

UNIVERSITY OF
CENTRAL MISSOURI™

*Undergraduate
Catalog*

2009

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UNIVERSITY OF
CENTRAL
MISSOURI

— Est. 1871 —

2009 Undergraduate Catalog

University of Central Missouri
Warrensburg, MO 64093

1-877-SAY-UCMO (1-877-729-8266)

University Operator 660-543-4111

www.ucmo.edu

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University of Central Missouri

Greetings

It is my pleasure to welcome you to the University of Central Missouri. As you view the pages of this catalog, you will learn more about our exciting array of nationally and internationally known academic programs. We also hope this catalog will serve as a guide, helping you to discover the advantages of a UCM education, while showing you how the university can help you achieve your career goals.

UCM is an institution with a vision. We aspire to be a national-level, comprehensive university that delivers a world-class university education by providing a small-college environment coupled with large-university opportunities. Being named by *The Princeton Review* as a “Best Midwestern College” and “Best Value College” and recognition by *U.S. News & World Report* as one of best master’s-level universities in the Midwest are examples of progress we’ve made toward reaching our ambitious goal.

Founded in 1871, UCM has grown from a college established to prepare teachers to an institution that serves more than 11,000 students and offers approximately 150 undergraduate and graduate degree programs. Students from 52 different countries today enjoy being a part of classes where they don’t get lost in the crowd. UCM not only has a 16-1 student-faculty ratio, but most of our courses are taught by tenured professors. We know you’ll be impressed by the friendliness of the people who contribute to a campus environment dedicated to helping students learn and grow.

UCM is committed to helping you obtain the knowledge and skills you will need for lifelong success. Here’s a sample of what you can expect from Central Missouri:

- committed, inspired faculty members focused primarily on student learning;
- campus life filled with opportunities for involvement and personal growth in a safe, beautiful environment;
- a level of confidence in your chosen field of study;
- a culture of friendship and service that extends around the globe; and
- a community of successful alumni with traditions that span generations.

We’re confident that your education at the University of Central Missouri will serve you long after you have graduated. Thank you for choosing UCM.

Aaron M. Podolefsky, Ph.D.
University President

For updated information, visit the university’s web site:

www.ucmo.edu

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Every effort is made to provide accurate and up-to-date information, however, the university reserves the right to change without notice statements concerning rules, policies, fees, curricula, courses or other matters when necessary.

This publication was prepared by the Registrar’s Office, Ward Edwards Building 1000, with help from the Office of Undergraduate Studies, Administration Building 203, and University Relations, Administration Building 302, University of Central Missouri, Warrensburg, MO 64093.

Photo: the Administration Building on the east end of the quadrangle.



Aaron Podolefsky
University President

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FALL SEMESTER 2009, AUGUST – DECEMBER

- Aug. 14 Friday, university apartments open, 8 a.m.
 Aug. 16 Sunday, residence halls open, 8 a.m.
 Aug. 17 Monday, faculty planning.
 Aug. 18 Tuesday, 8 a.m., classes begin.
 Aug. 25 Tuesday, last day for fall semester enrollment and changing classes.
 Sept. 7 Monday, Labor Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
 Sept. 19-20 Saturday-Sunday, Family Weekend.
 Sept. 22 Tuesday, last day to drop first-half semester classes (grade of W recorded).
 Oct. 9 Friday, final examinations for first-half semester classes and end of first-half semester.
 Oct. 10 Saturday, Homecoming.
 Oct. 12 Monday, second-half semester classes begin.
 Oct. 27 Tuesday, last day to drop full-semester classes (grade of W recorded).
 Nov. 16 Monday, last day to drop second-half semester classes (grade of W recorded).
 Nov. 20 Friday, residence halls close, 6 p.m.
 Nov. 23-25 Monday through Wednesday, fall break, CLASSES DISMISSED.
 Nov. 26-27 Thursday and Friday, Thanksgiving holiday, CLASSES DISMISSED AND UNIVERSITY OFFICES CLOSED.
 Nov. 29 Sunday, residence halls open, noon.
 Dec. 7-11 Monday through Friday, fall semester final examinations (includes second-half semester classes).
 Dec. 11 Friday, residence halls close, 6 p.m.
 Dec. 11 Friday, Graduate School Commencement.
 Dec. 12 Saturday, Undergraduate Commencement.
 Dec. 24-Jan. 1 Winter holidays, UNIVERSITY OFFICES CLOSED.

**SPRING SEMESTER 2010, JANUARY – MAY**

- Jan. 4 Monday, offices open.
 Jan. 10 Sunday, residence halls open, noon.
 Jan. 11 Monday, 8 a.m., classes begin.
 Jan. 18 Monday, Martin Luther King Jr. holiday CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
 Jan. 19 Tuesday, last day for spring semester enrollment and changing classes.
 Feb. 17 Wednesday, last day to drop first-half semester classes (grade of W recorded).
 March 3 Wednesday, final examinations for first-half semester classes and end of first-half semester.
 March 4 Thursday, second-half semester classes begin.
 March 12 Friday, residence halls close, 6 p.m.
 March 15-19 .. Monday through Friday, Spring Break, CLASSES DISMISSED.
 March 21 Sunday, residence halls open, noon.
 March 30 Last day to drop semester classes (grade of W recorded).
 April 1 Priority date for students to submit the 2010-2011 Federal Financial Aid Application (FAFSA) to the national FAFSA processing agency.
 April 15 Last day to drop second-half semester classes (grade of W recorded).
 May 3-7 Monday through Friday, spring semester final examinations (includes second-half semester classes).
 May 7 Friday, housing facilities close, 6 p.m.
 May 7 Friday, Graduate School Commencement.
 May 8 Saturday, Undergraduate Commencement.

SUMMER SESSIONS 2010: MAY – JULY

- May 9 Sunday, housing facilities open at 1 p.m. for 1st session students.
 May 10 Monday, 1st 3-, 6-, 9-, and 12-week sessions begin.
 May 27 Thursday, 1st 3-week session ends and final exams.
 May 28 Friday, housing facilities close, 6 p.m.
 May 30 Sunday, housing facilities open at 1 p.m. for 2nd-session students.
 May 31 Monday, Memorial Day holiday. CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
 June 1 Tuesday, 2nd 3-, 6-, and 9-week sessions begin.
 June 17 Thursday, 2nd 3-week and 1st 6-week sessions end and final exams.
 June 18 Friday, Housing facilities close, 6 p.m.
 July 20 Sunday, Housing facilities open at 1 p.m. for 3rd-session students.
 June 21 Monday, 3rd 3-week, 3rd 6-week sessions begin.
 July 5 Monday, Independence Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
 July 8 Thursday, 3rd 3-week, 2nd 6-week, 1st 9-week sessions end and final exams.
 July 9 Friday, housing facilities close, 6 p.m.
 July 11 Sunday, housing facilities open at 1 p.m. for 4th-session students.
 July 12 Monday, 4th 3-week session begins.
 July 29 Thursday, 4th 3-week, 3rd 6-week, 2nd 9-week, 12-week sessions end and final exams.
 July 30 Friday, housing facilities close, 6 p.m.

SECTION I

General Information, Standards and Regulations, Services and Facilities

Your Catalog

Your University of Central Missouri catalog contains a wealth of information for students and faculty members. Examine it carefully. Organized for your convenience, it has three main sections:

- I. General Information, Standards and Regulations, Services and Facilities;
- II. Degree Program Requirements and Course Descriptions;
- III. Faculty and Staff.

This catalog is a reliable guide for entering the university, reviewing available programs of study, selecting courses, and meeting graduation requirements. If you are a student entering the university, keep this catalog. To the extent possible, the university will accept the degree requirements in it for an eight-year period. (See Section I, Standards and Regulations, *Date of Catalog for Checking Degree Requirements*.)

Since the policies and programs of the university are constantly changing, no catalog can be completely up-to-date, even when it is published. Students, therefore, should review their programs periodically with an academic advisor and with departmental advisors to allow for necessary changes.

Individual departments and degree programs may have policies and requirements that are more stringent than the university policies described in Section I of this catalog.

The University

The University of Central Missouri is located in Warrensburg, a west central Missouri community of 16,350, 50 miles southeast of Kansas City at the junction of Highways 50 and 13. It is easily reached by automobile or AMTRAK.

Central Missouri has provided more than a century of service, having been founded in 1871 as the State Normal School for the Second Normal District of Missouri. Formal accreditation and continued growth led the campus to be recognized as Central Missouri State Teachers College in 1919, Central Missouri State College in 1946, Central Missouri State University in 1972 and the University of Central Missouri in 2006. UCM is an affirmative action EEO/ADA institution.

Including its airport and other special facilities, the university occupies more than 1,000 acres. It offers over 150 graduate and undergraduate programs for about 11,000 students. Its facilities are exceptional – not only its modern classrooms, laboratories, technical developments, and residence halls, but also its airport, Pertle Springs Park, and recreational and sports areas.

With a university motto of “Education for Service,” it is not surprising that the university’s faculty members have earned a reputation for teaching excellence, on and off campus. They have also distinguished themselves as scholars, achieving recognition in academic and professional organizations, in addressing learned societies, in performing in music and the arts, and in writing many books and journal articles.

Mission Statement

The University of Central Missouri is a comprehensive, public university dedicated to student learning and committed to service and excellence. Through a foundation in the liberal arts, professional degree programs, personalized higher education experiences and use of current technologies, UCM prepares a diverse body of students to be lifelong learners who are proficient in their fields of study, able to adapt to a changing world and contribute to the betterment of society.

UCM serves as Missouri’s lead professional technology institution and is committed to acquiring, disseminating, and utilizing technology to enhance the university’s comprehensive educational mission and to enrich the lives of all Missourians. In fulfilling its mission, the University of Central Missouri:

- **admits** graduates of accredited high schools based on specific admission criteria, actively recruits traditionally under-represented students, and offers a strong merit-based scholarship program to attract highly capable students.
- **provides** a learner-centered academic environment which challenges individuals to participate actively in the educational process and empowers the faculty to excel in teaching while engaging in scholarship, research, creative activities and public service.
- **offers** an undergraduate foundation in the liberal arts, with an emphasis on integrating critical thinking, interaction, valuing, communication skills and technological applications into the curriculum across all disciplines.
- **provides** pre-professional, professional, academic and career-oriented undergraduate and graduate programs to meet the changing and technological needs of the workforce.
- **provides** inservice instruction for technical educators and other professionals needed to make Missouri competitive in a national and world market.
- **continues** its historical emphasis in preparing educators for Missouri.
- **provides** advanced graduate studies and research in areas of particular strength and need.
- **uses** assessment to improve teaching, learning, research and all university operations.
- **fosters** a campus community responsive to the needs of a diverse student population, provides opportunities for global awareness, and promotes an appreciation for human diversity.
- **shares** human and academic resources with schools, businesses, industries, and public agencies through partnerships and outreach activities.
- **serves** as a cultural, artistic and information center for the citizens of Missouri.

Approved by the Board of Governors, February 2003

The Central Community Creed

Choosing to become a citizen of the University of Central Missouri implies an acceptance of and willingness to contribute to the common goals and purposes of the community. The Central Community Creed outlines the principles which guide the creation and maintenance of the desired community at UCM. The creed also provides a framework for individual behaviors which help build our vision.

As a member of the UCM community, I will join in building . . .

a **learning** community by striving for academic and personal excellence and by promoting the value of education and lifelong learning;

an **open** community by creating and maintaining effective channels of communication and by accepting and respecting individuals whose values, ideas, beliefs, and life experiences may be different from my own;

a **caring** community by seeking opportunities to serve and by supporting and affirming the well-being of others;



a **just** community by behaving in ways which are ethical, honest, equitable, trustworthy, civil and respectful;

a **disciplined** community by seeking to understand and fulfill personal responsibilities, by upholding university guidelines and by working toward self and community betterment;

a **celebrative** community by observing and honoring existing traditions and by seeking and creating opportunities to enrich and define UCM;

a **purposeful** community by helping to shape and achieve the common goals of the University of Central Missouri.

The Maastricht Friendship Tower in West Park symbolizes international understanding and friendship.

Accreditations

The University of Central Missouri is accredited by the Higher Learning Commission (HLC) a member of the North Central Association. For information about HLC Accreditation, contact The Higher Learning Commission, 30 North La Salle Street, Suite 2400, Chicago, IL 60602-2504, telephone 800-621-7440, www.ncahigherlearningcommission.org.

