Computer

Prerequisites: 6 hours of course work above the level of MATH 1030 in Math/Computer Science or at least 6 hours of philosophy or consent of instructor. 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 Advanced Formal Logic (3)

Prerequisite: PHIL 3360, graduate standing, or consent of instructor. Rigorous study of major developments in contemporary logic. Emphasis is given to theoretical problems and some attention is devoted to philosophical issues arising from logic.

PHIL 4465 Theory of Decisions and Games (3)

Prerequisite: Six hours of Philosophy and junior standing, POL SCI 6401 (or the equivalent) or consent of instructor. Same as POL SCI 4060. A study of rational decision making, including games against nature, zero-sum games and social choices. Topics will include the following: expected utility maximization, the Prisoner's Dilemma, Nash equilibria, and Arrow's theorem on the impossibility of a social welfare function. Parts of the course are technical in nature; a prior course in mathematics e.g., finite mathematics, calculus, statistics or an economics course with a mathematical component, symbolic logic, or some other course with comparable mathematical content is strongly recommended.

PHIL 4469 Topics in Political Philosophy (3)

Prerequisite: Nine hours of philosophy, graduate standing, or consent of instructor. Critical examination of philosophical theories of democracy, individual autonomy, political community, social justice, and other selected issues in political philosophy.

PHIL 4470 Topics in Philosophy of Language (3)

Prerequisite: Six hours of philosophy, graduate standing, or consent of instructor. Intensive examination of selected problems encountered in developing philosophical accounts of truth, reference, propositional attitudes, and related concepts. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 4474 Topics in Aesthetics (3)

Prerequisite: PHIL 3374, graduate standing, or consent of instructor. Selected topics, such as vision and representation, musical aesthetics, and recent theorists. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 4478 Topics in Philosophy of Mind (3)

Prerequisite: PHIL 3378 or six hours of other philosophy courses graduate standing, or consent of instructor. 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 consent of instructor and department chair.

PHIL 4479 Philosophy of Cognitive Science (3)

Prerequisite: PHIL 3378 or PHIL 4478 or nine hours of other philosophy courses or consent of instructor. An exploration of the philosophical foundations and implications 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 4482 Philosophy of Social Science (3)

Prerequisite: Six hours of philosophy or consent of instructor. An intensive examination of selected topics such as the nature theory, and the postmodernism debate e.g., Habermas of explanation in social science versus natural science, interpretation, Foucault, Clifford. This course may be repeated for credit on approval by the department.

PHIL 4483 Topics in History and Philosophy of Science (3)

Prerequisites: Six hours of philosophy (PHIL 3380, strongly recommended), graduate standing, or consent of instructor. Examines in depth a particular topic or topics from either the history or philosophy of science. This is a variable content course and may be taken again for credit with the consent of the instructor and department chair.

PHIL 4484 Topics in History and Philosophy of Medicine (3)

Prerequisites: Six hours of philosophy, graduate standing, or consent of instructor. Focuses on the rise of philosophical issues associated with scientific medicine, including the emergence of physiology; identification of infectious and genetic diseases; development of effective drugs; rise of diagnostic and therapeutic technologies. Topics may include: disease concepts, the classification of diseases, logic of clinical diagnosis, medical explanation, and clinical decision-making. Topics may also include development of special medical areas such as immunology, cancer treatments, or organ transplantation. This is a variable content course and may be taken again for credit with consent of instructor and the department chair.

PHIL 4485 Topics in Philosophy of Religion (3)

Prerequisite: nine hours of philosophy, or consent of instructor. An intensive study of problems arising out of traditional and contemporary philosophical theology. This is a variable content course and may be taken again for credit with the consent of the instructor and the department chair.

PHIL 4487 Topics in Philosophy of Law (3)

Same as CRIMIN 4487. Prerequisite: CRIMIN 1100 and 3 hours of philosophy, graduate standing or consent of instructor. 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. This is a variable content course and may be taken again for credit with consent of the instructor and the department chair.

PHIL 4491 Senior Seminar (3)

Prerequisites: Senior standing; at least 12 hours of philosophy at the 1000 level or above; or consent of instructor. Intensive study of a central philosophical problem. The course emphasizes the fundamentals of philosophical writing and scholarship. Students will write a major paper to be evaluated by two members of the Philosophy Department and the course instructor.

PHIL 5400 Proseminar in Philosophy (3)

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)

Prerequisites: Graduate Standing. In-depth study of work of a single philosopher. The philosopher selected will be announced prior to registration. This is a variable-content course any may be taken again for credit with consent of instructor and department chair.

PHIL 5478 Seminar in Philosophy of Mind (3)

Prerequisites: Graduate standing. Topics may include functionalism and physicalism; representation and nature of propositional attitudes such as belief, desire, and 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 instructor and department chair.

PHIL 5495 Thesis Research (3)

Prerequisite: Graduate standing or consent of instructor. May be repeated once for credit with consent of instructor and department chair.

PHIL 5521 Seminar in Analytic Philosophy (3)

Prerequisites: Graduate standing or consent of instructor. Intensive study of selected topics, texts, or individuals in historical or contemporary analytic philosophy. Topics may include, but are not limited to, Frege semantics, Russell's theory of definite descriptions, logical positivism, Wittgenstein's philosophy of language, Quine on the analytic/synthetic distinction, Kripke possible-world semantics, theories of propositions, the analysis of knowledge, contextualism in epistemology and language, relativistic semantics, epistemic two-dimensionalism, conceivability vs. possibility, three-dimensionalism vs. four-dimensionalism, presentism vs. eternalism, and applications of core concepts in other areas of philosophy. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 5530 Seminar in Social and Political Philosophy (3)

Prerequisites: Graduate standing or consent of instructor. An intensive study of contemporary philosophical debate about such issues such as civil liberty, economic justice, political decision-making, and state authority. Variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 5533 Philosophy of Law (3)

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)

Prerequisites: Graduate standing or consent of instructor. Answers questions from normative ethics or metaethics, which may include the following: 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)

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 consent of instructor and department chair.

PHIL 5545 Seminar in Metaphysics (3)

Prerequisites: 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 consent of instructor and department chair.

PHIL 5546 Seminar in Modality (3)

Prerequisites: Graduate standing or consent of instructor. Intensive study of selected topics, texts, or individuals in modality. Topics may include (but are not limited to): Kripke semantics, Lewis' genuine modal realism about possible worlds, linguistic ersatzism, epistemic two-dimensionalism, conceivability vs. possibility, theories of epistemic modals, theories of propositional attitude reports, theories of knowability, provability, and computability, modal paradoxes, and applications of core concepts in other areas of philosophy. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 5551 Special Readings in Philosophy (3)

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 consent of instructor and department chair.

PHIL 5555 Ethical and Legal Issues in Criminal Justice (3)

Same as CRIMIN 5555. Prerequisite: Graduate standing or consent of instructor. Examination of the moral and legal aspects of the policies and practices of criminal justice agencies and agents. Issues may include treatment of offenders, the role of technology, and research and professional ethics.

PHIL 5560 Seminar in Logic (3)

Prerequisites: Graduate standing. Focused study of topics in logic and/or its history. Representative topics include Aristotelian logic, modal logic, Gödel incompleteness theorems, relevance logic, paraconsistent logic, free logic. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 5561 Graduate Formal Logic (3)

Prerequisites: 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 5570 Seminar in Philosophy of Language (3)

Prerequisites: Graduate standing or consent of instructor. Close study of selected topics, texts, or individuals in the philosophy of language. Topics may include (but are not limited to): theories of indexicals and demonstratives, theories of proper names and descriptions, sense and reference, compositionality, natural language semantics, syntax pragmatics, applications of core concepts in other areas of philosophy. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 5579 Seminar in Philosophy of Cognitive Science (3)

Prerequisites: Graduate standing. General topics include role of computation in cognitive science, merits of symbolic computation and connectionism, aims and methods of artificial intelligence, and 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 consent of instructor and department chair.

PHIL 5580 Seminar in Philosophy of Science (3)

Prerequisites: Graduate standing or consent of instructor. Focus on recent issues and controversies. Topics may include theories and observation, models of explanation, confirmation, realism and antirealism, empiricism and naturalism, "social construction" and feminist views of science. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 5582 Seminar in Philosophy of Social Science (3)

Prerequisites: Graduate standing or consent of instructor. Intensive examination of selected topics, such as the nature of explanation in social science, rationality, value-freedom and objectivity, or relation of social to natural sciences. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 5590 Philosophical Issues in Other Disciplines (3)

Prerequisites: Graduate standing or consent of instructor. Examination of selected philosophical issues in disciplines other than philosophy. One or more such disciplines as history, political science, psychology, sociology, biology, chemistry, physics, or mathematics will be chosen. The discipline(s) and issues selected will be announced prior to registration. This is a variable content course and may be taken again for credit with consent of instructor and department chair.

PHIL 5595 Thesis Research (1-6)

Prerequisites: Graduate standing or consent of instructor. May be repeated to a total of six credit hours.

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Faculty

Bruce A. Wilking, Professor, Chairperson

Ph.D., University of Arizona

Jacob J. Leventhal, Curators' Professor

Ph.D., University of Florida

Frank Edward Moss, Curators' Professor Emeritus

Ph.D., University of Virginia

Ta-Pei Cheng, Professor Emeritus

Ph.D., Rockefeller University

Bernard Joseph Feldman, Professor

Ph.D., Harvard University

Ricardo A. Flores, Professor

Ph.D., University of California-Santa Cruz

Thomas F. George, Professor and Chancellor

Ph.D., Yale University

Peter Herwig Handel, Professor

Ph.D., University of Bucharest

Bob Londes Henson, Professor

Ph.D., Washington University

Jingyue Liu, Professor

Ph.D., Arizona State University

Richard Dean Schwartz, Professor Emeritus

Ph.D., University of Washington

Sonya Bahar, Associate Professor

Ph.D., University of Rochester

Philip Fraundorf, Associate Professor

Ph.D., Washington University

Wilfred H. Sorrell, Associate Professor

Ph.D., University of Wisconsin

Erika Gibb, Assistant Professor

Ph.D., Rensselaer Polytechnic Institute

Eric Majzoub, Assistant Professor

Ph.D., Washington University

Dan Zhou, Associate Research Professor

Ph.D., University of Arizona

Michael Fix, Associate Teaching Professor

A.M., Washington University

Mary Jane Kernan, Associate Teaching Professor

Ph.D., Washington University

Charles E. Burkhardt, Adjunct Professor

Ph.D. Washington University

J. Daniel Kelley, Adjunct Professor

Ph.D., Georgetown University

László Nánai, Adjunct Professor

Ph.D., Lebedeff Institute of Physics, Russia

Chung-In Um, Adjunct Professor

Ph.D., SUNY Buffalo

Lu Fei, Adjunct Associate Professor

Ph.D., University of Missouri-St. Louis

Udo Erdmann, Adjunct Assistant Professor

Ph.D., Humboldt University
Alexander Neiman, Adjunct Assistant Professor
Ph.D., Dr. Sc., Saratov State University, Russia

General Information

Degrees and Areas of Concentration

The Department of Physics and Astronomy offers course work leading to the B.A. in physics, the B.S. in physics, and in cooperation with the College of Education, the B.A. in physics with teacher certification and the B.S. in education with an emphasis in physics. The Department offers meritorious students opportunities to participate in teaching and research to help prepare them for the independent effort required in industry or graduate school. The Department's faculty members have a diversity of interests and are active in various experimental and theoretical research areas. Students successfully completing this program will obtain an understanding of basic physics concepts, mathematical and problem-solving skills needed to solve basic physics problems, experimental skills in physics, astrophysics, or biophysics, and the ability to analyze and interpret scientific data and write scientific papers or reports.