In addition, UCM has earned the following specialized accreditations:

- Art baccalaureates, National Association of Schools of Art and Design;
- Athletic Training baccalaureates, Commission on Accreditation of Athletic Training Education Programs;
- Automotive Technology Management, Computer Aided Drafting & Design Technology, Construction Management, Electronics Technology, Graphic Arts Technology Management baccalaureates, National Association for Industrial Technology;
- Aviation Technology baccalaureate, Aviation Accreditation Board International — Professional Pilot, Flight Operations Management, Airport Management, Maintenance Management, Avionics Management, Systems Design Technology;
- Business baccalaureates and graduate programs, The Association to Advance Collegiate Schools of Business (AACSB) - International;
- Chemistry baccalaureate, American Chemical Society;
- Construction Management baccalaureate, American Council for Construction Education;
- Dietetics baccalaureate, American Dietetic Association;
- Industrial Hygiene graduate and Occupational Safety and Health baccalaureate, Applied Science Accreditation Commission (ASAC) of the Accreditation Board for Engineering and Technology;
- Music baccalaureate and graduate programs, National Association of Schools of Music;
- Nursing baccalaureate and graduate programs, Commission on Collegiate Nursing Education
- Physical Education baccalaureate and graduate programs, National Association for Sport and Physical Education;

- Social Studies baccalaureate in education, National Council for the Social Studies;
- Social Work baccalaureate, Council on Social Work Education;
- Speech Pathology and Audiology master's program, American Speech-Language-Hearing Association;
- Teacher Education baccalaureate and graduate programs, National Council for Accreditation of Teacher Education and the Missouri Department of Elementary and Secondary Education;
- Technology and Occupational Education baccalaureate, Council for Technical Teacher Education.

The university has institutional membership in:

- American Association for Higher Education
- American Association of State Colleges and Universities
- American Association of University Women
- American Council on Education
- Association for Gerontology in Higher Education
- Association of American Colleges and Universities
- Association of Governing Boards of Universities
- Council for Public Higher Education for Missouri
- Council on Undergraduate Research
- Council on Social Work Education
- Institute of International Education Membership Services
- Mid-America Intercollegiate Athletics Association
- Missouri Academy of Science
- Missouri Campus Compact
- National Collegiate Athletic Association
- National Collegiate Honors Council
- National Council for Accreditation of Teacher Education
- National Council of Educational Opportunity Associations
- North Central Association of Colleges and Schools
- The Renaissance Group

Admissions

High School Students. Students admitted to UCM are expected to have completed a 16-unit* Missouri core curriculum requirement, a 2.00 high school grade point average, and either have a 21 or higher on the ACT (or SAT equivalent) or an admissions index score of 100. The index score is obtained by combining high school class percentile rank and the national percentile rank of the ACT score. Other applicants will be considered on an individual basis. All admitted students will be assessed for the purpose of placement in courses which will provide an appropriate challenge for their level of preparedness and enhance their opportunity for success.

From Other Colleges and Universities. Students who are in good standing at other regionally accredited colleges and universities may apply for admission and transfer appropriate credit. (See *Transfer Credit in Types of Credits section.*)

GED Applicants. General Education Development (GED) test scores may be used as a basis for admission to the university. (See *GED Applications.*)

Application Fee. A non-refundable application fee of \$30 must accompany the application. International students should remit \$75.

University Health Policies. Students must have documentation of receipt of two doses of measles vaccine after the first birthday or other evidence of measles immunity at the time of entry. Proof of these vaccinations from a physician, a school health nurse, or a community health department is required. A current medical history is requested. Forms are available from the University Health Center or online at www.ucmo.edu/uhc/immunization_policy.cfm.

Academic Preparation

Students who meet the following criteria are considered academically prepared and better able to take advantage of the opportunities available at Central Missouri: at least 16 units* of college preparatory work, including these courses:

- Four units of English with an emphasis on writing skills.
- Three units of mathematics (Algebra I and beyond).
- Two units of science (one must be a laboratory course in biology, physics, or chemistry).
- Three units of social science.
- One unit of visual/performing arts.
- Three additional academic units selected from foreign language, mathematics, science, social science, English (language arts), speech, or debate.

*Beginning with the high school graduating class of 2010, 24 units will be required for the high school core curriculum. Detailed information can be found at www.dhe.mo.gov/corecurriculum.shtml.

How to Apply

The Office of Admissions must receive all admission applications and supporting documents prior to the first day of class.

During High School. Graduating high school students who wish to enter the University of Central Missouri should apply for admission early in their senior year so that the admissions process may be completed well in advance of enrollment. Each student should submit the following credentials to the Office of Admissions:

1. A completed application for admission.
2. An official transcript mailed directly from the high school to the university Office of Admissions.
3. American College Test (ACT)/SAT scores, including subscores and composite.
4. \$30 application fee.

Admissions will make a decision based upon the 6th or 7th semester high school transcript and will permit enrollment for one semester. However, freshmen must provide a final high school transcript before being permitted to enroll in subsequent semesters.

After High School. Other students who have graduated from high school but have not attended a college/university should apply as early as possible. They should submit an application, \$30 application fee, and a final high school transcript.

From Other Colleges and Universities. Students who wish to transfer to Central Missouri from other regionally accredited colleges and universities should (1) submit a completed application form with \$30 application fee and (2) arrange to have an official transcript sent to the Office of Admissions from each college or university previously attended. Transfer students with less than 24 hours of college credit must submit a high school transcript.

Admission requires students to be in good standing and to have a grade-point average of C (2.00). Central Missouri's Office of Admissions will make an admission decision upon receipt of unofficial university transcript(s) and will permit enrollment for one semester. However, transfer students must provide the Office of Admissions with official transcript(s) from each university attended before being permitted to enroll in subsequent semesters.

GED Applications. Applicants should submit a completed application form with a \$30 application fee, official GED test results and ACT/SAT scores. As soon as these documents are on file in the Office of Admissions, the university considers the applications on an individual basis.

Readmission. Students who have been away from UCM (not suspended or dismissed) for one semester or longer need to submit a new application for admission to the Office of Admissions. No additional application fee is required. Students must submit transcripts from all colleges attended that are not yet on file. After a review of the academic records students will be notified as to whether they have been readmitted.



The Office of Admissions is located on the ground floor of the Ward Edwards Building in Suite 1400. The phone number is 877-SAY-UCMO (877-729-8266).

Reinstatement. The reinstatement of students who have been suspended or dismissed from Central Missouri is not automatic or guaranteed. Requests for reinstatement are reviewed by the major college or by the Transfer and Transition Office for undecided students. The reinstatement petition can be accessed at www.ucmo.edu/reinstatement. The petition includes a written portion which should include: an explanation of extenuating circumstances for earlier poor performance, and an explanation of activities and plans which may lead to improved scholastic performance at UCM. Other substantiating evidence may also be requested. No additional application fee is required. Students must submit transcripts from all colleges attended that are not yet on file. After a review of the petition and academic records students will be notified as to whether they have been reinstated.

Students may petition for reinstatement as follows:

1. Students who have been suspended may petition for reinstatement after one semester (excluding Summer Session). Students who have been dismissed may petition for reinstatement after one calendar year.
2. A student with extenuating circumstances who has been suspended or dismissed may petition for immediate (or early) reinstatement. Early reinstatement is rarely granted and only applies for extenuating circumstances for which supporting evidence can be provided.

Exception to Admissions Policies. All requests for exception to undergraduate admissions policies must be presented to the Director of Admissions.

Current High School Students

Seniors. High school seniors who can meet their graduation requirements with less than a full load of classes may apply for admission to take one or more courses at Central Missouri if they can meet the following requirements:

1. Class rank in the upper half.
2. Recommendation from counselor or principal.
3. A plan for total class work not to exceed a full-time load.
4. Released time to take university classes.

The application process is the same as that for a full-time university student. (See *How to Apply*.)

Juniors. High school juniors may apply to take UCM classes during the summer before their senior year if (1) they rank in the upper half of their class and (2) are recommended by a counselor or principal. The application process is the same as that for a full-time university student (see *How to Apply*)

NOTE: Students pursuing a high school diploma are not eligible to receive federal or state financial aid for classes taken from the University of Central Missouri. Before any financial aid can be authorized, all high school graduation requirements must be met and the student must be fully accepted for admission to UCM.

Visiting College Students

A student currently attending another college or university is permitted to enroll at UCM as a visiting college student. Enrollment under this status is limited to one semester per academic year. In order to apply, students must submit the application for admission along with a \$30 application fee. Transcripts from the student's primary institution will be required if enrollment in courses with prerequisites is desired.

At the completion of the course or courses at UCM, the visiting student should request that UCM's Registrar's Office send an official transcript to the certifying institution. Courses taken at UCM for the purpose of transfer to another institution will apply toward hours on a degree at UCM should regular admission status be desired. These hours might not meet specific major, minor or general education requirements. The admission's application and supporting documents must be received in the Office of Admissions prior to the first day of class in order to be considered for regular admission for that semester.

Visiting students are not eligible to receive federal or state financial aid from UCM. Financial assistance for which a visiting student may be eligible is processed by the student's home school, the college or university at which the student has been admitted to pursue a degree program.

Senior Citizens

Missouri residents who are 65 years of age may enroll for courses without tuition payment. Persons seeking this scholarship shall provide documentation of age to Central Missouri and satisfy all other necessary entrance requirements including a completed application for admission. This enrollment is for non-credit (audit) purposes and may only be used for classes located on the Warrensburg campus. This scholarship may not be utilized for Extended Campus class offerings.

Enrollment will be allowed no sooner than five days prior to classes beginning and on a space available basis only. Contact the Office of Student Financial Services at 660-543-8266 for further information.

Midwest Student Exchange Program

The Midwest Student Exchange Program (MSEP) is an interstate initiative established by the Midwestern Higher Education Commission to increase the educational opportunities for students in its member states. The University of Central Missouri is an active participant. MSEP permits legal residents of Kansas, Michigan, Minnesota, Nebraska, North Dakota and Wisconsin to enroll at Central Missouri at a reduced rate of tuition. The number of MSEP recipients is limited, however, and is based on factors such as date of admission to Central Missouri, ACT/SAT score, etc. Complete information about MSEP eligibility is available from the Office of Student Financial Services, 1100 Ward Edwards Building, 660-543-8266.

Non-Resident Fee Credit

If a non-resident student pays income tax in Missouri, or is in the legal custody of a parent who pays income tax in Missouri, a credit can be made against the nonresident student fees normally charged to the student. For information on this credit contact the UCM Office of Admissions, 660-543-4290.

Stateline Grant

A graduating high school or transfer student who is eligible for admission to UCM and resides in one of the following 10 Kansas counties that border Missouri will be permitted to pay the equivalent of in-state tuition and fees for all classes taken on the Warrensburg campus. The counties are: Atchison, Bourbon, Cherokee, Crawford, Doniphan, Johnson, Leavenworth, Linn, Miami and Wyandotte.

International Student Admissions

The Application Process. Applicants may complete a paper application or apply online at www.ucmo.edu/international. To complete the application process, international students must file the following credentials with UCM's International Center, Ward Edwards 1200.

1. Completed application form.
2. Official or original notarized copy of transcript(s) in English from each secondary (high school), college or university attended.
3. Evidence of the availability of sufficient financial support to cover all university expenses for at least one full academic year of study.
4. Brief statement describing educational objectives and career plans.
5. \$75 application fee.

Prospective students submitting admission applications from outside the U.S. should provide credentials for admission consideration at least three months before intended enrollment. Prospective students planning to transfer to UCM from another U.S. institution should submit credentials for admission review at least one month before intended enrollment.

Demonstration of English Proficiency. To provide the best opportunity for academic success and appropriate course placement, international students must submit evidence of English proficiency. Prior to enrolling in regular university courses, a satisfactory score on the TOEFL or IELTS is required of all international students whose native language is not English. The acceptable TOEFL score for undergraduate placement in regular university courses is 500 (PBT) or 61 (IBT). The acceptable IELTS score for regular undergraduate admission is 5.5. The TOEFL or IELTS requirement may be waived for applicants who have completed a minimum of 30 semester hours of regular university study at an accredited college or university in the United States or who are citizens of a country whose native language is English. Please refer to the UCM International Center web site, www.ucmo.edu/international, for further UCM English proficiency expectations and waiver scenarios along with a list of countries for which we waive our TOEFL or IELTS requirement.

International applicants who meet minimum UCM entry requirements but do not meet minimum English proficiency requirements for regular UCM admission may be granted conditional admission. Conditionally admitted students must maintain full-time enrollment in UCM's Intensive English Program until the minimum TOEFL requirement is met or level six of the Intensive English Program is successfully completed. Institutional TOEFL results earned at other institutions are not valid at UCM. International students not meeting minimum UCM English proficiency requirements are not permitted to enroll in regular classes.

English Language Center. The English Language Center (ELC) offers intensive instruction in English and short-term programs for English language studies. For qualifying students, the Intensive English Program (IEP) provides the opportunity to improve students' English language skills and become accustomed to a university setting in the United States. The courses are designed to help non-native speakers of English build on their existing language skills. The IEP offers courses at a variety of proficiency levels in reading, writing, grammar, communication skills, vocabulary, accent reduction, American culture, and academic preparation. These courses are credit bearing, but do not count toward completion of an academic degree.