The Master of Science in physics program combines a sound basis in the fundamental areas of classical and modern physics from both a theoretical and an applied perspective. The program is designed to enable students with undergraduate backgrounds in physics or other technical areas to further their professional development and maintain and improve their technical development. The program is offered almost entirely in the evening to serve students who are employed locally. Students receiving a M.S. in physics will obtain an understanding of advanced physics concepts and mathematical and problem-solving skills needed to solve advanced physics problems. Students are strongly encouraged to be involved with faculty research programs that will develop experimental skills in physics, astrophysics, or biophysics as well as experience in analyzing and interpreting scientific data and the writing of scientific papers, reports, or theses. The Department offers the Ph.D. degree in cooperation with Missouri University of Science and Technology Physics Department. Students must satisfy the Missouri S&T admission standards, and the Missouri S&T Qualifying Exam in Physics is required of University of Missouri-St. Louis Ph.D. students. However, all course work and dissertation research may be completed while the student is in residence at UMSL. In addition to obtaining an understanding of advanced physics concepts and mathematical and problem-solving skills needed to solve advanced physics problems, Ph.D. students are expected to conduct independent scientific research in physics, astrophysics, or biophysics while learning to analyze and interpret scientific data and write scientific papers, reports, and a dissertation.

Undergraduate Studies

General Education Requirements : Majors must complete the university and college general education requirements. Any of the following courses may be used to satisfy the physical science requirement:

ASTRON: 1001, 1001A, 1011, 1012, 1050, 1051, 1121

ATM SCI : 1001, 1001A

GEOL 1001, 1002, 1001A, 1002A

PHYSICS: 1001, 1011, 1012, 2111, 2112.

Degree Requirements

All physics majors, who are first-time freshman or transfer students, must complete PHYSICS 1099, Windows on Physics. All physics majors in all programs must complete the physics core curriculum. In addition to the core courses, each individual program has its own specific requirements. Required Physics, Mathematics, Chemistry, Biology, Optometry 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:

PHYSICS 1099, Windows on Physics

PHYSICS 2111, Physics: Mechanics and Heat

PHYSICS 2112, Physics: Electricity, Magnetism, and Optics

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:

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 or equivalent

CMP SCI 1250, Introduction to Computer Science

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.

Bachelor of Science in Physics

The B.S. degree provides students with five options: general physics, astrophysics, engineering physics, medical physics or optical biophysics.

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

PHYSICS 4311, Advanced Physics Laboratory I

PHYSICS 4323, Modern Optics

PHYSICS 4331, Introduction to Quantum Mechanics

PHYSICS 4341, Thermal and Statistical Physics

and three electives at or above the 4000 level in physics or astronomy.

Astronomy

ASTRON 1050, Introduction to Astronomy I **or** **ASTRON 1051**, Introduction to Astronomy II

Also required are:

Mathematics

MATH 2450, Elementary Linear Algebra

MATH 4030, Applied Mathematics I **or** **4320**, Numerical Analysis I

and one elective in mathematics at or above the 3000 level, or in computer science at or above the 2000 level.

Chemistry

CHEM 1121, Introductory Chemistry II, or equivalent.

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

PHYSICS 4331, Introduction to Quantum Mechanics

PHYSICS 4341, Thermal and Statistical Physics

Astronomy

ASTRON 1050, Introduction to Astronomy I

ASTRON 1051, Introduction to Astronomy II

ASTRON 4301, Astrophysics

ASTRON 4322, Observational Astronomy

And one physics elective at or above the 4000 level. With consent of the astronomy adviser, there may be substitution of ASTRON 1001, 1001A, 1011 or 1012 for 1050 or 1051.

Also required are:

Mathematics

MATH 2450, Elementary Linear Algebra

MATH 4030, Applied Mathematics I **or** **MATH 4230**, Numerical Analysis I

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
ENGR 2320, Dynamics

Joint Electrical Engineering

JE ENGR 2300, Introduction to Electrical Networks

Physics

PHYSICS 4310, Modern Electronics
PHYSICS 4311, Advanced Physics Laboratory I
PHYSICS 4323, Modern Optics
PHYSICS 4331, Introduction to Quantum Mechanics
PHYSICS 4341, Thermal and Statistical Physics

Mathematics

MATH 1320, Applied Statistics I
MATH 2450, Elementary Linear Algebra

Also required is **one** elective in mathematics at or above the 3000 level, or in a computer science at or above the 2000 level.

Medical Physics 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
PHYSICS 4347, Biophysics of Imaging

Biology

BIOL 1811, Introductory Biology I: From Molecules to Organisms
BIOL 1821, Introductory Biology II: Organisms and the Environment
and **two additional physics electives** at the 4000 level.

Also required are:

Chemistry

CHEM 1121, Introductory Chemistry II
CHEM 2612, Organic Chemistry I
CHEM 2622, Organic Chemistry II
CHEM 2633, Organic Chemistry Laboratory

Optical Biophysics Option

This program is designed for students wanting to obtain a strong biophysics emphasis that will also prepare them for the optometry program at UMSL. This 3+4 program allows students to complete their B.S. in physics and Doctor of Optometry degrees in seven years. Students can complete their B.S. in physics degree in their fourth year while starting coursework in the College of Optometry. A total of 55 hours in physics, biology, and optometry courses are required. In addition to the physics core curriculum, the following courses are required:

Physics

PHYSICS 4341, Thermal and Statistical Physics

Biology

BIOL 1811, Introduction to Biology I: From Molecules to Organisms
BIOL 1821, Introduction to Biology II: Organisms and the Environment
BIOL 2482, Microbiology
BIOL 2483, Microbiology Laboratory

Optometry (fourth year only)

OPTOM 8020, Geometric Optics

OPTOM 8060, Biochemistry
OPTOM 8120, Ocular Optics
OPTOM 8140, Physical Optics and Photometry

Also required are:

Chemistry

CHEM 1121, Introductory Chemistry II
CHEM 2612, Organic Chemistry I
CHEM 2622, Organic Chemistry II
CHEM 2633, Organic Chemistry Laboratory

Psychology

PSYCH 1003, General Psychology **and one elective** in psychology

Statistics,

MATH 1320, Applied Statistics I or **PSYCH 2201**, Psychological Statistics

Note: Upon declaring physics as a major and selecting this option, students should seek an initial interview with the Director of Student Services and the Pre-Optometry Advisor in the UMSL College of Optometry to ensure that all prerequisites for the College of Optometry will be completed. A similar review is recommended at the beginning of the Winter Semester of the second year. In August following the completion of their second year of this program, students may apply formally to the UMSL College of Optometry and arrange to take the Optometry Admissions Test (OAT) during the Fall semester of their third year. The applicant will be invited for a formal interview for acceptance into the College of Optometry professional program following receipt of a completed application in the Fall Semester of the candidate's third year. Following the formal interview with the College of Optometry at the beginning of the third year, students with a 3.0 or better grade point average in the science prerequisites for optometry and a score of 310 or better on the OAT exam may be accepted into the College of Optometry.

B.S. degree in Secondary Education with an Emphasis in Physics.

The course sequence below meets the science requirements for Missouri certification for teaching physics at the secondary school level. All candidates must enroll in a program that includes Levels I, II, and III coursework in the College of Education, which includes one semester as a Teacher Intern and one semester of full-time Student Teaching. In addition, students must complete the following Science Core Courses and the courses listed under Physics Endorsement:

Science Core Courses:

Philosophy

PHIL 3380, Philosophy of Science

BIOL 1811, Introductory Biology I: From Molecules to Organisms
BIOL 1821, Introductory Biology II: Organisms and the Environment
CHEM 1111, Introductory Chemistry I
CHEM 1121, Introductory Chemistry II
GEOL 1001, General Geology
ATM SCI 1001, Elementary Meteorology
BIOL 1202, Environmental Biology or another environmental science
PHYSICS 2111, Physics: Mechanics and Heat
PHYSICS 2112, Physics: Electricity, Magnetism, and Optics

Physics Endorsement

Physics

PHYSICS 3200, Mathematical Methods of Theoretical Physics
PHYSICS 3221, Mechanics
PHYSICS 3223, Electricity and Magnetism
PHYSICS 3231, Introduction to Modern Physics
PHYSICS 4310, Modern Electronics
PHYSICS 4311, Advanced Physics Laboratory I
PHYSICS 4802, or SEC ED 3240, Methods of Teaching Science in Secondary Schools
PHYSICS 4837, Teaching Intern Seminar

Minor in Physics

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
PHYSICS 2111, Mechanics and Heat

PHYSICS 2112, Electricity, Magnetism, and Optics
PHYSICS 3200, Mathematical Methods of Theoretical Physics
and two additional emphasis courses chosen from the following
PHYSICS 3221, Mechanics
PHYSICS 3223, Electricity and Magnetism
PHYSICS 3231, Introduction to Modern Physics I
PHYSICS 4310, Modern Electronics

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.

Graduate Studies

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.

Graduate Degree Requirements

Master's

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 (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. 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
Total: 6 hours

Second Semester

PHYSICS: 6000 level and 4000, 5000 level course
Total: 6 hours

Third Semester

PHYSICS: 6000 level and 4000, 5000 level course
PHYSICS 6490, Thesis Research or Seminar
Total: 9 hours

Fourth Semester

PHYSICS: 6000 level and 4000 level course
PHYSICS 6490 Thesis Research or Seminar
Total: 9 hours

Doctorate

Students must complete a minimum of 48 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.

Special Equipment, Facilities, or Programs

The **William L. Clay Center for Nanoscience**, which opened in 1996, is an interdisciplinary facility bringing together both physicists and chemists for research in materials science. A focus of the center is to foster collaborations between its members and colleagues in industry. The center houses the Microscope Image and Spectroscopy Tech Lab where research at the forefront of nanotechnology is conducted with transmission electron, scanning probe, and scanning electron microscopes in a building uniquely designed for such work. The center is spearheading the formation of the Missouri NanoAlliance, a nano-characterization and synthesis network that will facilitate the sharing of resources across Missouri. The Center for Neurodynamics, established in 1995, conducts research at the interface between physics and biology, with a focus on the roles of noise and stochastic synchronization in neural processing. The center has an on-site high speed (CCD) imaging system for studying the spatial dynamics of neural activity in the mammalian brain. Collaborations with St. Louis University will permit high time-resolution magnetoencephalography (MEG) image analysis, making use of a high-speed Internet 2 connection, UMSL's new high-speed (3.8 GHz) 128-node Beowulf cluster, and Missouri's first MEG machine. Astronomers make use of national facilities at Kitt Peak, Cerro Tololo, and Mauna Kea Observatories. The university provides email and internet services through numerous

student labs equipped with computers with Windows and Macintosh operating systems, flat-bed document scanners, and color printers. The department maintains a network of UNIX/LINUX/OSX system and workstations and a workstation for image processing. In addition, the department maintains a library containing some of the most frequently used physics journals and machine and electronics shops.

Career Outlook

Many of our students have been successful in subsequent graduate studies in astronomy and atmospheric science, biomedical engineering, medical physics, and patent law, as well as in physics. Our alumni have pursued graduate studies and earned doctorate degrees at institutions such as Cornell University, University of Wisconsin, Washington University, and University of Chicago. The many students who elected a career in industry are now working in a variety of settings for such firms as International Business Machines, Emerson Electric, MEMC Electronic Materials, Motorola, A T & T, Hewlett-Packard, Boeing, and the National Center for Atmospheric Research. Several former students are currently teaching physics in high schools around the St. Louis area.

Course Descriptions

Prerequisites may be waived by consent of the department. Courses in this section are grouped as follows: Astronomy; Atmospheric Science; Geology; and Physics.

Astronomy

ASTRON 1001 Cosmic Evolution/Introductory Astronomy (4) [MI, MS]

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. The format is three classroom hours and one 2-hour laboratory session per week to enhance lecture material.

ASTRON 1001A Cosmic Evolution/Introductory Astronomy (3) [MS]

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. The format is three classroom hours per week. Same as ASTRON 1001 without the laboratory.

ASTRON 1011 Planets and Life in the Universe (3) [MS]

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 classroom hours per week.

ASTRON 1012 The Violent Universe and the New Astronomy (3) [MS]

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 classroom hours and one observing session per week.

ASTRON 1050 Introduction to Astronomy I (3) [MS]

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) [MS]

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 1121 The Search for Extraterrestrial Life (3) [MS]

Prerequisite: ASTRON 1001 or 1011. Are we alone? The possibility of life in the universe in addition to our own will be explored. Our discussion of the chances for extraterrestrial life will be built around the current theories of chemical, biological, and cultural evolution, which have led to our own technological civilization on Earth. Strategies for communication with extraterrestrial intelligence will be discussed.

ASTRON 4301 Astrophysics (3)

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)

Prerequisites: 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.

Atmospheric Science

ATM SCI 1001 Elementary Meteorology (4) [MS, MI]

Prerequisite: MATH 1020 or equivalent. An elementary course covering atmospheric phenomena, weather, and climate. Topics included are temperature, pressure, and moisture distributions in the atmosphere and dynamical effects such as radiation, stability, storms, and general circulation. Four classroom hours per week with one hour being a learning enhancement session to include demonstrations and exercises on problem solving.

ATM SCI 1001A Elementary Meteorology (3) [MS]

Prerequisite: MATH 1020 or equivalent. An elementary course covering atmospheric phenomena, weather, and climate. Topics included are temperature, pressure, and moisture distributions in the atmosphere and dynamical effects such as radiation, stability, storms, and general circulation. Same as ATM SCI 1001 without the learning enhancement session.

Geology

GEOL 1001 General Geology (4) [MI, MS]

Earth materials and processes, including geological aspects of the resource/energy problem. Laboratory involves identification of common rocks and minerals.

GEOL 1001A General Geology (3) [MS]

Earth materials and processes, including geological aspects of the resource/energy problem. Same as GEOL 1001 without the laboratory.

GEOL 1002 Historical Geology (4) [MI, MS]

Prerequisite: GEOL 1001. Study of changes in geography, climate and life through geological time; origin of continents, ocean basins, and mountains in light of continental drift. Laboratory primarily involves description and identification of fossils.

GEOL 1002A Geology (3) [MS]

Study of changes in geography, climate and life through geological time; origin of continents, ocean basins, and mountains in light of continental drift. Same as GEOL 1002 without the laboratory.

GEOL 1053 Oceanography (3) [MS]

The atmospheric and ocean circulations; the chemistry and geology of the deep sea; and their effects on the distribution of marine organisms.

Physics

PHYSICS 1001 How Things Work (3) [MS]

Provides a practical introduction to understanding common life experiences by using physical intuition and basic ideas of physics. Powerful scientific principles are demonstrated through topics ranging from airplane wings to compact disk players, from lightning strikes to lasers.

PHYSICS 1011 Basic Physics I (4) [MI, MS]

Prerequisite: MATH 1800 or MATH 1100 (may be taken concurrently). A course specifically designed for students in health and life sciences, covering the topics of classical mechanics, heat and sound. Will not fulfill the PHYSICS 2111 requirement for physics, chemistry, and engineering majors. Three classroom hours and two hours of laboratory per week.

PHYSICS 1012 Basic Physics II (4) [MI, MS]

Prerequisite: PHYSICS 1011. A continuation of PHYSICS 1011. A course specifically designed for students in health and life sciences covering the topics of electricity, magnetism, light and radiation. Will not fulfill the PHYSICS 2112 requirement for physics, chemistry, and engineering majors. Three classroom hours and two hours of laboratory per week.

PHYSICS 1050 Introduction to Physics (4)

Prerequisite: MATH 1030. A laboratory survey course which introduces students to the fields of mechanics, heat and thermodynamics, optics, electricity and magnetism, and modern physics at the pre-calculus level. A problem-solving course, recommended for science and engineering students who have no physics background

or who desire additional preparation for PHYSICS 2111. Three classroom hours and two hours of laboratory per week.

PHYSICS 1099 Windows on Physics (1)

A seminar designed to introduce physics majors to research areas in physics and physics-related fields in the Department of Physics & 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 first-time freshmen or transfer students.

PHYSICS 2111 Physics: Mechanics and Heat (5) [MS, MI]

Prerequisite: MATH 1900 (may be taken concurrently). PHYSICS 1001, or CHEM 1121, or equivalent is recommended. An introduction to the phenomena, concepts, and laws of mechanics and heat for physics majors and students in other departments. Three classroom hours, one hour discussion, and two hours of laboratory per week.

PHYSICS 2112 Physics: Electricity, Magnetism, and Optics (5) [MI, MS]

Prerequisites: PHYSICS 2111 and MATH 2000 (MATH 2000 may be taken concurrently). 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 classroom hours, one hour discussion, and two hours of laboratory per week.

PHYSICS 3200 Mathematical Methods of Theoretical Physics (3)

Prerequisites: PHYSICS 2112 and MATH 2000. 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, and complex variables. Applications to electrostatics, mechanics, and fluid dynamics are emphasized. Three classroom hours per week.

PHYSICS 3221 Mechanics (3)

Prerequisites: PHYSICS 3200 and MATH 2020. MATH 2020 may be taken concurrently. Advanced course covering single and many particle dynamics, rigid-body dynamics, and oscillations. Variational principles and the Lagrangian and Hamiltonian formulations of mechanics are covered. Three classroom hours per week.

PHYSICS 3223 Electricity and Magnetism (3)

Prerequisites: PHYSICS 3200 and MATH 2020. MATH 2020 may be taken concurrently. 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 classroom hours per week.

PHYSICS 3231 Introduction to Modern Physics I (3)

Prerequisite: PHYSICS 2111, PHYSICS 2112, and MATH 2020 (may be taken concurrently), and PHYSICS 3200 strongly recommended. Photons and the wave nature of particles, wave mechanics, Schrödinger equation, with applications to atomic physics; and radiation; the physics of solids; elementary particles; special relativity; health physics. Three classroom hours per week.

PHYSICS 3281 Directed Readings in Physics (1-5)

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 from regular courses. Hours arranged.

PHYSICS 3390 Research (1-10)

Prerequisite: Consent of department. Independent research projects arranged between student and instructor. Hours arranged.

PHYSICS 4306 Nanoscience Practicals (1-3)

Prerequisite: Consent of Instructor (1.0 credit hour per module with a maximum of 3 credit hours) 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. 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 4308 Transmission Electron Microscopy (3)

Prerequisite: PHYSICS 4307 or consent of instructor. A lecture/laboratory study of transmission electron microscopy (TEM) in conventional, analytical, and phase-contrast (high resolution) applications. Course includes advanced electron optics and image formation, defect structures, specimen preparation, contrast theory, diffraction/periodicity analysis, and electron energy loss/x-ray spectroscopy. Two classroom hours and two hours laboratory per week.

PHYSICS 4309 Scanning Probe Microscopy (3)

Prerequisite: PHYSICS 4307 or consent of instructor. A lecture/laboratory study of research techniques using scanning probe microscopy. Topics include atomic force microscopy, scanning tunneling microscopy, feedback control, scanning tip fabrication, scan calibrations, air/solution/vacuum imaging, image processing and analysis, near-field optical probes, metrology, and lateral force/displacement microscopy. Applications in physics, chemistry, biology, engineering, and surface science are discussed. Two classroom hours and two hours laboratory per week.

PHYSICS 4310 Modern Electronics (3)

An integrated recitation/laboratory study of modern analog and digital electronics with emphasis on integrated circuits. Topics include circuit elements, operational amplifiers, logic gates, counters, adc/dac converters, noise reduction, microprocessors, embedded microcontrollers, and digital processing. Six hours of laboratory per week.

PHYSICS 4311 Advanced Physics Laboratory I (3)

Prerequisites: Advanced standing with at least nine completed hours of physics at or above the 3000 level. Physics majors are introduced 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)

Prerequisite: PHYSICS 3223. A study of modern optics including diffraction theory, polarization, light propagation in solids, quantum optics, and coherence. Three classroom hours per week.

PHYSICS 4331 Introduction to Quantum Mechanics (3)

Prerequisites: PHYSICS 3200 and PHYSICS 3231. Photons and the wave nature of particles; wave mechanics, the Schrodinger equation, operator and matrix formulations, and Dirac notation; applications to single particle systems, atomic physics, and spectroscopy. Three classroom hours per week.

PHYSICS 4335 Atomic and Nuclear Physics (3)

Prerequisite: PHYSICS 4331. Application of Schrödinger's equation to hydrogen-like atoms; atomic structure and spectra; nuclear masses, energy levels; alpha, beta, and gamma radiation, nuclear reactions, and models of the nucleus. Three classroom hours per week.

PHYSICS 4341 Thermal and Statistical Physics (3)

Prerequisites: MATH 2000 and PHYSICS 3231. Introduction to statistical mechanics, classical thermodynamics and kinetic theory. Three classroom hours per week.

PHYSICS 4343 Selected Topics in Physics I (3)

Prerequisites: PHYSICS 3221, PHYSICS 3223, PHYSICS 3231, and PHYSICS 4341. Topics include special phenomena from research areas such as scattering of waves, biophysics, nonlinear physics, geophysical fluid dynamics and the atmospheric sciences treated by methods of advanced mechanics, thermodynamics and quantum mechanics. Three classroom hours per week.

PHYSICS 4347 Biophysics of Imaging (4)

Prerequisites: PHYSICS 3231, BIOL 1811, BIOL 1821. An introduction to the application of physical principles to problems in medical physics and biology, with a particular focus on the biophysics of various technologies for imaging both human patients and biological macromolecules. Topics covered will include the principles of X-ray crystallography, metabolic and optical changes in the brain, NMR and fMRI, magnetoencephalography, PET imaging, the electrophysiology of EEG and ECG, dynamics in the body and brain, and dynamics in genetics. Laboratory projects on brain imaging and data analysis are an integral part of the course. Three classroom hours and two laboratory hours per week.