Orientation. All international students admitted to UCM for the first time are required to arrive on campus on a set date (typically 8-10 days prior to the first day of classes) for orientation and evaluation sessions. During the orientation sessions, any international student whose native language is not English may be required to undergo further English evaluation for oral and written proficiency. Depending upon evaluation results, students may be required to enroll in special classes designed to improve English communication skills. The departmental-initiated oral and written English evaluations are waived if the student presents one of the following:

1. Secured a minimum TOEFL score of 580 (PBT) or 92 (IBT).
2. Secured a minimum IELTS score of 7.0.
3. Earned a degree from an accredited United States college or university.
4. Earned at least 30 semester hours of regular university credit from an accredited U.S. college or university in the United States and has successfully completed both English Composition I and English Composition II.

Health Insurance. All international students are required to participate in the Student Health Insurance Program or provide proof of adequate health insurance from their native country.

Financial Aid. International applicants are eligible to compete for scholarships. The annual value of international student scholarships ranges from \$1,000 to \$4,000. All scholarships are awarded based upon prior academic achievement. For new students, scholarship eligibility decisions are made during the initial admission review process. Please refer to the International Center web site, www.ucmo.edu/international/admissions, for additional scholarship information. Students admitted to UCM are eligible for scholarship consideration and/or continuation based upon meeting minimum criteria established by UCM's Office of Student Financial Services. For more information, visit www.ucmo.edu/scholarships.

An international student usually does not qualify for federal or state financial assistance unless the student has been designated an eligible non-citizen or a permanent resident by the U.S. Citizenship and Immigration Services (USCIS) of the Department of Homeland Security (DHS). Documentation verifying the student's citizenship status may be required by the UCM Office of Student Financial Services to determine the student's eligibility of financial aid.



Planned Placement

Central Missouri wants to ensure that all students are placed in academic courses for which the student is academically prepared. For that reason Planned Placement criteria have been developed to make placement decisions that facilitate student success. Three core components of the ACT exam (reading, writing, and mathematics) are considered for Planned Placement.

All new students and transfer students with fewer than 24 semester hours must be placed according to university policy. Placement testing is available to students wishing to challenge his or her placement to determine the preparedness of the student for college-level courses in math, reading and English.

Students admitted without a recent ACT score (within the last five years) are automatically placed and enrolled into introductory math, English and reading courses. Placement testing is available to students wishing to challenge their placement to determine the preparedness of the student for college-level courses in mathematics, reading and English.

The Planned Placement test used at UCM is ACT-Compass. Sample test questions and information about this test can be found on www.ACT.org/compass. Each test may be taken one time. Students living a distance from Warrensburg may contact Testing Services to determine if remote testing is available closer to their home. To test at a remote test center, the student must be registered by Testing Services. Scores from other institutions are not accepted at UCM unless approved through remote testing by Testing Services.

For more information about planned placement, placement testing or remote testing, contact Testing Services, Admissions Building 102, 660-543-4919 or testingservices@ucmo.edu.

Placement criteria are as follows:

To enroll in:.....Students must have an ACT score:

AE 1000: (Introduction to College Writing)	ACT English score 17 or below
ENGL 1020: (Composition I)	ACT English score 18 or above
ENGL 1080: (Advanced Composition)	ACT English score 26 or above
AE 1820: (Learning Strategies)	ACT Composite score 18 or below
AE 1030: (Introduction to Algebra)	ACT Math score 16 or below
MATH 1101: (Intermediate Algebra).....	ACT Math score 17 or above or AE 1030 Introduction to Algebra
MATH 1111: (College Algebra).....	ACT Math score 20 or above or MATH 1101 Intermediate Algebra
MATH 1620: (Contemporary Mathematics).....	ACT Math score 20 or above or MATH 1101 Intermediate Algebra
MATH 1131: (Applied Calculus).....	ACT Math score 21 or above or MATH 1111 College Algebra
MATH 1150: (Pre-Calculus Mathematics)	ACT Math score 21 or above
MATH 1151: (Calculus and Analytical Geometry)	ACT Math score 24 or above, MATH 1112 College Trigonometry or MATH 1150 Pre-Calculus Math



Types of Credits

Validated Credit

A student is able to earn college credit by demonstrating specific competencies. These tests or measurements vary by department and are free to the student. Validated credit is an option within three areas of the General Education program: the Oral Communication (Public Speaking or Oral Interpretation) area through the Communication Department, the Humanities area through the Modern Language Department, and the Mathematical Reasoning area through the Mathematics Department.

Transfer Credit

Students who hold an Associate of Arts (A.A.) degree from an accredited Missouri two-year institution or have met the Missouri 42-hour General Education Core requirements are considered to have met Central Missouri's requirements in General Education, Divisions I and II. Transfer students who have completed the Missouri AA or the 42-hour General Education Core must also complete additional institutional requirements in Divisions III and IV and any major or minor specific General Education courses. Note that the state of Missouri requires certain General Education courses for teacher certification.

For those with degrees other than the Missouri AA or degrees from an institution outside the state of Missouri, the university reviews transcripts and accepts applicable credit on a course-by-course basis. Courses taken at a two-year college will not be applicable toward upper-level hour requirements. For current course equivalencies as provided by academic departments, visit UCM's web site www.ucmo.edu/corequiv.

Credit, listed on a student transcript from another institution resulting from examinations for course credit, may or may not transfer to UCM. A student must request an official score be sent from the test company directly to Testing Services, Administration Building Room 102. The Director of Testing Services will evaluate the official score (one received directly from the test company) and the student's UCM transcript to determine eligibility for course credit. For course equivalencies and eligibility criteria as provided by course credit by examination at UCM, visit www.ucmo.edu/testingservices. Select the link for Course Credit by Examination.

Elective Transfer Credit

Students should meet with their academic advisor for General Education requirements that are not major or minor specific to see if any of the elective transfer credit can be substituted in General Education. For major or minor requirements and General Education courses required by the major or minor, students should visit with the department chair of the major or minor to discuss possible course equivalencies or substitutions.

If a student wants to appeal the decision of the University of Central Missouri in accepting the transfer of credit from another accredited Missouri institution of higher education, an established appeal process exists. This appeal process is articulated in the publication, *Transfer of Credit From Accredited Missouri Institutions of Higher Education* and can be obtained through the Office of Admissions.

Undergraduate Enrollment in Graduate Courses

Graduating UCM seniors may arrange, in their final semester of undergraduate study, to take courses for graduate credit, as long as their total load does not exceed 16 hours. To do so, students submit an application for admission to the School of Graduate

and Extended Studies in advance of enrollment. Students must be enrolled in all remaining degree requirements in order to be admitted to the graduate school. Upon notification of admission to the graduate school, students may enroll in the undergraduate and graduate courses.

NOTE: A financial aid applicant classified as a senior should be aware that only those classes taken for **undergraduate** credit can usually be included when determining the student's enrollment status (full-time, half-time, etc.) to qualify for federal and state financial aid. A student may not receive financial aid to pay for graduate credit hours unless the student is fully admitted by both the School of Graduate and Extended Studies and the academic department of the graduate degree program.

Credit from Missouri Institutions

Central Missouri follows the guidelines of the Council on Public Higher Education as described in *Policies and Procedures for the Review of Academic Program Proposals: New Academic Programs, Off-Site Delivery of Existing Programs and Program Changes* (Missouri CBHE, April 1997).

Educational Tours

No more than nine semester hours of credit earned as part of educational tours will be accepted toward an undergraduate degree.

Course Credit by Examination

The university offers students the opportunity to gain academic credit for knowledge they may have acquired through course work or independent study. Several options may be available for earning special credit in a specific subject area.

Eligibility Requirements for Course Credit by Examination

- Only test scores obtained within the past 10 years are accepted.
- Only official test score reports sent from the test company directly to Testing Services will be reviewed.
- Official score reports are to be sent directly to:
 - Testing Services
 - Administration Building, Room 102
 - University of Central Missouri
 - Warrensburg, MO 64093
- Course credit by examination will not exceed 30 semester hours for a bachelor's degree.
- Students must score at or above the level established by the university to receive course credit by examination.
- Course equivalencies must be available as established by university faculty to receive course credit by examination. Not all exams have a course equivalent at UCM.
- Course credit by examination cannot be applied to upper-level hour requirements or in-residence hours.
- Course credit by examination that would result in duplicate credit will not be granted.
- Course credit received by examination may or may not apply to a degree program.
- Students are not eligible for course credit by examination when currently enrolled in the course.

Course Credit by Examination from Other Institutions

Course credit by examination from other institutions is not automatically transferred to UCM. Review course credit by examination equivalencies on www.ucmo.edu/testing-services or contact Testing Services to determine if a course equivalent for the exam taken is available at UCM. If a course equivalent is available and the test score is less than 10 years old contact the test company to request an official score report be sent to: Testing Services, ADM 102, UCM, Warrensburg, MO 64093. The Director of Testing Services will review the official score report to determine eligibility for credit.

Students may view course credit by examination equivalencies at www.ucmo.edu/testing-services, select the link for Course Credit by Examination. For additional information about course equivalents, how to order official test score reports or other important course credit by examination policies, contact Testing Services (Administration 102, 660-543-4919).

Examination Score Reports Accepted for Review for Course Credit

The following exams are those accepted for review at UCM for possible course credit. Tests marked by an asterisk (*) are administered by UCM's Testing Services.

- Advanced Placement Examinations (AP) (www.collegeboard.com/ap)
- International Baccalaureate Program (IB) (www.IBO.org)
- *Certiport IC3 Exam
- *Math-for-Credit Exams
- *Oral Proficiency Interview
- *Writing Proficiency Test
- *College Level Examination Program (CLEP) (www.collegeboard.com/clep)
- *Chauncey Group International – DANTES (www.getcollegecredit.com)

Credit for Official Certifications

In certain instances, academic departments will evaluate official certifications, licenses, and diplomas granted by fully accredited national and state boards and officially recognized professional organizations to determine whether or not undergraduate credit may be assigned by the Provost and Vice President for Academic Affairs toward the fulfillment of degree requirements in specific major or minor related areas. Appropriate university departments reserve the right to test competencies and performances in these areas and to determine the hours and the nature of the credit to be assigned, if any. All requirements as stated in the *Undergraduate Catalog* must be met before a degree is conferred. Students should work with their academic department to determine if credit is possible for official certifications. Paperwork will be submitted by the academic department to the Registrar's Office for processing.

Military Service-Related Credit

Credits earned by service personnel in specialized training programs of the United States armed services under certain circumstances may be accepted. The guidebook published by the American Council on Education is used to determine the credit value. The Division III Personal Interaction requirement of the General Education Program may be met by veterans upon presentation of evidence of 12 months or more active military training in a U.S. service. Students who have completed six months of active military service, although not considered veterans, may meet two semester hours of the physical education requirement through presentation of appropriate evidence of their service experience. Official transcripts should be sent to the Office of Admissions which will review them and determine the appropriate credit, if applicable.



Housing

The University of Central Missouri requires first-year students to reside in university housing. For housing purposes, upperclass status is determined by the completion of 24 or more credit hours of course work, on-campus residence at UCM for one academic year, or the student's being 21 years of age or older.

On-Campus Housing

The University of Central Missouri provides a variety of on-campus housing opportunities. Except for freshmen, who must receive permission to live in locations other than residence halls, on-campus housing is optional. Our accommodations attract a substantial number of upperclass students. Early application for housing is wise.

Arranging for Housing. Contact the Office of University Housing, L23 Ellis Complex, or call 660-543-4515 for applications and information. Assignments are made according to agreement date. A deposit of \$100 must accompany the application. Apartments will require an additional deposit of \$100 or \$200 (depending on location) prior to occupancy. This deposit may be forfeited for late cancellation, damage to university property, outstanding account or other agreement violations.

Students with requests due to disability will need to provide Housing or Accessibility Services with appropriate professional verification supporting the request. Six to eight weeks notice is recommended.

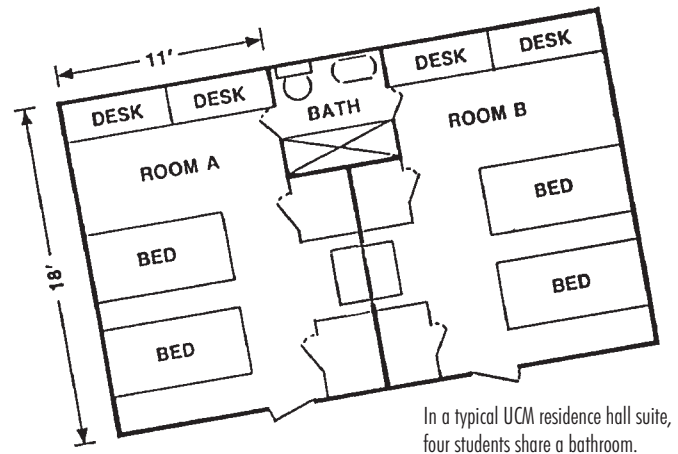
Residence Halls. Residence halls are located on the east and west sides of the campus. Students may choose from a variety of housing options. Most halls are air-conditioned.