PHYSICS 4350 Computational Physics (3)

Prerequisite: CMP SCI 1250, plus PHYSICS 3221, PHYSICS 3223, and PHYSICS 3231. Computer analysis in physics; solutions of eigenvalue problems; coupled differential equations. Three classroom hours per week.

PHYSICS 4351 Elementary Solid State Physics (3)

Prerequisite: PHYSICS 4331. Theoretical and experimental aspects of solid state physics, including one-dimensional band theory of solids; electron emission from metals and semiconductors; electrical and thermal conductivity of solids. Three classroom hours per week.

PHYSICS 4353 Physics of Fluids (3)

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. Three classroom hours per week.

PHYSICS 4354 Atmospheric Physics (3)

Prerequisite: PHYSICS 4341 and 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. Three classroom hours per week.

PHYSICS 4356 Quantum Optics (3)

Prerequisites: PHYSICS 3200 and PHYSICS 3231, and Math 2020. Review of atomic theory and spectroscopy. Selected applications to modern optical phenomena such as optical pumping, lasers, masers, Mossbauer effect, and holography. Three classroom hours per week.

PHYSICS 4365 Introduction to Plasma Physics (3)

Prerequisite: PHYSICS 3223 and PHYSICS 4341. A study of the nonlinear collective interactions of ions, electrons, and neutral molecules with each other and with electric and magnetic fields. Topics include plasma confinement and stability, electrical discharges and ionization, kinetic theory of plasma transport, plasma waves and radiation, and controlled fusion. Solutions of the Boltzmann, Fokker-Planck, and Vlasov equations are discussed and methods of advanced electromagnetism and statistical physics are utilized. Three classroom hours per week.

PHYSICS 4370 Relativity and Cosmology (3)

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, Riemannian geometry and tensor analysis, Einstein Field Equation and cosmology. Three classroom hours per week.

PHYSICS 4381 Directed Readings in Physics (1-10)

Prerequisite: Consent of instructor. An independent study of special topics in physics for senior undergraduates or graduate students.

PHYSICS 4802 Curriculum and Methods of Teaching Physical Sciences (3)

Prerequisite: TCH ED 3310 and a near-major in the subject matter. 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. To be taken prior to student teaching. This course must be completed in residence.

PHYSICS 4837 Chemistry/Physics Teaching Intern Seminar (1)

Same as CHEM 4837. Prerequisite: CHEM 4802 or PHYSICS 4802. A seminar to accompany student teaching covering integration of physical science curricula and methods into the classroom setting. To be taken concurrently with Secondary Student Teaching, SEC ED 3290 One hour discussion per week.

PHYSICS 5307 Advanced Scanning Electron Microscopy (3)

Prerequisite: Consent of instructor. This course introduces students to advanced scanning electron microscopy techniques and their applications to solving challenging materials and biological problems. The course includes electron optics, electron-specimen interactions, image formation and interpretation, compositional analysis by energy dispersive X-ray spectroscopy, and sample preparation of both biological and non-biological systems. Laboratory experiments will provide students "hands-on" experience with SEM operations and problem-solving skills. Successful completion of the course enables students to independently operate scanning electron microscopes to perform research experiments. Two classroom hours and two hours of laboratory per week.

PHYSICS 5345 Nonlinear Dynamics and Stochastic Processes (3)

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 5357 Fundamental Particles and Forces (3)

Prerequisites: PHYSICS 3223, PHYSICS 3231 and PHYSICS 4331 (may be taken concurrently). Introduction to nuclear and particle physics. Nuclear phenomenology and models; high energy particle accelerators and detectors; phenomenology of strong, electromagnetic and weak interactions; symmetry principles; quark compositions of strongly interacting baryons and mesons; gauge theories and the standard model of particle interactions; grand unification. Three classroom hours per week.

PHYSICS 5402 Introduction to Mathematical Physics (3)

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 classroom hours per week.

PHYSICS 5403 Principles of Mathematical Physics (3)

Graduate standing in physics or consent of instructor. Boundary value problems; Sturm-Liouville theory and orthogonal functions; Green's function techniques; and introduction to group theory with emphasis on representations of Lie Algebras. Three classroom hours per week.

PHYSICS 6300 Master's Thesis (3)

Prerequisites: 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)

Prerequisites: Must have a faculty mentor and approval of the Department Chair. A study of special topics in physics for graduate students.

PHYSICS 6401 Special Topics (1-4)

Prerequisite: Consent of instructor. This course is designed to give the Department an opportunity to test a new course.

PHYSICS 6404 Experimental Research Techniques (3)

Prerequisite: Graduate standing. Experiments in various fields of physics designed to stress techniques and experimental approach.

PHYSICS 6405 Theoretical Physics I (3)

Prerequisites: PHYSICS 3221 and PHYSICS 3223 or equivalent. Newton's laws applied to simple systems, central force problem, variational principles. Lagrangian and Hamiltonian formulations, electrostatics. Maxwell field operations, wave propagation.

PHYSICS 6406 Theoretical Physics II (3)

Prerequisites: PHYSICS 3231, PHYSICS 4341, or equivalent, and PHYSICS 6405. Schroedinger equation and wave mechanical treatment of simple systems: perturbation theory; identical particles and spin. Laws of thermodynamics, canonical systems; thermodynamic potentials and Maxwell equations, open systems, and chemical potential. Clausius-Clapeyron equation.

PHYSICS 6407 Modern Physics (3)

Prerequisite: PHYSICS 4331. A study of some of the more important concepts of modern physics.

PHYSICS 6409 Theoretical Mechanics I (3)

Prerequisite: PHYSICS 3221. Classical mechanics, methods of Newton, Lagrange, and Hamilton, applied to motion of particles and rigid bodies, elasticity, and hydrodynamics.

PHYSICS 6410 Seminar (variable hours)

Prerequisite: Approval of department chair. Discussion of current topics.

PHYSICS 6411 Electrodynamics I (3)

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, and conservation laws.

PHYSICS 6413 Statistical Mechanics (3)

Prerequisites: PHYSICS 4331 and PHYSICS 4341. A study of statistical ensembles; Maxwell-Boltzmann, Fermi-Dirac, and Einstein-Bose distribution laws, application to some simple physical systems.

PHYSICS 6415 Theoretical Mechanics II (3)

Prerequisite: PHYSICS 6409. Transformation theory of mechanics, Lagrange and Poisson brackets, Hamilton-Jacobi theory, introduction to the classical theory of fields.

PHYSICS 6417 Advanced Statistical Mechanics (3)

Prerequisite: PHYSICS 6413. A continuation of PHYSICS 6413. Further applications as to such topics as the imperfect gas, condensation and the critical region, magnetism, liquid state, and transport phenomena.

PHYSICS 6423 Electrodynamics II (3)

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 multipoles. Relativity: covariant formulation of Maxwell's equations and conservation laws, fields of uniformly moving and accelerated charges.

PHYSICS 6425 Plasma Physics (3)

Prerequisites: PHYSICS 4341 and PHYSICS 6411. Fundamentals of kinetic theory, fluid equations, MHD equations, and applications; wave propagation, shielding effect, diffusion stability, and charged particle trajectories.

PHYSICS 6435 Cloud Physics (3)

Prerequisites: PHYSICS 3223 and PHYSICS 4341. A study of cloud microphysics and dynamics, atmospheric condensation and freezing nuclei, phase, precipitation mechanisms, aerosol scavenging, role of electrification, current dynamical models, and review of diagnostic techniques.

PHYSICS 6455 Theoretical Nuclear Physics (3)

Prerequisite: PHYSICS 6461. A study of the basic properties of nuclei, nuclear scattering and forces, nuclear reactions, and models.

PHYSICS 6461 Quantum Mechanics I (3)

Prerequisite: PHYSICS 4331. A study of the Schrödinger wave equation, operators and matrices, perturbation theory, collision, and scattering problems.

PHYSICS 6463 Quantum Mechanics II (3)

Prerequisite: PHYSICS 6461. Continuation of PHYSICS 6461 to include such topics as Pauli spin-operator theory, classification of atomic states, introduction to field quantization. Dirac electron theory.

PHYSICS 6465 Quantum Mechanics III (3)

Prerequisites: PHYSICS 6461 and PHYSICS 6463. Topics chosen from such fields as: relativistic quantum mechanics, potential scattering, formal collision theory, group theoretical methods in quantum mechanics, electrodynamics.

PHYSICS 6467 Quantum Statistical Mechanics (3)

Prerequisites: PHYSICS 6413 and PHYSICS 6463. Techniques for calculation of the partition function with examples drawn from interacting Fermi gas, interacting Bose gas, superconductors, and similar sources.

PHYSICS 6471 Atomic and Molecular Structure (3)

Prerequisite: PHYSICS 6461. Applications of quantum mechanics to the structure of atoms and molecules; perturbation and variational calculations, self-consistent fields, multiplets, angular momenta, Thomas-Fermi model, diatomic molecules, spectral intensities.

PHYSICS 6473 Atomic Collision Theory (3)

Prerequisite: PHYSICS 6471 or PHYSICS 6463. Basic quantum mechanical concepts involved in atomic scattering theory. Topics include: elastic and inelastic collisions of electrons and ions with neutral atoms and molecules; collisions between heavy particles; curve crossing; photo-processes; and Coulomb wave functions.

PHYSICS 6475 Molecular Spectroscopy (3)

Prerequisite: PHYSICS 6461. Introduction to classical and quantum treatment of the vibrational and rotational structure and spectra of diatomic, linear triatomic, and simple polyatomic molecules: vibrational-rotational interactions, point group symmetry in simple infrared spectra analysis, calculations of vibrational frequencies, and normal coordinates of polyatomic atoms.

PHYSICS 6481 Physics of the Solid State (3)

Prerequisite: PHYSICS 6461. Crystal symmetry, point and space groups, lattice vibrations, phonons, one-electron model, Hartree-Fock approximation, elementary energy band theory transport properties, the Boltzmann equation, introduction to superconductivity, semiconductors, and magnetism.

PHYSICS 6483 Selected Topics of the Solid State (3)

Prerequisite: PHYSICS 6481. Introduction to many-body perturbation theory, the use of Feynman diagrams. Green's functions, treatment of the electron-electron, phonon-phonon, and electron-phonon interactions, theory of magnetism, and theory of superconductivity

PHYSICS 6485 Advanced Quantum Mechanics (3)

Prerequisite: PHYSICS 6465. Selected topics such as many-body problems field theory, S matrix theory and symmetries.

PHYSICS 6490 Research (variable hours)

Prerequisites: 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 6493 Oral Examination

After completion of all other program requirements, oral examinations for on campus students may be processed during the first two weeks of an academic session or at any appropriate time for off-campus students upon enrollment in PHYSICS 6493 and payment of an oral examination fee. All other students must enroll for credit commensurate with uses made of facilities and/or faculties. In no case shall this be for less than three semester hours for resident students.

PHYSICS 6495 Continuous Registration

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. Billing will be automatic as will registration upon payment.