First-year students are required to live on campus. First-year students are also required to have a meal plan. Freshmen (under 21 years) are assigned to first-year floors. These environments are carefully designed to help acclimate the new student to the UCM campus. Special staffing, educational and social activities, faculty involvement, student government, and access to a variety of campus resources create an environment where student success is emphasized.

Students with 24 or more credit hours or those over 21 years old may live in upperclass housing. Residence hall accommodations offer the student convenience, opportunities for involvement and a variety of choices. Residence hall agreements are for a full academic year. Single rooms are available at an additional cost. Meal plans for upperclass students are available, but optional.

In the residence halls, students in each pair (suite) of rooms share a private bath. Each student room has a phone jack, cable television capability and Internet access. All rooms are furnished with desks, beds, mattresses, chairs, draperies, a chest of drawers and mirror. However, residents may bring additional items to make their rooms more home-like. Residents have ready access to coin-operated washers and dryers, but they must furnish their own irons and fireproof ironing boards. Mail is delivered regularly to the main desk at each residence hall. Lounge areas and recreation facilities are open to all residents. Residence hall libraries and study areas provide a quiet place for reading and study.

The university tries to honor student preferences in housing assignments. Room changes will be permitted beginning on designated dates during the first part of each semester. Housing agreements for students who do not check in are canceled after 5 p.m. on the first day of classes, unless students have made arrangements to arrive late.



Family Housing. Apartments are available for married couples with or without children and single parents with children living with them full time. These apartments are available for 12-month accommodations.

Meals. Students in first-year halls must be on a meal plan. Students may choose from a variety of meal plan options. Full-meal service is available daily. The Elliott Union provides additional on-campus dining alternatives. The food service accommodates students with special dietary needs. This service requires a doctor's request.

Fraternities and Sororities. Members of seven sororities live in Panhellenic Hall. Similarly, the Fraternity Complex accommodates eight fraternities. Other sororities and fraternities are housed or provided Chapter Room space in South Todd Hall.

Graduate/Upperclass Residence. Special accommodations have been designated in residence halls and/or university apartments for students 21 years of age or older, for those who have completed at least four semesters, or for those enrolled in graduate school.

Twelve-Month Accommodations. Twelve-month housing accommodations are available for students seeking year-round housing.

Insurance and Safety

The Department of Public Safety and the Office of University Housing work together to provide a safe campus environment. However, the university is not responsible for loss of, or damage to, personal property. Parents and/or students are urged to arrange privately for insurance coverage of personal property.

University Conference Center

The University Conference Center is located on Anderson Street, east of the main campus. A variety of suites and rooms are available for university guests. For reservations, call the University Conference Center at 660-543-4034.



UCM enjoys a student population that is eight percent multicultural and four percent international. Last year, students from 38 states and 51 foreign countries attended Central Missouri.

Nondiscrimination/Equal Opportunity Statement

The University of Central Missouri actively follows a policy of nondiscrimination with regard to age, race, color, religion, sex, national origin, sexual orientation, marital status, Vietnam Era veterans, and persons with handicaps and disabilities.

This policy applies to the awarding of student financial aid, and the recruitment, admission, housing, placement, and retention of students, faculty and staff. The university complies with the regulations implementing Title VI and Title VII of the Civil Rights Act of 1964 regarding race, color, national origin, religion and sex discrimination; Title IX of the Education Amendments Act of 1972 regarding sex discrimination; the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 regarding discrimination based on disabilities and handicaps; the Age Discrimination in Employment Act; and other state and federal laws and regulations.

Persons with inquiries concerning the university's compliance with the regulations above are directed to contact the General Counsel, Administration 208, 660-543-4730, or the Director of Human Resources, Administration 101, 660-543-4255, the University of Central Missouri, Warrensburg, MO 64093. Toll-free numbers for Relay Missouri are 800-735-2966 for TTY, and 800-735-2466 for voice callers.

Institutional and Financial Information

Federal law requires institutions of higher education, including the University of Central Missouri, to inform prospective students, faculty and staff of institutional and financial information. This information is available at www.ucmo.edu/research/ir/toc.htm.

First-year Residential Requirement Policy



The price of a residence hall room includes local phone service, cable service, Internet access, and utilities. A room comes furnished with two twin beds, one dresser, two desks, two chairs, and a trash can.

I. Purpose

The purpose of the First-year Residential Requirement Policy is to enhance each student's educational experience and personal development.

II. Policy

First-year students are required to live in university housing. Students whose circumstances meet one of the exemptions or have changed since signing the Housing Agreement may apply for an exemption to this requirement. A list of exemptions may be obtained from the Office of University Housing. Exemptions may be granted based upon acceptable documentation submitted to the Director of University Housing.

III. Procedures

Reasons other than those listed may qualify as exemptions based on the determination and at the discretion of the Director of University Housing. The Vice President for Student Affairs shall review appeals of these determinations and the decision upon any such appeal is a final action.

Costs

Fees and Expenses

Housing, food service, and instructional fees are assessed for payment prior to the beginning of the semester. Rates are set by action of the Board of Governors and are subject to change. Information regarding fees and expenses is available from the Office of Student Financial Services or by visiting www.ucmo.edu/sfs.

Supplemental Course Costs

Certain courses and programs require supplementary fees, materials, supplies, and activities at additional expense to the student.

Determination of Missouri Residency for Fee Purposes

The Missouri Department of Higher Education has issued regulations to be applied by Missouri universities to determine the resident status of students. This regulation is available at *6 Code of State Regulations 10-3.010*. The burden of proof in establishing residency rests with the student. Students who are legal minors or tax-dependents whose parents reside outside the state of Missouri are not eligible for resident fee paying status. One can be classified as a resident for fee purposes immediately upon moving to the state if the move is to accept full-time employment (or if one is the dependent of someone who came to Missouri to accept full-time employment.) In other situations, continuous domiciliary presence in the state for 12 months must be proven AND sufficient proof of intent to be domiciled in Missouri permanently must be provided.

Residency is determined by each educational institution. Residency for attendance at a community college, obtaining a driver's license or serving in the Missouri Guard will not necessarily mean a residency determination for fee purposes at UCM.

Applications and additional information are available for undergraduate students in the Admissions Office and for graduate students in the School of Graduate and Extended Studies.

Financial Responsibility

Students have the primary responsibility for paying all charges incurred due to class enrollment, room and board choices, departmental charges and fines. Payment for a semester's cost is due in full approximately 10 days before the semester begins. Full payment dates are published in the *Student Planner/Handbook*, on the Office of Student Financial Services web site and on the student billing statement. Non-payment of charges or failure to make payment arrangements by the due date will result in additional fees being charged. Late payment fees are added to the student account each month that payment is not made when due. Collection costs are assessed if collection action becomes necessary. For additional information regarding the payment of charges, visit www.ucmo.edu/sfs.

Refund Policy

Reduced Load. Refunds of instructional fees for student-initiated reduction in class load will not be processed until after the fourth week of classes. The following schedule for such refunds will apply for semester hours dropped:

- First week of classes: full refund.
- Second week of classes: 50 percent
- Third week of classes: 25 percent

No refund of instructional fees will be made for student-initiated reduction in class load after the third week.

If a fee amount would be reduced due to load changes caused by failure of classes to materialize or class cancellation by the university, a full refund for that class will be made.

NOTE: A federal financial aid recipient who drops to less than half-time enrollment status should be aware that depending on his/her class attendance records, some or all of the assistance credited to the student's UCM account for the semester may have to be reversed.

NOTE: Students participating in a Study Abroad program, when permitted to withdraw from a course, will not receive any refund.

Withdrawal. Students who find it necessary to withdraw from UCM should initiate the procedure in the Office of Student Affairs. International students must notify the International Center, Ward Edwards 1200, prior to beginning the process of withdrawal from the university. The following refund schedule for instructional fees applies to students who are **not** financial aid recipients.

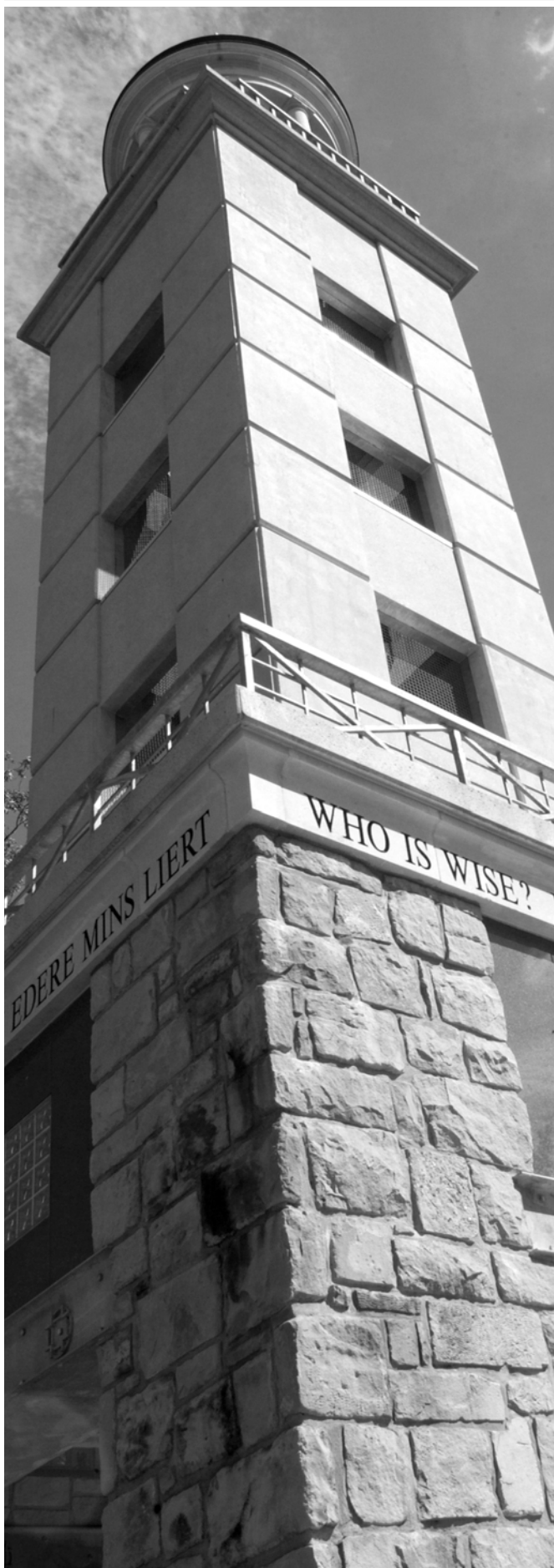
- Withdrawal prior to the announced deadline for full payment of all charges for the current semester: full refund.
- Withdrawal during second week of classes: 50 percent
- Withdrawal during third week of classes: 25 percent

No instructional fees are refundable if the student withdraws after the third week of classes.

NOTE: In accordance with federal regulations, a financial aid recipient who officially or unofficially withdraws from UCM may be required to repay some or all of the grant and loan assistance credited to his or her UCM account, based on the date of withdrawal and last date of class attendance for the semester. A copy of the withdrawal policy is available from the UCM Office of Student Financial Services, Ward Edwards Building 1100.

Refund Appeal. A student who believes that a refund greater than the established schedule should be issued may submit a written request to the Office of Student Affairs for complete withdrawals or to their college advisement office for reduced load appeals. An online petition is available at: www.ucmo.edu/portal/refund. The reasons and unusual circumstances believed to justify a larger refund must be outlined in the written request. All requests for refunds must be submitted within two weeks of the end of the semester for which the fees were paid.

For the most current information on the Refund Policy, please see www.ucmo.edu/sfs/pay/refunds.cfm.



Financial Assistance

To help an individual reach his or her educational goals, the University of Central Missouri offers a variety of federal, state, and institutional grant, loan, and employment assistance, much of which is awarded on the basis of a student's calculated financial need.

The Office of Student Financial Services annually processes over \$70 million in assistance to nearly 80 percent of the students who attend Central Missouri. Each student's family and economic situation is recognized as unique, and every financial aid application is examined on an individual basis. The number of applications for financial aid, however, almost always exceeds the total amount of assistance available. Therefore, it is very important for each applicant to:

- apply on-time (by April 1) each year
- comply with all financial aid instructions, policies, and requests for follow-up information and documents
- contact the Office of Student Financial Services with any questions:

In person: 1100 Ward Edwards Building

Telephone: 660-543-8266

Fax: 660-543-8080

Email: sfs@ucmo.edu

Federal and state financial assistance may be used to help pay direct educational expenses, such as tuition/fees, books/supplies, and housing/meal plan charges, as well as variable living costs, such as off-campus housing, food, transportation, child care, and other personal costs related to attending UCM. In accordance with federal and state regulations, the responsibility for meeting these costs lies primarily with the student and his or her family. However, financial aid from one or more of the following programs can be awarded to supplement the family's financial contribution.

Types of Financial Aid

Grants (Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Academic Competitiveness Grant, National SMART Grant, and Access Missouri Grant) are types of assistance that do not have to be repaid.

Loans (Federal Stafford Loan, Federal Perkins Loan, and Federal PLUS (parent) Loan) are types of low-interest loans that must be repaid, but often not until after the student graduates, withdraws, or drops to less than half-time enrollment status.

Employment (Federal Work-Study) assistance enables a student to earn a portion of his or her educational resources through part-time work on-campus or off-campus. Information about available Federal Work-Study positions, as well as University-funded student employee positions, is available from the UCM Office of Career Services, Elliott Union 302.

How to Apply

To apply for the above types of federal and state financial aid, a student must submit a **Free Application for Federal Student Aid (FAFSA) each year**. A student files the FAFSA online at www.fafsa.ed.gov. No other web site should be used. There is no charge to apply.

After submitting the FAFSA, a financial aid applicant may be required to provide supporting documents or clarifying information to the UCM Office of Student Financial Services. If required to do so, the applicant will be contacted by UCM, and should respond promptly.

Financial Need

A student's calculated need for federal and state financial assistance is determined by a careful analysis of the results of the applicant's FAFSA data. Once this calculation has been completed, one or more types of financial aid are awarded to help meet the individual's level of need. The student is then notified by email of his/her award package, which is accessible in the MyCentral Portal. The notification process begins each spring for UCM's earliest FAFSA applicants and continues throughout the year.

Scholarships

Nearly \$7 million in merit-based scholarship aid is awarded annually to students who demonstrate academic excellence, leadership, special talents, or potential in a specific field of study. UCM also offers scholarships to children of Central Missouri alumni and other special groups.

To be considered for an undergraduate scholarship, a student must:

1. be admitted to UCM,
2. meet minimum qualifying criteria,
3. not be on academic probation,
4. be a full-time enrolled undergraduate student (12 or more credit hours). A scholarship recipient may enroll for less than 12 hours and be considered to receive a proportional amount of an award under the following conditions:
 - be enrolled in a UCM-approved internship or be student teaching, or
 - be a last-semester senior completing a bachelor's degree program
5. earn a minimum of 12 undergraduate hours per semester at UCM.

If a student is the recipient of more than one University of Central Missouri scholarship, the combined total may not exceed the cost of education at UCM. Scholarships may also be adjusted or canceled if the recipient fraudulently misrepresents any information on a UCM application or engages in serious misconduct which warrants substantial disciplinary penalty.

For information about scholarships associated with specific majors, students should contact the academic department offering the program of study. For general undergraduate merit scholarship information, visit www.ucmo.edu/scholarships or the UCM Office of Student Financial Services, 1100 Ward Edwards Building, 660-543-8266.

Other Assistance

Financial assistance other than federal and state aid is also available from the University of Central Missouri. Many scholarships from a wide variety of sources are awarded each year to undergraduate students. Information and applications are available at www.ucmo.edu/scholarships. Financial aid recipients should be aware, however, that receiving "external" types of financial aid or educational benefits can result in an adjustment to the federal aid that may have already been awarded and/or disbursed.

Satisfactory Academic Progress

Federal regulations require that every student who wishes to continue receiving federal financial aid (after having completed at least one semester at UCM) must maintain satisfactory academic progress toward the completion of his or her degree or certification program. Satisfactory academic progress for federal financial aid purposes is defined as successfully completing at least two-thirds of

the credit hours attempted during a school year and is checked each May after all spring semester grades have been posted. In addition, undergraduate students with 60 or more credit hours must maintain at least a 2.00 cumulative grade-point average to remain eligible for federal assistance. Students should be aware that certain state financial assistance programs may require a recipient to maintain more stringent standards of satisfactory academic progress.

Short-Term Loans

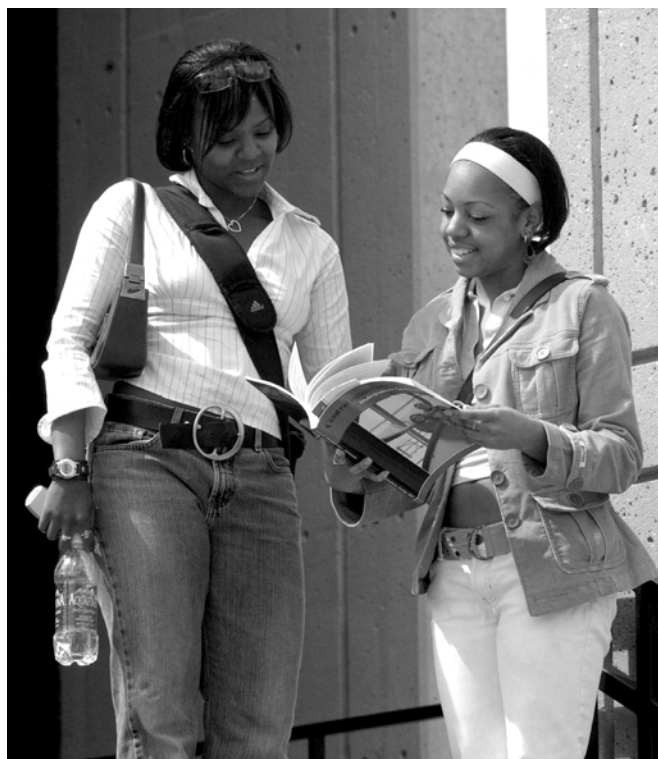
The University of Central Missouri realizes that many students are dependent upon federal financial assistance to satisfy the costs of attending UCM. However, it is important to have some personal money on hand when starting classes each semester to help pay incidental costs during the first week or two of classes. If an emergency arises, a student can apply for short-term loan funds at the Office of Student Financial Services, 1100 Ward Edwards Building. This assistance must normally be repaid within 60 days. A service charge of \$10 is levied to borrow from the UCM Short-Term Loan Fund, but no interest is charged.

Veteran Services

The UCM Veteran Services Officer assists approximately 500 students annually. This staff member is located within the Office of Student Financial Services, Ward Edwards Building 1100 and acts as a liaison between students requiring veteran services and the Veterans Administration offices in St. Louis and Kansas City.

Support is provided to students enrolled at UCM who are in the Military Reserve/National Guard (Chapter 1606), on active duty or no longer in the military but eligible for VA educational benefits (Chapter 30), Veterans Vocational Rehabilitation students (Chapter 31), dependents of military personnel (Chapter 35), and personnel who contributed to the Veterans Educational Assistance Program (Chapter 32).

For information and assistance in completing and maintaining the proper documents to receive VA benefits, a student should contact the Veteran Services Office in person, by telephone 660-543-4983 or by email sfs@ucmo.edu.



Standards and Regulations

Philosophy of Academic Standards

To maintain standards which foster an atmosphere of academic excellence:

Central Missouri retains students who, through periodic university-administered assessment and evaluation, meet or exceed established university academic standards.

Central Missouri grants degrees to students who fulfill prescribed program requirements and meet or exceed the minimum academic standards established by the university and the state of Missouri.

Central Missouri assesses former students to determine to what extent the university experience has helped them attain an intellectual orientation by which they can develop, throughout their lifetimes, the capacity for self improvement, career achievement, and responsible living in a free society.

Student Responsibility

Central Missouri, through action of the faculty, administration, and Board of Governors, establishes and maintains requirements for its various degrees. These requirements must be completed before a degree is granted. The staff of the university will assist students in understanding and meeting these requirements, but the individual student is responsible for fulfilling them. Therefore, it is important for each student to be familiar with the requirements pertaining to the degree being sought and to remain currently informed throughout the period of enrollment. The academic advisors, faculty, and Registrar's Office can be of assistance in this process.

Academic Load

The normal load per semester for an undergraduate student is 15 or 16 semester hours. A full-time undergraduate student is one pursuing 12 or more semester hours of work per semester or nine semester hours in the summer session. The maximum academic load is 18 semester hours for freshmen and sophomores (less than 60 earned hours). Juniors and seniors (60 or more earned hours) in good academic standing may enroll in as many as 19 semester hours. Freshmen and sophomores desiring to exceed 18 semester hours must have the overload approved by their major department chair or the director of the Transfer and Transition Services office if no major is declared. Students on academic probation may not enroll in more than 15 semester hours during any semester of academic probation.

If students are enrolled for course work at other institutions of higher education while concurrently enrolled at Central Missouri, the total number of semester hours taken in any enrollment period may not exceed the maximum specified for a full-time, resident student at Central Missouri.

International students must complete a minimum of 12 semester hours per semester. The International Center must approve concurrent enrollment for any international student prior to the beginning of each semester. To meet concurrent enrollment requirements, international students must be enrolled in a minimum of six semester hours of work at UCM and at least six semester hours of work at another higher education institution for a minimum total of 12 semester hours of work in a semester.

Summer Course Load Policy

Maximum course loads for summer are six hours during a three-week session and 12 hours for the entire summer semester. Undergraduate students may enroll for more than 12 hours with the approval of their major department chair or if undeclared, the

director of the Transfer and Transition Services office. Nine hours over the summer semester is considered full-time status.

International students are not required to enroll in summer hours unless they are in the first semester of their academic program at UCM. International students beginning their academic program in the summer must complete a minimum of six semester hours for the entire summer semester.

Academic Standards

Grading System. The grading system used in evaluating a student's work is as follows:

- A – Work of marked excellence.
- B – Work of superior quality.
- C – Work of average quality.
- D – Work of inferior quality.
- F – Failure to do work of passing quality.
- CR - Credit (by examination, special credit, etc.).
- NC – No credit granted for course (audit).
- NR - No grade reported by instructor.
- P – Work of passing quality in a-pass/fail course.
- U – Course not completed for justifiable reasons.
- W – Course dropped during withdrawal period.*
- WP – Work was of passing quality at time of approved withdrawal.
- WF – Work was of failing quality at time of approved withdrawal.*

* For more information about withdrawal grades, refer to the section *Changes in Schedules*, and either the Calendar in this catalog or the *Student Planner/Handbook*. Course withdrawal and refund dates can also be found in MyCentral in the Student Services tab in the UCM Registration section under the link Check Refund Dates.

Unfinished Work

An instructor may report a semester grade of U when, for justifiable reasons, the student has not completed the work of the course. For example, if a student has an illness or death in the family during the last week of the course, an extension may be granted at the discretion of the instructor. At the end of the next semester (Fall, Spring or Summer) the U becomes an F unless the requirements of the course have been satisfactorily completed or the course is of an individualized nature, e.g., thesis, research report, or similar investigation. Students do not enroll in the class during the subsequent semester. Students having more than one U grade are expected to reduce their course load accordingly in order to complete the unfinished work. It is the student's responsibility to contact his/her instructor concerning the removal of the U grade. Students may not graduate with a U grade on their record. If the work is unable to be completed or the student does not wish to complete the work (in the case of an elective course), the grade will be changed to an F to meet graduation requirements.

Grade Requirements for Acceptance and Graduation into Programs.

In addition to the general requirements applicable to all areas, several academic programs specify grade standards that may apply to acceptance into a program and/or that must be maintained for graduation from a program. Such special standards are listed under the major programs in the curriculum section of this catalog.

The Pass/Fail Program

Pass/fail is a grading option that may be available to students instead of a traditional letter grade (A-F) under certain circumstances. One objective of pass/fail is to encourage students to experience courses they usually might avoid because of lack of confidence or initial competence. The following rules apply to courses taken for pass/fail:

1. Students may count a maximum of nine pass/fail credit hours toward graduation requirements.
2. Courses which are only offered as pass/fail and study abroad credits taken as pass/fail do not count toward the maximum of nine credit hours.
3. Students may choose to take any free elective for pass/fail credit. A free elective is a course which is not a requirement or elective for the student's major or minor and is not used to satisfy General Education requirements. Study abroad credit is an exception to this and may count towards the major and minor credit if approved by the major/minor department chair.
4. Upon enrollment students may designate the course or courses to be taken as pass/fail using self-enrollment. If pass/fail is not selected during the initial enrollment, students must designate pass/fail by the end of the fifth week of classes or within the first 13 class days for half semester classes. A course designated as pass/fail may not be changed to a graded course after that date.
5. Students who take a class as pass/fail and earn an A, B, C or D will have a P (Pass) recorded on the transcript and the grade will not be calculated in the grade-point average, but the credit hours will count towards earned hours. A student who fails will have an F (Fail) recorded on the transcript and the F will be calculated in the grade-point average. In cases of academic dishonesty, an F will be recorded at the discretion of the instructor.
6. A department may elect to offer a course for pass/fail credit only. Courses which are only offered as pass/fail do not count towards the maximum of nine credit hours. Courses that are offered only for pass/fail credit are designated in this catalog.
7. Students who plan to study at an institution outside the U.S. (UCM sponsored Study Abroad) may elect to take all or none of the courses completed abroad as pass/fail credit or letter grade credit. If the student elects to take these courses for pass/fail credit, they must provide written notification to the Study Abroad staff in the International Center before beginning the Study Abroad program.
8. Study tours sponsored or recognized by UCM through Extended Campus are not exempt from the nine-hour maximum.