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Department of Political Science

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Faculty

G. Eduardo Silva, Professor, Chairperson
Ph.D., University of California-San Diego

David B. Robertson, Distinguished Teaching Professor
Ph.D., Indiana University

J. Martin Rochester, Distinguished Teaching Professor
Ph.D., Syracuse University

Todd Swanstrom, E. Desmond Lee Endowed Professor in Community Collaboration & Public Policy
Ph.D., Princeton University

Glen Hahn Cope, Professor, Provost and Vice Chancellor
Ph.D., Ohio State University

E. Terrence Jones, Professor
Ph.D., Georgetown University

Dennis R. Judd, Professor Emeritus
Ph.D., University of Illinois

Carol W. Kohfeld, Professor Emerita
Ph.D., Washington University

Joyce M. Mushaben, Professor
Ph.D., Indiana University

Lyman Tower Sargent, Professor Emeritus
Ph.D., University of Minnesota

J. Fred Springer, Professor Emeritus
Ph.D., University of California-Davis

Lana Stein, Professor Emerita
Ph.D., Michigan University

Brady Baybeck, Associate Professor, Director Public Policy Administration
Ph.D., Washington University

Andrew Glassberg, Associate Professor
Ph.D., Yale University

Joel N. Glassman, Associate Professor, Director, Center for International Studies, Associate Vice Provost for Academic Affairs
Ph.D., University of Michigan

Barbara L. Graham, Associate Professor, Graduate Director
Ph.D., Washington University

Jean-Germain Gros, Associate Professor
Ph.D., University of California-Berkeley

Ruth Iyob, Associate Professor
Ph.D., University of California-Santa Barbara

David C. Kimball, Associate Professor
Ph.D., Ohio State University

Nancy T. Kinney, Associate Professor
Ph.D., University of Colorado at Denver

Richard T. Middleton, IV, Associate Professor
Ph.D., University of Missouri-Columbia

Kenneth P. Thomas, Associate Professor
Ph.D., University of Chicago

Brian Fogarty, Assistant Professor
Ph.D., University of North Carolina at Chapel Hill

Farida Jalalzai, Assistant Professor
Ph.D., University of Buffalo

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' 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.

General Information

Degrees and Areas of Concentration

The political science department offers undergraduate work leading to the B.A. degree in political science, 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, and public policy.

Principal areas of concentration include urban politics, American political processes and behavior, international politics, comparative politics, public policy and administration, public law, and political theory. 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.

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. Financial assistance is available to full-time students.

Special Interdisciplinary Degree

The Department of Political Science also cooperates with the Department of Economics in the College of Arts and Sciences and the College of Business Administration in offering a master's degree in public policy administration (MPPA). For information on the MPPA degree program, see that section in this *Bulletin*.

Cooperative Programs

Political science students may also study overseas, or obtain a Certificate in International Studies, European Studies, African Studies, East Asian Studies, Latin American Studies, Women's & Gender Studies, or Writing, in conjunction with their political science major. See Certificate Programs in this *Bulletin* and consult with the Center for International Studies.

Research in political science is encouraged for students at all levels. Assistance is available at UMSL's Public Policy Research Centers, the Center for International Studies, and the Office of Computing. The department's membership in the Interuniversity Consortium for Political and Social Research provides access to a wide range of survey 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.

Undergraduate Studies

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 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.

Degree Requirements

Bachelor of Arts in Political Science

All majors must complete at least 36, but not more than 45, hours of political science. All students are required to take the following core curriculum:

Political Science

- POL SCI 1100**, Introduction to American Politics
- POL SCI 1500**, Introduction to Comparative Politics
- POL SCI 2000**, Political Analysis
- POL SCI 3950**, Senior Seminar in Political Science

Majors are urged to take POL SCI 1100, 1500, and 2000 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 3950 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).
- Political Theory** (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).
- Methodology** (chosen from among courses listed in bulletin at the 1000, 2000, or 3000 or 4000 level).

At least **18 hours** of political science course work must be at the 2000, 3000 or 4000 level, not including POL SCI 2000. 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.

Graduate School Preparation

This program is designed for students planning to pursue graduate studies in political science, particularly the Ph.D. degree, with the aim of a career as either an academic or practitioner (working as a researcher, policy analyst, or in some other capacity calling for advanced knowledge and skills). In addition to the core curriculum and common requirements for all political science majors, students are advised to (1) take as many political science courses at the 2000 and 3000 or 4000 level as possible in a variety of areas (public law, American politics, comparative and international politics, etc.), (2) complete a departmental honors project based on independent research and writing in POL SCI 3900, Special Readings, and (3) give special consideration to courses in normative political theory (such as POL SCI 2620, Modern Political Thought) and research methods (such as POL SCI 6401, Introduction to Policy Research, which is a graduate course open to undergraduates with Graduate School approval). Students are also encouraged to take course work outside the department in microeconomics, macroeconomics, and statistics.

Legal Studies

This is an ideal program of study for double majors in political science and criminal justice or for any student interested in law school and a career in the law. In addition to the core curriculum and common requirements for all political science majors, students are advised to take POL SCI 1200, Foundations of Law: An Introduction to Legal Studies, and at least four of the following political science courses:

- POL SCI 2260**, Law, Politics and Society
- POL SCI 2280**, Judicial Politics and Policy

POL SCI 2290, Gender and the Law
POL SCI 2650, American Political Thought
POL SCI 2900, Studies in Political Science (when appropriate)
POL SCI 3200, Constitutional Law
POL SCI 3210, Civil Liberties
POL SCI 3260, The Supreme Court
POL SCI 3290, Studies in Public Law
POL SCI 3900, Special Readings (when appropriate)
POL SCI 3940, Public Affairs Internship (when appropriate)
POL SCI 4850, International Law

Students are also advised to take political science course work that gives them a strong background in American political institutions and processes. Those students considering practicing law in the international arena should take course work in comparative and international politics. Political science course work may be supplemented by course work in criminal justice and criminology.

American Politics

Designed for those students interested in careers in communications, education, business, social work, political consulting, and other fields requiring knowledge of American urban, state, and national politics and institutions. Education majors planning to teach in the social studies field, communications majors planning on a career in journalism, or business majors thinking about working in corporate relations may especially wish to consider a double major in political science with a focus in this area. In addition to the core curriculum and common requirements for all majors, students are advised to take at least five of the following political science courses:

POL SCI 2280, Judicial Politics and Policy
POL SCI 2300, State Politics
POL SCI 2320, African Americans and the Political System
POL SCI 2350, Introduction to Urban Politics
POL SCI 2380, The Politics of Gender in the United States
POL SCI 2420, Introduction to Public Policy
POL SCI 2650, American Political Thought
POL SCI 2820, United States Foreign Policy
POL SCI 2900, Studies in Political Science (when appropriate)
POL SCI 3300, The American Presidency
POL SCI 3330, Introduction to Political Behavior
POL SCI 3331, Congressional Politics
POL SCI 3340, Politics and the Media
POL SCI 3350, Political Parties and Elections
POL SCI 3390, Studies in American Politics
POL SCI 3480, Environmental Politics
POL SCI 3900, Special Readings (when appropriate)
POL SCI 3940, Public Affairs Internship (when appropriate)

In addition, students may wish to choose other political science courses listed below under the public policy and administration program of study. Given the growing reality of international interdependence, students should not restrict their studies completely to American politics but should take some course work in comparative and international politics as well. Depending on their specific career interest, students may wish to round out their program with course work in other social science departments such as criminal justice, communications, economics, or social work.

Public Policy and Administration

Designed for students interested in working inside or outside government, in a career requiring familiarity with how public policies are formulated and implemented. (Students alternatively may wish to consider the B.S. in public policy and administration degree offered by the political science department.) In addition to the core curriculum and common requirements for all majors, students are advised to take POL SCI 2420, Introduction to Public Policy, and at least four of the following political science courses:

POL SCI 2400, Public Administration
POL SCI 2820, United States Foreign Policy
POL SCI 2900, Studies in Political Science (when appropriate)
POL SCI 3420, Public Personnel Management
POL SCI 3439, Studies in Policy Formation
POL SCI 3440, Public Budgeting
POL SCI 3450, Urban Administration
POL SCI 3460, The Politics of Poverty and Welfare
POL SCI 3480, Environmental Politics
POL SCI 3570, Gender, Race, and Public Policy
POL SCI 3900, Special Readings (when appropriate)

- POL SCI 3940**, Public Affairs Internship (when appropriate)
- POL SCI 4460**, Urban Planning and Politics
- POL SCI 4510**, Comparative Public Policy and Administration
- POL SCI 4940**, Leadership and Management in Nonprofit Organizations

Depending on career interests, students should add course work in American, comparative, or international politics. Students are encouraged to develop a policy concentration in a particular policy area, such as urban, labor, health, education, and business studies, with multidisciplinary course work taken in political science and other departments.

International and Comparative Studies

Designed for students interested in international careers in government service (not only the U.S. State Department but also other federal government agencies), intergovernmental and non-governmental organizations, business, education, and other areas of employment. In addition to the core curriculum and common requirements for all political science majors, students are advised to take POL SCI 1800, World Politics, or POL SCI 2500, Comparing Different Worlds, and at least four of the following political science courses (some of which are international politics courses that focus on conflict and cooperation between countries, and some of which are comparative politics courses that focus on political, economic, and social change within countries):

- POL SCI 1600**, Contemporary Political Ideologies
- POL SCI 1820**, Global Issues
- POL SCI 2510**, The Politics of European Union
- POL SCI 2520**, Middle Eastern Politics
- POL SCI 2530**, Political Systems of South America
- POL SCI 2540**, Political Systems of Mexico, Central America, and the Caribbean
- POL SCI 2550**, East Asian Politics
- POL SCI 2560**, Russia and the New Republics
- POL SCI 2580**, African Politics
- POL SCI 2820**, United States Foreign Policy
- POL SCI 2900**, Studies in Political Science (when appropriate)
- POL SCI 3570**, Gender, Race, and Public Policy
- POL SCI 3595**, Studies in Comparative Politics
- POL SCI 3690**, The Marxist Heritage
- POL SCI 3830**, International Political Economy
- POL SCI 3850**, International Organizations and Global Problem Solving
- POL SCI 3860**, Studies in War and Peace
- POL SCI 3890**, Studies in International Relations
- POL SCI 3900**, Special Readings (when appropriate)
- POL SCI 3940**, Public Affairs Internship (when appropriate)
- POL SCI 4510**, Comparative Public Policy and Administration
- POL SCI 4850**, International Law

Students interested in working for the U.S. Foreign Service, American-based multinational companies, and nonprofit organizations should also take course work that familiarizes them with the American political system and how public policy is made. Students should explore the various interdisciplinary area studies and international studies certificate programs offered through the Center for International Studies.

Bachelor of Science in Public Policy and Administration

The BSPA degree has three emphasis areas. The first is a public administration track, 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 track 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 third emphasis 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.

All BSPA majors must complete at least 33, but no more than 45, hours in political science. The following core curriculum is required of all BSPA majors:

Political Science

- POL SCI 1100**, Introduction to American Politics
- POL SCI 1500**, Introduction to Comparative Politics
- POL SCI 2000**, Political Analysis
- POL SCI 2400**, Public Administration
- POL SCI 2420**, Introduction to Public Policy
- POL SCI 3940**, Public Affairs Internship
- POL SCI 3950**, Senior Seminar in Political Science
- ECON 1001**, Principles of Microeconomics
- ECON 1002**, Principles of Macroeconomics

CRIMIN 2220, Statistical Analysis in Criminology and Criminal Justice or
SOC 3220, Sociological Statistics or
ECON 3100, Economic Statistics

In addition, students must provide a demonstration of computer proficiency through one of the following:
BUS AD 1800, Computers and Information Systems, extension courses, or other study approved by the BSPA coordinator.

BSPA 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, 1500, 2400, 2000, 2420, 3940, and 3950.

Public Administration Emphasis Area

In addition to the core curriculum requirements for all BSPA majors, students in the public administration emphasis area are required to complete the following courses:

POL SCI 3420, Public Personnel Management

POL SCI 3440, Public Budgeting

BUS AD 2400, Fundamentals of Financial Accounting

Students in the public administration emphasis area also must take two of the political science courses listed under policy and institutions courses below, as well as take at least two additional elective courses chosen from among that list or any other political science offerings.

Public Policy Emphasis Area

In addition to the core curriculum requirements for all BSPA majors, students in the public policy emphasis area must take four political science courses, preferably selected from the policy and institutions courses listed below but which may include other political science course offerings as well.

Policy and Institutions Courses:

POL SCI 1450, Introduction to Labor Studies

POL SCI 2280, Judicial Politics and Policy

POL SCI 2300, State Politics

POL SCI 2350, Introduction to Urban Politics

POL SCI 3300, The American Presidency

POL SCI 3331, Congressional Politics

POL SCI 3430, Union Leadership and Administration

POL SCI 3439, Studies in Policy Formation

POL SCI 3450, Urban Administration

POL SCI 3460, The Politics of Poverty and Welfare

POL SCI 3480, Environmental Politics

POL SCI 4460, Urban Planning and Politics

POL SCI 4510, Comparative Public Policy and Administration

POL SCI 4940, Leadership and Management in Nonprofit Organizations

Students will adopt a policy concentration of at least 15 credit hours. 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 BSPA coordinator, will select courses from related disciplines in addition to taking two more political science courses related to the policy area.

Nonprofit Emphasis Area

In addition to the core curriculum requirements for all BSPA majors, students in the nonprofit emphasis area are required to complete the following courses (9 credit hours):

POL SCI 4911, Management Issues in Nonprofit Organizations: Staff Management Issues (1 credit hour)

POL SCI 4912, Management Issues in Nonprofit Organizations: Legal Issues in Governing and Managing Nonprofit Organizations (1 credit hour)

POL SCI 4913, Management Issues in Nonprofit Organizations: Financial Issues (1 credit hour)

POL SCI 4940, The Management and Leadership of Nonprofit Organizations

POL SCI 4960, American Philanthropy and Nonprofit Resources Development

Students in the nonprofit emphasis area also must take four political science courses from the list below.

POL SCI 2320, African Americans and the Political System

POL SCI 2350, Introduction to Urban Politics

POL SCI 3350, Political Parties and Elections

POL SCI 3420, Public Personnel Management*

POL SCI 3430, Union Leadership and Administration

POL SCI 3440, Public Budgeting*

POL SCI 3450, Urban Administration

POL SCI 3460, The Politics of Poverty and Welfare

POL SCI 3480, Environmental Politics
POL SCI 4510, Comparative Public Policy and Administration

With the permission of an advisor, students may also choose from relevant special topic courses frequently offered as Studies in Political Science (2900)

Students who complete the required 9 credit hours for the Nonprofit Emphasis, as well as an additional three selected courses (two are marked with an asterisk*, above), are eligible to earn the Undergraduate Certificate in Nonprofit Management and Leadership. Further details about earning the certificate are available at the [program's webpage](#).

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.

Requirements for the 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 Political Science, General

Fifteen hours, chosen from among all political science courses.

Minor in American Politics

Fifteen hours, chosen from the following political science courses:

POL SCI 1100, Introduction to American Politics
POL SCI 2280, Judicial Politics and Policy
POL SCI 2300, State Politics
POL SCI 2320, African Americans and the Political System
POL SCI 2350, Introduction to Urban Politics
POL SCI 2380, Politics of Gender in the United States
POL SCI 2420, Introduction to Public Policy
POL SCI 2650, American Political Thought
POL SCI 2820, United States Foreign Policy
POL SCI 3260, The Supreme Court
POL SCI 3300, The American Presidency
POL SCI 3331, Congressional Politics
POL SCI 3330, Introduction to Political Behavior
POL SCI 3340, Politics and the Media
POL SCI 3350, Political Parties and Elections
POL SCI 3390, Studies in American Politics
POL SCI 3900, Special Readings (when appropriate)
POL SCI 3940, Public Affairs Internship (when appropriate)

Minor in Comparative Politics

POL SCI 1500, Introduction to Comparative Politics, plus 12 hours from the following political science courses:

POL SCI 2500, Comparing Different Worlds
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 2550, East Asian Politics
POL SCI 2560, Russia and the New Republics
POL SCI 2580, African Politics
POL SCI 3570, Gender, Race, and Public Policy
POL SCI 3595, Studies in Comparative Politics
POL SCI 3900, Special Readings (when appropriate)
POL SCI 4510, Comparative Public Policy Administration

Minor in International Relations

Fifteen hours, chosen from the following political science courses:

POL SCI 1800, World Politics
POL SCI 1820, Global Issues
POL SCI 1850, Global Ecology
POL SCI 2520, Middle Eastern Politics
POL SCI 2820, United States Foreign Policy

POL SCI 3830, International Political Economy
POL SCI 3850, International Organizations and Global Problem-Solving
POL SCI 3860, Studies in War and Peace
POL SCI 3890, Studies in International Relations
POL SCI 3900, Special Readings (when appropriate)
POL SCI 3940, Public Affairs Internship (when appropriate)
POL SCI 4850, International Law

Minor in Political Theory

Fifteen hours, chosen from the following political science courses:

POL SCI 1600, Contemporary Political Ideologies
POL SCI 2610, Ancient and Medieval Political Thought
POL SCI 2620, Modern Political Thought
POL SCI 2650, American Political Thought
POL SCI 3680, Feminist Political Theory
POL SCI 3690, The Marxist Heritage
POL SCI 3695, Studies in Political Theory
POL SCI 3900, Special Readings (when appropriate)

Minor in Public Administration

POL SCI 2400, Public Administration, plus 12 hours chosen from the following political science courses:

POL SCI 2420, Introduction to Public Policy
POL SCI 3420, Public Personnel Management
POL SCI 3439, Studies in Policy Formation
POL SCI 3440, Public Budgeting
POL SCI 3450, Urban Administration
POL SCI 3900, Special Readings (when appropriate)
POL SCI 3940, Public Affairs Internship (when appropriate)
POL SCI 4460, Urban Planning and Politics
POL SCI 4510, Comparative Public Policy and Administration

Minor in Public Law

Fifteen hours, chosen from the following political science courses:

POL SCI 1200, Foundations of Law: An Introduction to Legal Studies
POL SCI 2260, Law, Politics and Society
POL SCI 2280, Judicial Politics and Policy
POL SCI 2290, Gender and the Law
POL SCI 3200, Constitutional Law
POL SCI 3210, Civil Liberties
POL SCI 3260, The Supreme Court
POL SCI 3290, Studies in Public Law
POL SCI 3900, Special Readings (when appropriate)
POL SCI 4850, International Law

Minor in Public Policy

POL SCI 2420, Introduction to Public Policy, plus 12 hours chosen from the following political science courses:

POL SCI 2300, State Politics
POL SCI 2350, Introduction to Urban Politics
POL SCI 2400, Public Administration
POL SCI 3300, The American Presidency
POL SCI 3440, Public Budgeting
POL SCI 3450, Urban Administration
POL SCI 3460, The Politics of Poverty and Welfare
POL SCI 3480, Environmental Politics
POL SCI 3570, Gender, Race, and Public Policy
POL SCI 3900, Special Readings (when appropriate)
POL SCI 3940, Public Affairs Internship (when appropriate)
POL SCI 4460, Urban Planning and Politics
POL SCI 4510, Comparative Public Policy and Administration

Minor in Urban Politics

POL SCI 2350, Introduction to Urban Politics, plus 12 hours chosen from the following political science courses:

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 3900, Special Readings (when appropriate)
POL SCI 3940, Public Affairs Internship (when appropriate)
POL SCI 4460, Urban Planning and Politics

Minor in Women and Politics

POL SCI 1550, Women and Politics in the Developing World and 12 hours from among the following political science courses:

POL SCI 2290, Gender and the Law

POL SCI 2380, The Politics of Gender in the United States

POL SCI 3439, Studies in Policy Formation (consent of instructor required)

POL SCI 3460, The Politics of Poverty and Welfare

POL SCI 3570, Gender, Race, and Public Policy (Comparative)

POL SCI 3590, Politics, Leadership and the Global Gender Gap

POL SCI 3680, Feminist Political Theory

POL SCI 3900, Special Readings (consent of instructor required)

POL SCI 4940, Leadership and Management in Nonprofit Organizations (consent of instructor)

Bachelor of Arts with Teacher Certification

For information, refer to the College of Education section in this *Bulletin*.

Bachelor of Science in Education: Emphasis in Social Studies

The Political Science requirements are the same as for the B.A. degree except students fulfill the College of Education general education requirements rather than those of the College of Arts and Sciences. For information, refer to the College of Education section in this *Bulletin*.

Graduate Studies

2+3 B.A. and M.A. in Political Science

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 fulltime 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 three 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

1. Students must take

POL SCI 1100, Introduction to American Politics

POL SCI 1500, Introduction to Comparative Politics

2. PLUS two of the following:

POL SCI 1600, Contemporary Political Theory

POL SCI 1800, World Politics

POL SCI 2300, State Politics

POL SCI 2350, Introduction to Urban Politics

POL SCI 2400, Introduction to Public Administration

POL SCI 2650, American Political Thought

B. Undergraduate Requirements Within the 2+3 Program

1. Two of the following:

POL SCI 2280, Judicial Politics and Policy

POL SCI 2620, Modern Political Thought

POL SCI 3200, Constitutional Law

POL SCI 3210, Civil Liberties

POL SCI 3300, The American Presidency

POL SCI 3331, Congressional Politics

POL SCI 3350, Political Parties and Elections

POL SCI 3470, Gender, Race and Public Policy
POL SCI 3480, Environmental Politics

2. PLUS two of the following:

POL SCI 2510, The Politics of European Union
POL SCI 2520, Middle Eastern Politics
POL SCI 2530, Political Systems of South America
POL SCI 2540, Political Systems of Mexico, Central American & the Caribbean
POL SCI 2580, African Politics
POL SCI 3690, The Marxist Heritage (PHIL 3369; INTDSC 3690)
POL SCI 3830, International Political Economy
POL SCI 3850, International Organizations and Global Problem Solving
POL SCI 4850, International Law

3. Plus one additional course from B-1 or B-2

C. Graduate Requirements

1. POL SCI 6401, Introduction to Policy Research (3 credits)

2. PLUS 3 of the following (9 credits):

POL SCI 6420, Proseminar in Public Law
POL SCI 6430, Proseminar in American Politics
POL SCI 6440, Proseminar in Public Policy Administration
POL SCI 6450, Proseminar in Comparative Politics
POL SCI 6470, Proseminar in Urban Politics
POL SCI 6480, Proseminar in International Relations

3. PLUS 5 additional graduate Political Science classes (**15 credits**).

Students should select an emphasis in American Politics, Public Policy, Comparative Politics, Political Theory, or International Relations.