Audit Courses

A student may audit a class for no grade and no credit. Acceptable performance, attitude and attendance as determined by the instructor in charge are expected. Regular fees and enrollment procedures are required. Courses taken as an audit must be so designated prior to the final date for changing class schedules as announced in the official calendar. Audited classes do not fulfill requirements for load consideration, nor do they count as part of a student's enrollment status for receiving federal or state financial aid, or VA educational benefits.

Computation of Grade Point Average

In order to compute the cumulative grade-point average, total quality points earned are divided by total hours attempted. Each semester hour is assigned a grade-point value as indicated below:

1. Each semester hour of A is assigned 4 quality points.
2. Each semester hour of B is assigned 3 quality points.
3. Each semester hour of C is assigned 2 quality points.
4. Each semester hour of D is assigned 1 quality point.
5. Each semester hour of F or WF is assigned 0 quality points.
6. Each semester hour of P, W, WP, or NC is not considered.
7. Each semester hour of U is not considered until complete.

Repeat Enrollment in Courses

A student receiving a grade lower than B in an undergraduate course may repeat the course at UCM. The higher of the two grades will be utilized in computing the cumulative grade-point average; however, the lower grade will remain as a matter of transcript record.

Students should check with departmental polices regarding course repeats which may be more stringent than the university policy. The following specific stipulations apply to the above repeat enrollment policy:

1. Courses taken at another institution and subsequently repeated at the same institution are transferred using the same rules applicable for Central Missouri courses which have been repeated. Courses taken at another institution and repeated at Central Missouri with a passing grade use the same rules applicable for Central Missouri courses which have been repeated. Courses taken at Central Missouri and then repeated at another institution will have the grades averaged. Courses taken at two different institutions other than UCM will have the grades averaged.
2. A course may be taken more than twice only if a grade of F has been earned both times unless departmental requirements stipulate otherwise. In the case of more than two repeats, only one grade is forgiven (the worst grade from the first two attempts). The grades from all other attempts are counted in the grade point average.
3. If two consecutive grades of D are earned, or if two consecutive grades of F are earned, only the second will be used in computing the cumulative grade average.
4. If it becomes necessary for a course to be taken a third time, the second F will not be discounted but will be averaged into the cumulative grade average.
5. A course may not be repeated for the purpose of raising a grade average if a more advanced course in a sequence has been completed.
6. Repeating a course under the pass/fail option will not negate the initial grade received.
7. Credit hours for repeated courses will be counted only once in the number of course hours earned toward a degree.

Dean's List

To be eligible for the Dean's List, a student must be an undergraduate who earns 12 or more semester hours of residence credit during the fall or spring semesters with a grade-point average for the semester of 3.50 or above. During the summer semester a student must be enrolled in nine or more semester hours and achieve a 3.50 or above grade point average.

Academic Standing

Student academic standing is determined by both the cumulative GPA and the UCM GPA. Students can find their academic standing in MyCentral in the Student Services tab under “Check Your Registration Status” or “Unofficial Transcript”.

Good Academic Standing. Central Missouri students who have both a 2.00 cumulative and UCM grade point average are in good academic standing and are eligible to enroll for classes.

Academic Probation. A student whose cumulative GPA or total UCM GPA drops below 2.00 will be placed on academic probation. A transfer student will be placed on academic probation at the time of admission if his/her cumulative GPA is less than 2.00. Students placed on academic probation may continue to enroll in classes. Students are encouraged to seek advice from their college advisor about future enrollments. Students on academic probation may not enroll in more than 15 semester hours during any semester of academic probation.

Removal From Probation. A student placed on academic probation will be continued on probation until the UCM GPA and the cumulative GPA are 2.00 or higher. When a student on academic probation raises their UCM GPA and their cumulative GPA to 2.00 or above, the student is removed from probation. Transfer credit may not be used to raise a total UCM GPA.

Academic Suspension. A student on academic probation will be suspended from Central Missouri at the conclusion of his/her next semester/enrollment period if his/her semester/enrollment period GPA is less than 2.00. A transfer student who was admitted on probation will be suspended from Central Missouri at the conclusion of his/her first semester/enrollment period if his/her semester/enrollment period GPA is less than 2.00. Academic suspension is for a period of one full semester (not including summer semester), after which, students may apply for reinstatement. International students must contact the International Center immediately upon suspension from the university.

Academic Dismissal. A student who has been suspended and later reinstated and continued on probation but does not achieve a semester GPA of 2.00 or higher in a subsequent semester/enrollment period will be dismissed. Academic dismissal is for a period of one calendar year, after which, a student may apply for reinstatement. International students must contact the International Center immediately upon dismissal from the university.

Reinstatement. The reinstatement of students who have been suspended or dismissed from Central Missouri is not automatic or guaranteed. Requests for reinstatement are reviewed by the major college or by the Transfer and Transition Office for undecided students. The reinstatement petition can be accessed at www.ucmo.edu/reinstatement. The petition includes a written portion where the student includes: an explanation of extenuating circumstances for earlier poor performance, and an explanation of activities and plans which may lead to improved scholastic performance at UCM. Other substantiating evidence may also be requested. No additional application fee is required. Students must submit transcripts from all colleges attended that are not yet on file. After a review of the petition and academic records students will be notified as to whether they have been reinstated.

Students may petition for reinstatement as follows:

1. Students who have been suspended may petition for reinstatement after one semester excluding Summer Session. Students who have been dismissed may petition for reinstatement after one calendar year.

2. A student with extenuating circumstances who has been suspended or dismissed may petition for immediate (or early) reinstatement. Early reinstatement is rarely granted and only applies for extenuating circumstances for which supporting evidence can be provided.

Course Prerequisites

A student is expected to have satisfied prerequisites required of any course in which he/she is enrolled. Students without prerequisites should not enroll in these classes and may be dropped from the class if they do enroll. A student will not be allowed to enroll in a course that is a prerequisite to a course he/she has already successfully completed with a grade of C or better, except as an audit enrollment.

Class Attendance

Students are expected to attend all lectures, seminars, laboratories and field work for each registered class and to complete all work assigned by the instructor for the course. Advance arrangements for unavoidable absences should be made with the instructor whenever possible. Neither absence nor notification of absence relieves the student of the responsibility for meeting all course requirements.

Make-up of course requirements missed because of extenuating circumstances shall be worked out between the instructor and the student upon the student's initiative. Instructors are required to allow for such make-up when a student is absent because of participation in approved university activities, university programs (that the student is required to attend) or when absence is required by order of a physician. A student must contact his/her instructor on the first day the student returns to class. The instructor may have special attendance/requirement policies for particular classes, whenever those policies are not in conflict with the student's right to make up missed requirements as described above.

When absent for three consecutive days or more, a student may ask the Office of Student Affairs to send an informational note to his/her instructors; however, excused absences may only be granted by the class instructor.

The University Health Center does not provide medical excuses to students for the purpose of being excused from class. The only medical excuse provided will be for those students who have a physical disability and cannot participate in a class activity. This excuse will be for the activity only and not from attending the class.

An enrolled financial aid recipient who fails to attend classes (or stops attending) may be required to repay some or all of the assistance credited to his/her UCM account for the semester.

Changes in Class Schedules

Adding Classes. Students may make changes in class schedules using self-enrollment in MyCentral through the Drop and Add period (typically one week after the start of classes). Courses may not be added after the Drop and Add period, unless a late add is approved by the department chairperson of the course.

Dropping Classes. Students may make changes in class schedules using self-enrollment in MyCentral through the Drop and Add period* (typically one week after the start of classes). Courses dropped during this time will be given a full refund and will not be entered on the permanent record (transcript). During the Withdrawal period* (second week through the 10th week of fall and spring semesters), a student may withdraw from any full-semester class using self-enrollment in MyCentral.

Students may wish to consult with an academic advisor and/or the course instructor prior to withdrawal. International students must seek approval from the International Center, Ward Edwards 1200, prior to dropping below a full course load of 12 semester credit hours during any semester. Withdrawal from a course during a Study Abroad program is not permitted during the last one-third of the period.

A grade of W is recorded as the final grade if the course is dropped during the Withdrawal period* (second week through the 10th week of fall and spring semesters). A grade of W has no impact on grade point average. Exception to this will be effected in the event that a failing grade is given for cause such as academic dishonesty. In this instance, a WF will be recorded. A grade of WF does impact the grade point average.

After the 10th week of the fall and spring semesters, withdrawal from a class is not allowed. In enrollment periods other than a semester, withdrawal from classes is not permitted during the last one-third of the period.

*Course specific refund and withdrawal dates may be found in MyCentral. These dates can be found in the Student Services tab, UCM Registration section titled Check Refund Dates.

Withdrawal from the University

Students who leave the university must officially withdraw through the Office of Student Affairs (Administration Building 214, 660-543-4114). International students must notify the International Center, Ward Edwards 1200, prior to beginning the process of withdrawal from the university. In the event a student fails to initiate this process, his/her withdrawal is not considered complete and grades of F will be recorded for failure to attend classes. After the last day to drop a course with “W” (typically the last five weeks of a fall or spring semester), late withdrawal must be approved. If the student was receiving a failing grade in the course at the time of withdrawal, the result is the recording of a WF on the permanent record. If the student was receiving a passing grade in the course at the time of withdrawal, the result is the recording of a WP on the permanent record.

Regulations governing credit for room and board payments are found in the housing contract. (See the Refund Policy for information on the credit of fees.) A financial aid recipient who officially or unofficially withdraws from UCM will be required to repay some or all of the grant and loan assistance credited to his or her UCM account, based on the date of withdrawal and last date of attendance for the semester as reported by his or her instructors.

Course Numbers

Courses offered on the undergraduate level are divided into five categories. In general, the following may be considered guidelines:

0000 level courses are primarily used for skills development and do not count as hours or grades earned towards graduation requirements.

1000 level courses are primarily for freshmen students.

2000 level courses are primarily for sophomore students and those students with required prerequisites or backgrounds.

3000 level courses are primarily for junior students and those students with required prerequisites or backgrounds.

4000 level courses are primarily for senior students and those students with required prerequisites or backgrounds.

Graduate level courses cannot be applied to the undergraduate degree programs.

Classification of Students

Freshmen are defined as those students who have completed zero through 29.5 semester hours of college credit. Sophomores are those who have completed 30 through 59.5 semester hours. Juniors must have completed 60 through 89.5 semester hours. Seniors are defined as all students who have completed more than 89.5 semester hours.

Upper-level Credit

Upper-level credit is coursework at the 3000 and 4000 level. Special credit (testing credit, validated credit, etc.) does not count towards upper-level credit. Transfer credit from community colleges does not count towards upper-level credit.

Candidates for a bachelor’s degree must complete a minimum of:

- 30 total semester hours of upper-level credit
- 20 semester hours of upper-level credit must be earned at UCM
 - 12 upper-level hours must be in the major subject, nine of these must be earned at UCM
- One upper-level hour must be in the minor subject (if applicable) earned at UCM

Degree Audit Reporting System (DARS)

The Degree Audit Reporting System (DARS) produces a report that reflects a student’s degree requirements in a given catalog year and degree program. The DARS includes transfer credit and progress toward graduation. This report also designates the number of credit hours earned, both cumulative and UCM grade-point averages, and a listing of courses completed.

In addition to degree audits reflecting the student’s current academic major(s) and minor(s) (if applicable), students may run a “what-if” degree audit in MyCentral as a way to explore how their current courses completed would apply to different majors, minors, or catalogs.

Degree audits will reflect The Honors College requirements for those students accepted into The Honors College. Honors students who take courses outside of the typical honors choices will need substitutions provided from the dean of the The Honors College for the audit to reflect them properly.

Degree audits may include double major and double minors, but are not able to reflect double degrees. Students pursuing double degrees can run a “what-if” degree audit for the secondary degree program. Individualized majors and minors are not reflected on degree audits.

Students should run a degree audit prior to enrollment in future semesters to see what requirements are remaining. After enrollment, a second degree audit should be run to ensure that the courses scheduled fulfill degree requirements as expected. Courses which show at the end of the degree audit under “Elective Courses Taken” are not being used to fulfill degree requirements.

Deviations from the major or minor requirements must be approved in writing by the department chair and submitted to the Office of the Registrar to be reflected on the DARS. A student may access this report in MyCentral.

Grade-point Averages

In order to receive a degree, a student must earn a minimum grade-point average of 2.00 (C) in each of the following areas:

1. All work attempted (cumulative GPA).
2. All work attempted at Central Missouri (UCM GPA).
3. All work taken to satisfy major requirements at UCM.

- All work taken to satisfy minor requirements at UCM.

Students must review their degree and major program for all minimum GPA requirements. Several degree programs specify grade standards that may apply to acceptance into a program and/or that must be maintained for graduation from a program. Such special standards are listed under the major programs in the curriculum section of this catalog.

Grade Appeals

Students appealing a grade have one calendar year from the time the grade was issued to appeal any grade changes. These appeals should be directed to the instructor who taught the course in question. Please refer to the current *Grade Appeal Procedure* in the *UCM Student Planner/Handbook* for information regarding this procedure.

Application for Exception Procedure

All requests for an exception to undergraduate academic university policies and procedures will be processed through the Office of the Registrar. Please refer to the current *Exception Procedure* in the *UCM Student Planner/Handbook* for information regarding this procedure.

Amendment of Education Records

- If a student believes the education records relating to the student contain information that is inaccurate, misleading, or in violation of the student's rights of privacy, he or she may ask the university to amend the record by contacting the University Registrar.
- The university shall decide whether or not to amend the record as requested within a reasonable time after the request is received.
- If the university decides not to amend the record as requested, the University Registrar shall inform the student of its decision and of his or her right to a hearing under The Family Educational Rights and Privacy Act.

NOTE: The amendment of education records is NOT the process used for a grade appeal. Please refer to the current *Academic Appeal Procedure* in the *UCM Student Planner/Handbook* for information regarding this procedure.

Graduation with Honors

To be eligible for graduation with honors, a student must have earned both cumulative and Central Missouri grade point averages of 3.50. Those with cumulative and Central Missouri grade point averages of 3.50 to 3.74 graduate Cum Laude; 3.75 to 3.84, Magna Cum Laude; and 3.85 and above, Summa Cum Laude. Should the Central Missouri and cumulative GPAs be in different categories, the lower designation of honors will be recognized.

Residence

Residence requirements establish a minimum number of credit hours which must be earned from UCM. Online courses and courses which are offered off campus but through UCM do count towards residence hours.

A candidate for any bachelor's degree must have earned the following minimum hours at UCM:

- 30 hours overall
- 20 upper-level hours (3000/4000 level courses)
- 15 hours in the major
- 9 upper-level hours in the major
- 9 hours in the minor (if applicable)

- 1 upper-level hour in the minor (if applicable)
- the last 12 semester hours required for the degree

Date of Catalog for Checking Degree Requirements

Students are always subject to current administrative, academic and general policies and regulations. The *2009 Undergraduate Catalog* becomes effective Fall 2009.

Students use the *Undergraduate Catalog* issued for any year following the date of his/her first enrollment in the university so long as it is dated not more than eight years prior to the date the degree is conferred as a basis for degree requirements. A student must earn academic credit at UCM during the year of the catalog chosen or have attended consecutive semesters at another institution of higher education in Missouri. UCM follows the catalog agreement described in *Policies and Procedures for the Review of Academic Program Proposals: New Academic Programs, Off-Site Delivery of Existing Programs and Program Changes* (Missouri CBHE, April 1997). However, the university reserves the right to add, change, delete, and interpret policies at any time and to require these be met by those seeking degree candidacy and/or conferral.

Choice of Degrees

A student may pursue a second degree, different from that of the initial degree granted. Two identical degrees are not permitted. A second degree requires a minimum of 30 additional semester hours beyond the requirements of the first degree. Majors (and minors, if applicable) must be unique to each degree.

Application for Degrees

An application for each undergraduate degree to be awarded must be made in the Registrar's Office. Such applications must be received by the Registrar not fewer than 30 days before the date the degree is to be conferred. Students should apply for graduation online (www.ucmo.edu/portal/degreeapp) during the semester before they plan to graduate, but after they have enrolled in all remaining requirements. The student's degree audit should reflect that all remaining requirements are in progress. All curriculum substitutions (if applicable) should be received by the Registrar's Office prior to filing the application for degree.

Questions about applying for graduation should be directed to the Registrar's Office in WDE 1000, 660-543-4900, or registrar@ucmo.edu.

Final Examinations

Final examinations are given at the end of each semester according to an announced schedule. Permission to take an examination out of scheduled hours is granted only in special cases, with the approval of the instructor of the class and the Vice President for Student Affairs. A fee of \$10 per final is charged for rescheduling of final examinations. Any student who has three final examinations scheduled on any one day may request permission to move one of the examinations to another day during the final examination period. There is no charge for this, but approvals must be secured as described above. Resolution of conflicting examination schedules, as well as arranging make-up examinations, must be made with class instructors.

Final Grades and Transcripts

Final grades can be reviewed online in MyCentral. A student number and pin number is required. Official transcripts are processed by the Registrar's Office for a fee. Unofficial transcripts are available to students online.

Field Trips

At times, field trips are planned in conjunction with course assignments. Students in classes for which such trips are planned are to be given sufficient advance notice to make necessary arrangements for absence from the campus. Field trips are not scheduled during final examination periods nor can they be required by an instructor. Work missed in other classes may be made up, although instructors are not required to provide tutoring. All arrangements are subject to the limitations of university liability coverage.

When transportation is provided for the class, faculty may arrange for wheelchair accessible transportation by contacting Accessibility Services.

Family Educational Rights and Privacy Act

Central Missouri adheres to the federal Family Educational Rights and Privacy Act (FERPA). Copies of the full policy implementing the FERPA may be obtained from the Office of the Vice President for Student Affairs.

Degree Revocation Policy

It is the policy of the University of Central Missouri that a degree may be revoked when it is demonstrated by clear and convincing evidence that:

- A degree had been erroneously conferred when all requirements had not been satisfied at the time the degree was granted.
- A degree had been erroneously conferred as a result of an act of academic dishonesty.

The president of the university is charged with developing procedures to implement this degree revocation policy. The president of the university, the provost and the faculty will develop such procedures including the appropriate levels of procedural due process extended to the degree recipient.

Unauthorized Persons in Classrooms

Persons who are not officially enrolled in a course may not attend a class session without the prior consent of the instructor.

Persons bringing children on campus are responsible for their supervision and any inappropriate behavior.

Vehicles on Campus

Because parking space is limited, the university asks that students who can arrange other transportation not bring vehicles to campus. To park in student lots, students may buy parking permits at Parking Services (306 Broad Street). However, parking permits are limited by the number of parking spaces and may not be available for purchase. Handicap parking permits are available at the standard student rate when medical verification is presented to Parking Services or Accessibility Services, Elliott Union 220.

Students may get complete information on parking and operating motor vehicles on campus by picking up a copy of The University of Central Missouri Parking and Traffic Regulations at Parking Services, or contacting Parking Services at parking@ucmo.edu or toll free at 800-873-8577.

Alcohol and Other Substances

The university has established and is committed to enforcing clear policies that promote an educational environment free from the abuse of alcohol and other substances.

The university complies with federal regulations that require alcohol and drug testing for safety sensitive positions. The

university expects students, employees, visitors, and organizations to adhere to state statutes prohibiting individuals under the age of 21 from drinking or having alcohol in their possession. Drinking or possession of alcoholic beverages is prohibited in university buildings and residence halls except in those places where an explicit exception has been granted.

The university also expects students, employees and visitors to comply with laws that prohibit the possession, use, distribution and sale of alcohol and illicit drugs.

Anyone found to be in violation of such laws shall be subject to all applicable criminal penalties, as well as disciplinary action in accordance with applicable policies of the University of Central Missouri.

Students under the age of 21 are reminded it is unlawful to use fictitious identification for purchasing alcohol. Health risks associated with the use of illicit drugs and alcohol include, but are not limited to, addiction, accidents as a result of impaired judgment and ability, overdose, damage to internal organs or a developing fetus and unpredictable or violent behavior. Resources for assistance with alcohol or drug-related problems include the Counseling Center, University Health Services, Employee Assistance Program and a variety of community and regional referral services.

For more information call the Counseling Center at 660-543-4060 or University Health Services at 660-543-4770.

Enrollment Validation Policy

Central Missouri enforces an enrollment validation policy prior to the start of Fall and Spring semesters. Students must confirm their schedule via MyCentral to show that they intend to be enrolled in the upcoming semester. In addition to this online confirmation, students must attend the first day of each class or have made prior arrangements with their instructors to secure their seat in the course. Students whose instructors report first-day absences will have those classes dropped from their schedule. Students who do not attend classes and receive financial aid may be required to repay some or all of the assistance credited to their UCM account for the semester.

Enrollment Verifications

Central Missouri has authorized the National Student Clearinghouse to provide enrollment verification certifications for students through its web-based Student Self-Service program.

Student Self-Service enables Central Missouri students to print official enrollment verification certifications on demand via a secure student portal, MyCentral, at no charge. These certificates can be sent to health insurers, housing providers, or other organizations requiring proof of enrollment. Students can also check deferment forms and electronic notifications sent to lenders, view their enrollment history, obtain a list of student loan lenders and link to real-time loan information, and view enrollment verifications provided to student service providers at their request.

Social Opportunities

A college education is more than what happens in the classroom. At UCM, students are encouraged to participate in a variety of activities outside of the classroom that create a well-rounded educational experience. Getting involved on campus gives students the opportunity to develop interpersonal and leadership skills that will serve them throughout their lives.

Campus Activities

From participating in Campus Activities events to membership in a fraternity or sorority, UCM has it all! There are many things for students to do on campus including dances, plays, films, concerts, bowling, and being involved in clubs, intramural sports and student government. Taking part in social, cultural and athletic events provides students with many opportunities to learn about themselves, other people and the world in which they live.

Student Organizations

Approximately 180 registered student organizations exist at Central Missouri. Students are able to affiliate with academic honoraries, departmental organizations, religious organizations, sports teams, and special interest groups. Research indicates a positive correlation between involvement and student academic

success; one such experience is involvement in student organizations. Participation in student organizations offers a means to apply classroom learning, explore career choices, gain leadership experience and make valuable contacts.

For information, see the Office of Campus Activities, Elliott Union 217. To see a list of organizations and descriptions go to the Office of Campus Activities web page www.ucmo.edu/saffairs/oca.

Greek Life

Fraternities and sororities are a special type of student organization that many students choose to join while at Central Missouri. Students join fraternities and sororities through a process called recruitment which typically occurs at the beginning of each semester. Greek Life offers students the opportunity to develop leadership and organizational skills, participate in community service, and make life-long friends. Friendship, fun, scholarship, community service, and school spirit – Greek Life has it all! For more information, visit the Office of Greek Life located in Elliott Union 217 or call 660-543-4007.

Intercollegiate Athletics and Organized Sports

Central Missouri offers three general classes of organized activities in athletics and sports: intercollegiate athletics, intramural sports, and sports clubs.

Intercollegiate Athletics. Central Missouri belongs to the 10-member Mid-America Intercollegiate Athletics Association (MIAA) and the National Collegiate Athletic Association (NCAA), Div. II.

Varsity sports for women are basketball, bowling, cross-country, indoor track, outdoor track, softball, soccer, and volleyball. For men, they are baseball, basketball, cross-country, football, golf, indoor track, outdoor track, and wrestling. (See the Office of Intercollegiate Athletics, Multipurpose Building, Room 203, for information.)

The Athletic Committee, composed of faculty and students from all parts of the university, advises the intercollegiate athletics program.

Intramural Sports. An extensive intramural program gives university students, faculty, and staff many opportunities to take part in competitive and non-competitive activities at low cost. Team and individual activities are available for men, women, and co-recreational groups. Among these are badminton, basketball, billiards, bowling, golf, racquetball, rifle and pistol shooting, soccer, softball, swimming, table tennis, tennis, touch football, track, volleyball, wrestling, and many others. (Visit the Office of Campus Activities, Elliott Union 217, for information.)

Sports Clubs. Sports clubs give students an opportunity to participate in sports which are not included in the university's intercollegiate program. Club activities may be intramural (all participants being Central Missouri students) or extra-mural (competition with teams from outside the university). The university funds club sports but assumes no liability for them. (See the Office of Campus Activities, Elliott Union 217, for information.)



Whether intercollegiate or intramural sports, there's plenty for fans to cheer about at UCM. Admission to regular season sports events is free with student ID. In recent years Mules baseball, and basketball and Jennies bowling have made it into the national championship playoffs.

Recreation Facilities

Multipurpose Building. The “Multi,” located just west of the Audrey J. Walton Stadium, seats up to 10,000 in its arena and provides recreational facilities for students, faculty, and the community. Its basketball area accommodates four courts, five volleyball courts, and a six-lane, 220-yard indoor track. It also has eight handball/racquetball courts, two weight rooms, a six-lane, 25-meter pool with a one-meter diving board, conference rooms, and an activity area.

Pertle Springs. Located at the end of Holden Street one mile south of campus, Pertle Springs is a 300-acre recreational, instructional and biological research area. Popular activities on the wooded grounds are boating, fishing, hiking, and picnicking. Especially popular is the 18-hole golf course with its air-conditioned golf shop and fleet of golf carts.