4. PLUS Exit Project or Internship or Thesis (6 credits)

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

Master of Arts in Political Science

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. The GRE is required, and scores should be submitted at the time of application. 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
and three of the following political science courses:
POL SCI 6410, Introduction to Policy Analysis
POL SCI 6420, Proseminar in Public Law
POL SCI 6430, Proseminar in American Politics
POL SCI 6440, Proseminar in Public Policy Administration
POL SCI 6450, Proseminar in Comparative Politics
POL SCI 6470, Proseminar in Urban Politics
POL SCI 6480, Proseminar in International Relations

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.

Ph.D. in Political Science

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 a) complete academic transcripts, b) three letters of recommendation, c) aptitude tests of the GRE and d) 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 intermediate economics 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.

Career Outlook

Bachelor of Arts, Bachelor of Science, and Master of Arts in Political Science

Political science graduates have done well in obtaining appropriate employment and in pursuing graduate education. Majors develop communications and decision-making skills, learn to analyze complex policy issues, both domestic and international in scope, and have a thorough understanding of government and politics. Political science is a particularly good undergraduate major for pre-law students. Many other majors pursue

graduate education in business, education, public administration, public policy administration, journalism, public relations, non-profit organizations, and many other fields.

Ph.D. in Political Science

The Ph.D. in political science prepares students for three career areas: 1) government leadership and management positions at the local, state, and federal levels (both for new employees and in-service employees); 2) careers in the private sector, particularly positions in public affairs, policy research, and governmental relations departments of corporations, as well as consulting firms and nonprofit organizations; and 3) research and teaching careers in academic institutions.

Requests for further information about the M.A. or Ph.D. program should be sent to the Director of Graduate Studies, Department of Political Science, University of Missouri-St. Louis, One University Blvd, 347 SSB, St. Louis, MO 63121-4499 or by e-mail: umslpolisci@umsl.edu.

Learning Outcomes

Majors in the BA learn about power, conflict and cooperation in society, within and outside government.

Students understand the fundamentals of scientific-based inquiry, the postulating of cause-effect relationships, and the marshalling of evidence using quantitative or qualitative methods to draw conclusions about problems in politics.

We train students to communicate information effectively.

The BSPPA program provides knowledge and skills for real world application in the context of American institutions and structures.

Students learn the fundamentals of administration and policymaking in the United States by acquiring skills in budgeting, personnel management, accounting, and expertise in a specific policy area.

The M.A. in political science provides a firm grounding in scientific-based inquiry into problems in politics.

Students learn how institutional design and economic and cultural factors shape the distribution of power and patterns of cooperation and conflict in society within and outside of government.

Students master the postulating of cause-effect relationships, and the marshalling of evidence using quantitative or qualitative methods to test hypotheses about problems in politics.

The Ph.D. in political science trains students to become independent researchers who may apply their skills in the academic, government, non-profit, and business worlds.

Students master the skills to frame researchable questions that make original contributions to empirical and theoretical knowledge about problems in politics.

Students learn to rigorously specify cause-effect relationships, and to master techniques for marshalling evidence using quantitative and qualitative methods to test competing hypotheses about problems in politics.

Course Descriptions

POL SCI 1100 Introduction to American Politics (3) [V, SS, ST]

Introduction to basic concepts of government and politics with special reference to the United States, but including comparative material from other systems.

POL SCI 1200 Foundations of Law: An Introduction to Legal Studies (3) [MI, V, SS]

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 1450 Introduction to Labor Studies (3) [MI, SS]

This course covers many topics important to the role of unions in the American political system and American society from a labor perspective. institutional structure, collective bargaining strategies Topics include the role of workers in current and future times, unions' and obstacles for union organizing, recent union campaigns, labor's political role, and the relationship between labor and the media.

POL SCI 1500 Introduction to Comparative Politics (3) [MI, V, SS, CD]

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.

POL SCI 1550 Women and Politics in the Developing World (3) [MI, V, SS, CD]

Women play a central role in the transformation of political, economic, cultural and gender relations in developing nations. This course examines the political role of women in these transformations. In particular, the course examines ways that modernity, universal education, the market economy and globalization have widened the scope of women's public activities; the emergence of social movements driven by the transformation of economic and political roles brought about by the inclusion of women in the political arena; the re-interpretation of religious doctrines, especially those that emphasize women's "return" to the private sphere and legitimate the denial of women's political rights.

POL SCI 1600 Contemporary Political Ideologies (3)

An introduction to the major political ideologies of the world today. Emphasis is placed on democracy, feminism, Marxism, and nationalism.

POL SCI 1800 World Politics (3) [V, SS]

An introduction to the field of international relations, covering such topics as nationalism, power, foreign policy-making, diplomacy, war, arms control and disarmament, interdependence, the regulation of conflict, and other aspects of politics among nations.

POL SCI 1820 Global Issues (3) [MI, SS]

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 1990 The City (3) [MI, V, SS]

Same as SOC 1999 and INTDSC 1990. An interdisciplinary course. Consideration of economic factors, urban institutions, historical developments in urbanization, problems of the inner city, suburbia and the metropolitan area, ethnic groups, stratification, and Psychological implications of urban living. This course is primarily for freshmen and sophomores. It is open to juniors and seniors with the instructor's permission.

POL SCI 2000 Political Analysis (3)

An introduction to political analysis, emphasizing both the logic of inquiry and practical methods. Students learn about the construction and evaluation of theories that relate to real-world politics. They 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 2260 Law, Politics and Society (3)

Prerequisites: POL SCI 1100, or POL SCI 1200, or consent of instructor. An examination of the formal and informal aspects and processes of the American judicial system and its effect on the individual. The course will cover criminal and civil law, public and private law, state and federal courts, and the processes by which disputes are transformed into legal actions. Topics include judicial selection and recruitment, plea-bargaining, the impact and implementation of judicial decisions, the examination of a number of substantive areas of law like contracts and torts, and the role of courts in policymaking and dispute resolution.

POL SCI 2280 Judicial Politics and Policy (3) [ST]

Prerequisite: POL SCI 1100 or 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 function 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.

POL SCI 2290 Gender and the Law (3) [ST]

Legal position of women in the United States, emphasizing constitutional law, criminal law, domestic relations, and fair employment practice laws. Same as WGST 2290. This course examines the ways in which laws and interpretations of laws affect gender equality in the United States. Emphasizing how traditional roles impact both women and men historically and currently, the course highlights major pieces of legislation and court rulings related to employment, economics, education, sexual harassment, pornography, rape, reproductive rights, and domestic relations. The course stresses the impact of federal and state institutions and non-governmental influences on equality. It also addresses gender representation in the legal profession and its effect on judicial decisions. (This course satisfies State requirements in American History and Government)

POL SCI 2300 State Politics (3) [ST]

Prerequisite: POL SCI 1100 or consent of instructor. An examination of contemporary state politics in the United States; social, economic, and political determinants of policies; federal-state-local relations; elections, interest groups, and participation; executive, legislative, and judicial institutions and policies, and their impact.

POL SCI 2320 African Americans and the Political System (3) [ST]

Prerequisite: POL SCI 1100 or consent of instructor. Examination of the status of African Americans in the

context of the American political system. The course will focus on a number of issues, including: 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.

POL SCI 2350 Introduction to Urban Politics (3) [ST]

Prerequisite: POL SCI 1100 or consent of instructor. Examination of structure and process of politics in the urban community, with emphasis on their relationships to community power structures.

POL SCI 2380 The Politics of Gender in the United States (3) [ST]

Same as WGST 2380. Prerequisite: POL SCI 1100 or consent of instructor. This course examines the role of gender in political institutions, practices and policy in the United States, past and present. It focuses on various movements 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. (This course satisfies State requirements in American History and Government.)

POL SCI 2400 Public Administration (3) [ST]

Prerequisite: POL SCI 1100 or consent of instructor. Survey of public administration, with reference to organization, financial administration, personnel management, and judicial control of the administrative process.

POL SCI 2420 Introduction to Public Policy (3) [ST]

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 2500 Comparing Different Worlds (3)

This course focuses on the role of political institutions, economic structures and social groups in explaining differences in forms of government and levels of socioeconomic 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)

Prerequisite: POL SCI 1500 or consent of instructor. 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 2520 Middle Eastern Politics (3) [CD]

Prerequisite: POL SCI 1100, or 1500, or consent of instructor. Survey of political movements, governments, and international conflicts in the Middle East. Islam, nationalism, ideologies, and economic systems will be studied. The effects of oil and the military will also be considered.

POL SCI 2530 Political Systems of South America (3) [CD]

Prerequisite: 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.

POL SCI 2540 Political Systems of Mexico, Central America, and the Caribbean (3) [CD]

Prerequisite: 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.

POL SCI 2550 East Asian Politics (3) [CD]

An introduction to the study of the Chinese and Japanese political systems. Examination of the cultural context that has shaped the path of political development for both states.

POL SCI 2560 Russia and the New Republics (3)

Prerequisite: POL SCI 1500 or consent of instructor. Examination of political-economic conditions responsible for the creation, collapse, and reconstruction of the former Soviet Union, with emphasis on new elites and interest groups, problems of democratic transition, ethnic conflict and socio-economic reform.

POL SCI 2580 African Politics (3) [CD]

Prerequisite: POL SCI 1500 or consent of instructor. An introduction to the nature of societies, governments, and international relations in Africa. The course 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.

POL SCI 2610 Ancient and Medieval Political Thought (3)

Study of political thought from Plato to Machiavelli.

POL SCI 2620 Modern Political Thought (3)

Study of political thought from Machiavelli to the present.

POL SCI 2650 American Political Thought (3)

History of political thought in the United States from colonial times to the present.

POL SCI 2820 United States Foreign Policy (3)

Prerequisite: POL SCI 1100, or 1500, or consent of instructor. Examination of the factors influencing the formation and the execution of United States foreign policy, with a focus on specific contemporary foreign policy issues.

POL SCI 2900 Studies in Political Science (3)

Selected topics in political science.

POL SCI 3200 Constitutional Law (3) [ST]

Prerequisite: POL SCI 1100, or 1200, or consent of instructor. Study of leading American constitutional principles regarding legislative, executive, and judicial power, federalism, the commerce clause, and economic due process as they have evolved through the important decisions of the U.S. Supreme Court.

POL SCI 3210 Civil Liberties (3) [ST]

Prerequisite: POL SCI 1100, or 1200, or 3200, or consent of instructor. Civil rights in the American constitutional context, emphasizing freedom of religion, freedom of expression, minority discrimination, and the rights of defendants.

POL SCI 3220 Labor Law (3)

Prerequisite: Consent of instructor. In this course, participants will examine the role of government in the regulation of labor-management relations in the United States. While the focus of the course will be on federal laws regulating private sector labor relations, parallel issues addressed in the Railway Labor Act and state public sector labor relations law will also be covered. Specific topics include the legal framework for the organization of workers, definition of prohibited or unfair labor practices of employers and unions, legal regulation of the collective bargaining process, regulation of the use of economic weapons in labor disputes, enforcement of collective bargaining agreements and the regulation of internal trade union activities.

POL SCI 3260 The Supreme Court (3) [ST]

Prerequisite: POL SCI 1100, or POL SCI 1200, or consent of instructor. An examination of the role, function and assertion of power by the U.S. Supreme Court in our constitutional democracy. Topics include 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. This course fulfills the state requirement.

POL SCI 3290 Studies in Public Law (3)

Prerequisite: POL SCI 1100, or 1200, or consent of instructor. Selected topics in public law. May be repeated.

POL SCI 3300 The American Presidency (3) [ST]

Prerequisite: POL SCI 1100 or consent of instructor. Study of the constitutional, political, legislative, and administrative roles played by the American chief executive in the development of public policy.

POL SCI 3330 Introduction to Political Behavior (3) [ST]

Prerequisite: POL SCI 1100 or consent of instructor. An introduction to political behavior employing perspectives from both political psychology and political sociology. Subjects include political socialization, the character of public opinion, citizen participation, group dynamics, the social determination of reality, and the underlying bases of leadership and authority.

POL SCI 3331 Congressional Politics (3) [ST]

Prerequisite: POL SCI 1100 or consent of instructor. An examination of the Congress of the United States, its history and evolution, its contemporary politics, and its role in the national policy-making process. Topics 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 role of Congress in foreign policy, economic policy, and social-welfare policy will be examined.

POL SCI 3340 Politics and the Media (3)

Prerequisite: POL SCI 1100 or consent of instructor. An analysis of the role the media play in shaping American political life. The first part of the course examines the organizational structures, the economic and psychic incentives, and the social and professional norms that define how television and newspapers report news about public affairs. The second part then considers the nature of a mass-communications society by looking at how reality is defined, the susceptibility of mass publics to persuasion and propaganda, the peculiar form of media election campaigns, and the manner in which the media link changes the basic character of a citizenry.

POL SCI 3350 Political Parties and Elections (3) [ST]

Prerequisite: POL SCI 1100 or consent of instructor. An examination of the part played by parties and elections in American politics. Topics include the historical development of the party system, the organization and management of political parties and campaigns, contemporary changes in the nature of electoral politics, and the effects of elections on public policy.

POL SCI 3390 Studies in American Politics (3)

Prerequisite: POL SCI 1100 or consent of instructor. Selected topics in American politics. May be repeated.

POL SCI 3420 Public Personnel Management (3)

Prerequisite: POL SCI 1100, or 2400, or consent of instructor. A study of personnel practices in the public sector, including recruitment, job development, labor relations, and administration of equal employment/affirmative action programs.

POL SCI 3430 Union Leadership and Administration (3)

Prerequisite: Consent of instructor. This course will focus on the roles and challenges of union leadership in a changing environment. Topics will include the union leader's roles as representative, organizer and educator as well as administrative responsibilities within the union and the relationship with enterprise management in both adversarial and participatory situations. Options for leadership style and organizational models will be discussed and explored in both theory and practice. Leaders will develop their skills of motivation, speaking, strategic planning and managing complex campaigns and diverse organizations.

POL SCI 3439 Studies in Policy Formation (3)

Prerequisite: Consent of instructor. Selected topics in policy formation. May be repeated.

POL SCI 3440 Public Budgeting (3)

Prerequisite: POL SCI 1100 or consent of instructor. Budgeting is the study of "who gets what" and who pays for it. This course examines the administration and politics of federal, state, and local government budgets. Students gain experience in interpreting budget documents and making budget choices, using electronic and other resources.

POL SCI 3450 Urban Administration (3) [ST]

Prerequisite: 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)

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 Collective Bargaining (3)

Prerequisite: Consent of instructor. This course involves a study of collective bargaining processes including contract negotiations, contract administration, and methods for the resolution of bargaining disputes. Both theoretical and applied issues in collective bargaining will be addressed. Specific topics include the economic determination of bargaining power, legal constraints on the bargaining process, negotiations strategies and techniques, and the use of mediation and arbitration in the resolution of bargaining disputes.

POL SCI 3480 Environmental Politics (3)

Prerequisite: POL SCI 1100 or consent of instructor. This course examines the process of environmental policy-making and key environmental issues. Topics include national and international policies toward air and water pollution, energy use, solid and toxic waste disposal, global warming, overpopulation, and wilderness and wildlife conservation.

POL SCI 3490 Studies in Public Administration (3)

Prerequisite: POL SCI 1100 or 2400, or consent of instructor. Selected topics in public administration. May be repeated.

POL SCI 3570 Gender, Race and Public Policy (3)

Prerequisite: POL SCI 1100, or 1500, or consent of instructor. Raises the question as to whether "more women in politics," stemming from diverse economic, racial, ethnic backgrounds and age groups, will necessarily result in better policies for women and men. Compares gendered and racialized impacts of a wide array of public policies (in the areas of education, employment, health care, welfare, and reproductive technologies) across a broad sample of advanced industrial societies. Analyzes the "empowerment" potential of new equality policies being generated at the international and supranational levels (e.g., in the UN and the European Union).

POL SCI 3590 Politics, Leadership and the Global Gender Gap (3)

Prerequisites: POL SCI 1500 or consent of instructor. Compares women's day-to-day leadership and participation patterns across a wide variety of political-economic contexts, emphasizing their performance as elective and administrative office holders. It examines the experiences of individual female leaders, long-term

nomination and recruitment strategies, and the larger political opportunity structure awaiting women beyond the year 2000.

POL SCI 3595 Studies in Comparative Politics (3)

Prerequisite: POL SCI 1500 or consent of instructor. Selected topics in comparative politics. May be repeated.

POL SCI 3680 Feminist Political Theory (3)

A study of the history of feminist political thought with an emphasis on contemporary concerns. Issues to be considered include the feminist theories of the state, gender and justice, and equality and difference.

POL SCI 3690 The Marxist Heritage (3)

Same as PHIL 3369. Study of Marx and leading Marxists. Designed to evaluate their influence on recent political, economic, and social thought and institutions.

POL SCI 3695 Studies in Political Theory (3)

Prerequisite: POL SCI 1100, or 1500, or consent of instructor. Selected topics in political theory. May be repeated.

POL SCI 3830 International Political Economy (3)

Prerequisite: 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)

Prerequisite: POL SCI 1100 or 1500, or consent of instructor. Introduction to the study of international organization. The course focuses on relationships between nation-states and "nonstate" actors (e.g., global intergovernmental organizations such as the United Nations, and nongovernmental organizations such as multinational corporations) in world politics and on the role of international institutions in such problem areas as economic development, management of resources, and control of violence across national boundaries.

POL SCI 3860 Studies in War and Peace (3)

Prerequisites: Junior standing and POL SCI 1100, or 1500, or consent of instructor. Exploration, development, and testing of theories about the causes and consequences of war, peace, and conflict among nations. A broad range of literature on war and peace will be reviewed and applied to crisis situations in the international system.

POL SCI 3890 Studies in International Relations (3)

Prerequisite: POL SCI 1100, or 1500, or consent of instructor. Selected topics in international relations. May be repeated.

POL SCI 3900 Special Readings (1-10)

Prerequisite: Consent of instructor. Independent study through readings, reports, and conferences. May be repeated.

POL SCI 3940 Public Affairs Internship (1-6)

Prerequisites: Junior standing and consent of instructor. Independent study involving work with an appropriate public or private agency. A maximum of 6 credit hours may be earned.

POL SCI 3950 Senior Seminar in Political Science (3)

Prerequisites: Senior standing and consent of instructor. Required of all political science majors in their last year of course work as an integrative capstone experience. Emphasis is on 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. Topics vary. May be repeated. This course is not available for graduate student credit.

POL SCI 4040 Survey Research Practicum (3)

Same as ECON 4140 and SOC 4040. Prerequisites: Junior standing and consent of the instructor. The execution of a sample survey, including establishing study objectives, sampling, questionnaire construction, interviewing, coding, data analysis, and presentation of results.

POL SCI 4060 Theory of Decisions and Games (3)

Prerequisite: Six hours of Philosophy and junior standing, POL SCI 6401 (or the equivalent) or consent of instructor. Same as PHIL 4465. A study of rational decision making, including games against nature, zero-sum games and social choices. Topics will include the following: expected utility maximization, the Prisoner's Dilemma, Nash equilibria, and Arrow's theorem on the impossibility of a social welfare function. Parts of the course are technical in nature; a prior course in mathematics (e.g., finite mathematics, calculus, statistics or an economics course with a mathematical component), symbolic logic, or some other course with comparable mathematical content.

POL SCI 4090 American Government for the Secondary Classroom (3)

Prerequisites: POL SCI 4090/SEC ED 4090 must be taken concurrently with HIST/SEC ED 4011 except with special consent of the School Studies Coordinator. (Same as SEC ED 4090) 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 themes of American government, on expanding bibliography, and on choosing methods of inquiry for use in an interactive classroom. Either HIST/SEC ED 3257 or 3258 or POL SCI/SEC ED 3209 must be taken the same semester as HIST/SEC ED 3255 except with special consent of the Social Studies Coordinator. Can be counted towards the Political Science major requirement, but not the American Politics subgroup. Counts towards Social Studies Certification.

POL SCI 4460 Urban Planning and Politics (3) [ST]

Prerequisite: POL SCI 1100, or 2400, or consent of instructor. Examination of the political processes of urban areas as they relate to the planning of services and facilities.

POL SCI 4510 Comparative Public Policy and Administration (3)

Prerequisite: POL SCI 1500 or consent of instructor. A comparative study of the characteristics of public administrators, their institutions and environments in Western democratic, developing nations, and communist political systems.

POL SCI 4850 International Law (3)

Prerequisite: POL SCI 1100, or 1500, or consent of instructor. Study of the international legal system, including the content and operation of the laws of war and peace, how law is 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)

Prerequisite: POL SCI 1100 or consent of Instructor. Selected topics in political science.

POL SCI 4911 Management Issues in Nonprofit Organizations: Staff Management Issues (1)

Prerequisite: Junior Standing. Same as SOC WK 4911 and P P ADM 4911. 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.

POL SCI 4912 Management Issues in Nonprofit Organizations: Legal Issues in Governing and Managing Nonprofit Organizations (1)

Prerequisite: Junior Standing. Same as SOC WK 4912 and P P ADM 4912. 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.

POL SCI 4913 Management Issues in Nonprofit Organizations: Financial Issues (1)

Prerequisite: Junior Standing. Same as SOC WK 4913 and P P ADM 4913. 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.

POL SCI 4940 Leadership and Management in Nonprofit Organizations (3)

Same as P P ADM 4940, SOC WK 4940, and SOC 4940. Prerequisite: Junior standing. Addresses the role and scope of the independent sector in the United States, as well as the leadership and sector, the role of volunteerism in a democratic management of nonprofit organizations within that sector. Topics include the economic and political scope of the independent society, and the role and scope of philanthropy. Topics include the dynamics, functions and membership voluntary organization management and leadership 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 4960 American Philanthropy and Nonprofit Resources Development (3)

Prerequisite: Junior standing or consent of instructor. Same as SOC WK 4960 and P P ADM 4960. 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.

POL SCI 6400 Analytic Perspectives in Political Science (3)

An introduction to the graduate study of political science. The course presents a number of analytic approaches to the scientific examination of a wide variety of political phenomena.