The Recreation Center (Cosmo Bowl) is located in the Elliott Union and provides 10 bowling lanes, 10 billiards tables and a variety of video games. The facility can be reserved for student organizational, departmental or general public events. Freshens® is located here providing drinks, fruit smoothies, yogurt, popcorn, and pretzels.

Recreational Programs. At UCM, we work hard and play hard. Our recreational programs have something to meet everyone’s needs. Intramural sports offers a wide range of individual and team activities including flag football, softball, volleyball, basketball, and soccer. We also have an indoor rifle and pistol range (located in the Humphreys Building) where students can experience the challenges of recreational shooting. Contact the Intramural Office at 660-543-4007 or visit Elliott Union 217.

Shooting Range. The UCM Shooting Range is located east of Warrensburg at the Agriculture and Conservation Education Center at the Prussing Farm. The facility includes a 3,000-square-foot learning center for educational activities and social functions and three trap shooting ranges and one skeet range. The UCM Shooting Range is open to students, faculty, and staff as well as the general public. Contact 660-543-4837 or 660-543-4240 for information about the shooting range.

Union Fitness Center. The Union Fitness Center (Elliott Union 229) is an educational facility developed to provide Fitness/Wellness and Physical Education majors with a laboratory for research, testing, and rehabilitation activities. The facility is operated by the Department of Health and Human Performance and is temporarily located in the Elliott Union during the renovation of the Morrow/Garrison Complex. The Fitness Center is open to faculty, staff and students. The center houses computerized fitness equipment and Cybex weight equipment. Students, staff, and faculty are encouraged to inquire at the Health and Human Performance Office, Humphreys 216 (660-543-4256) or Elliott Union 229 (660-543-4387), about usage.

Other Facilities. Other campus facilities include a eight acres of recreational and practice fields west of the stadium, a 400-meter track in the football stadium, a play field southeast of Diemer Hall and the South Recreational Complex.

Five city parks are located within walking distance of campus. Knob Noster State Park, 10 miles east of the campus, offers group and family picnic grounds, hiking trails, and a swimming pool.

Services for Students

Academic Advisement

Academic advising is critical to the success, satisfaction, retention and graduation of the University of Central Missouri students. Academic advising is an ongoing interactive process involving the student, professional advisors, faculty advisors and the institution. The primary goal of academic advising is to assist students in the development and accomplishment of meaningful educational plans that are compatible with their life goals. Academic advisors help undergraduates plan career opportunities, determine degree programs, select courses and coordinate their academic progress.

The University of Central Missouri has created an advising system designed to meet the needs of all students. The Office of Transfer and Transition Services serves new transfer students (except for those in the College of Science and Technology, who are assisted in their college), conditionally admitted students, and students who are undecided about a major. All other students are assigned to the colleges for advising by both professional and faculty academic advisors. Students can find the name and email of their assigned academic advisor on their MyCentral home page. More information about academic advisement can be found at www.ucmo.edu/advising.

The six offices which provide academic advisement are:

Transfer and Transition Services

Ward Edwards Building, Room 1900, 660-543-4721
transition@ucmo.edu, www.ucmo.edu/transition

College of Arts, Humanities, and Social Sciences

Martin Building 124, 660-543-4814
cahssadvising@ucmo.edu, www.ucmo.edu/cahss

Harmon College of Business Administration

Ward Edwards Building 1600, 660-543-8577
hcbaadvising@ucmo.edu,
www.ucmo.edu/hcba

College of Education

Lovinger Building 2160, 660-543-4888
coeadvising@ucmo.edu, www.ucmo.edu/ced

College of Health and Human Services

Administration Building 104, 660-543-4497
chhsadvising@ucmo.edu, www.ucmo.edu/chhs

College of Science and Technology

Humphreys Building 223, 660-543-4554
cstadvising@ucmo.edu, www.ucmo.edu/cst

Academic Enrichment

The Department of Academic Enrichment (AE) provides support for students throughout their university experience. AE courses and programs range from those that prepare students for the general education curriculum to the McNair Scholars program, which prepares students for graduate school. AE offers free, walk-in tutoring through the Writing Center and Learning Center. AE courses (see course listings and descriptions in AE Department curriculum section) earn elective credit towards graduation. More information can be found by visiting Humphreys 127, calling 660-543-4061 or at www.ucmo.edu/ae.

Learning Center. The AE Learning Center offers free individualized tutoring in math, study skills, test taking, and test preparation. The AE Learning Center provides opportunities for all students to meet the challenges of college-level course work. The Learning Center offers a relaxed, informal setting for students, faculty, and staff to study, get individualized help, or find resources. The Learning Center is located in Humphreys 110 and is open Monday-Friday. More information can be found at www.ucmo.edu/learningcenter.

Writing Center. In one-on-one conferences, Writing Center faculty and tutors help students develop the intellectual skills necessary to become self-sufficient writers capable of revising and editing their own texts. In addition, computers, handbooks, style manuals, and other reference materials are provided to support any writing task. The Writing Center is open Monday - Friday in Humphreys 116 and has evening hours in the residence hall satellites announced early each semester. Online writing assistance, along with instructional handouts and general information, is available at www.ucmo.edu/writingcenter.

McNair Scholars Program. Funded by a U.S. Department of Education grant, the McNair Scholars Program offers preparation for doctoral study. This TRIO program is designed primarily for juniors and seniors who meet government eligibility requirements. Activities include information seminars, faculty mentoring, and the opportunity for a paid summer research internship. Because of federal guidelines, students must apply for acceptance to the McNair program through the Department of Academic Enrichment. Additional information can be found at www.ucmo.edu/mcnair.

Student Support Services (TRIO-SSS). SSS, a federally funded TRIO program, provides academic assistance to U.S. citizens and permanent residents who are first-generation college students, students from modest-income families, and/or students with disabilities. Tuition-free credit courses are offered in writing and mathematics to meet Planned Placement requirements and in university studies techniques and college success strategies. In addition, free tutoring in high-risk courses, additional advisement, workshops, a computer lab, and a laptop loan program can be accessed through TRIO-SSS in the Department of Academic Enrichment. Further information can be found at www.ucmo.edu/sss.

Summer Suspension Waiver Program. Students on academic suspension, with GPAs of 1.50 or higher, may request readmission for summer classes. Faculty mentors meet weekly with students to discuss strategies for improving academic performance. Students who successfully complete the summer program and achieve at least a 2.00 summer GPA are permitted to enroll in fall classes.

Assessment and Testing Services

The Office of Assessment and Testing Services administers, supports and coordinates UCM's Assessment and Testing Services Programs. Staff can assist students in identifying appropriate tests, register students for tests and/or provide test registration information.

Assessment - UCM's Quality Improvement Program

The Director of Assessment is located in Administration 304, 660-543-4116, and the interim director of Testing Services is located in Administration Building 102, 660-543-4919. The Office of Assessment and Testing Services administers, supports and coordinates Central Missouri's Assessment and Testing Services Programs.

Assessment is an integral part of the continuous process of

learning and development with the purpose of enhancing a student's total university experience. Assessment uses well-defined outcomes and criteria employing multiple measures. All students are required to participate in UCM's assessment program. This assessment may include periodic measurements of student intellectual and personal growth through examinations/assessments in general education, intellectual skills or the major field of study and various opinion surveys. A description of the major goals and components of CQIP can be found at www.ucmo.edu/testing-services.

General Education Assessment. Information regarding the university's general education assessment policy may be found in the General Education portion of this catalog.

Major Field Assessment. Each academic program establishes the conditions and requirements for assessment of its majors. All students are encouraged to contact faculty within their program to determine the policy, practice and standards for assessment in their major field.

Surveys. In addition to standardized and locally developed assessments in general education and the major field, Central Missouri utilizes a variety of opinion surveys designed to measure student perceptions of their experiences at UCM, both academic and non-academic. The information derived from assessment activities is used to facilitate student learning and development, to promote faculty and staff growth and to improve the quality of academic and non-academic programs, services and facilities.

Testing Services

Testing Services serves as the repository of official score reports, provides information and administers national, state, and locally developed tests, as well as supports and coordinates Central Missouri's Quality Improvement Program (CQIP). Testing Services is a member of the National College Testing Association (NCTA) and the Consortium of College Testing Centers. Testing Services adheres to the NCTA Professional Standards and Guidelines, www.NCTA.org. For additional information, contact Testing Services, Administration Building 102, by calling 660-543-4919, or visit www.ucmo.edu/testing-services.

Official Score Report Policy

- Official score reports are required to be on file for a student to meet admission and/or other program requirements.
- Only score reports that are sent from the test company directly to Testing Services are considered official.
- The University of Central Missouri retains and uses scores obtained within the past 10 years. ACT scores accepted at the time of admission may be no older than five years.
- To protect confidentiality and privacy, score reports are not available by telephone, fax, email, Internet, or proxy.
- An official ID containing the candidate's photo and signature is required for most services.

Test Registration

- Test registration and/or information is available in MyCentral, select the "Student Services" tab and "UCM Testing Services". Select "Testing Services' Registration Calendar". Registration for some tests must be completed in person in Testing Services.
- Advanced test registration is required for most tests. Test administrative fees and test registration deadlines apply for most tests.

- Test administrative fees and test fees are automatically billed to the student's UCM financial account.
- For candidates not enrolled at UCM, only money orders payable to UCM will be accepted. Candidates are not registered until Testing Services confirms receipt of test administrative fees and the availability of a seat.
- Test administrative fees are non-refundable and non-transferable to another test date.

Test Cancellation Policy

To discourage candidates from registering and not showing up and to maintain reasonable test administrative fees, candidates are obligated to test on the date and time that is originally scheduled. A candidate who decides not to keep the appointment is responsible for notifying Testing Services, during business hours, a minimum of 24 hours in advance of the test date. Rescheduling administrative fees apply.

Candidates with Documented Disabilities

Testing Services is pleased to accommodate candidates who have a documented disability. In compliance with the Americans with Disabilities Act, candidates with documented disabilities, who wish to use their approved test accommodations, are responsible for:

- Requesting test accommodations at the time of registering for a test but no later than a minimum of two weeks prior to a test.
- Requesting the Office of Accessibility Services, Elliott Union 222, 660-543-4421, provide Testing Services with approved accommodations. Testing Services needs the information a minimum of two weeks prior to the test date.
- Making payment of test administrative fees by registration deadlines.
- Confirming with Testing Services the test date, test location, and test time.

Testing Services is not able to provide test accommodations to students arriving for a test but have not followed the above procedures. The candidate will be allowed to either take the test under standard test administration conditions or to follow the above procedures for another test date.

Campus Advocate

The Campus Advocate, located in Elliott Union 224, serves as a support office for students with questions, concerns and/or problems. The advocate's role is to facilitate communication between students and others (faculty, administration, other students) and to assist students in knowing how to address/resolve problems within the framework of the university's organizational structure.

Chapel

The Alumni Memorial Chapel was built in 1956 in memory of Central Missouri students who served in World War II and the Korean War. Funds were donated by private individuals and organizations. The Alumni Chapel seats 200 in the sanctuary, has a meeting room for 20 people, and contains a complete kitchen and dining area in the undercroft. The Danforth Foundation funded the attached Danforth Chapel which contains six kneeling benches and is open to the public during the day. In the fall of 1994 a bronze sculpture titled "Guardian," which is a memorial to all men and women who have served the country in armed services, was placed near the entrance of the Danforth Chapel. The chapel is used by Central Missouri students as a meeting place for social and religious organizations, choir practice, initiation ceremonies, group testing, parties, and weddings. Students also use it for individual or group meditation and communion.

The Counseling Center and Lighthouse Services

The Counseling Center and Lighthouse Services are located in Humphreys 131. Services are confidential and can help students with anything that might interfere with success as a student, such as difficulty coping with stress, relationships, home life, or any other type of personal problem. Lighthouse Services can help persons who have been sexually assaulted, hurt by their boyfriends or girlfriends, are in an emotionally painful relationship, or are being stalked. Call 660-543-4060 for more information or to schedule an appointment. Visit them on the web at www.ucmo.edu/cps.

Dining Service

In addition to regular meal service in residence halls, dining service is also available in the Elliott Union. The union features, on the first level, the Central Courte offering Burger King® Express, Pizza Hut® Express, Taco Bell® Express, Sub Connection®, and the Corner Market™, which offers daily entrees with all accompaniments, soup, salads and desserts. Located on the main level in the Recreation Center is Freshens® which features drinks, fruit smoothies, popcorn, yogurt and pretzels. Also on the main level in the union atrium is Jazzman's® Cafe with delicious Seattle's Best® coffee, espresso, latte, tea and fresh-baked desserts.

Both on- and off-campus groups and organizations may arrange for catered refreshments and full meals through the Union Catering office, Elliott Union 108, 660-543-4440.

Distance Learning

Distance Learning at the University of Central Missouri encompasses Internet-based, electronically-delivered education via online and interactive television (ITV). Within the School of Graduate and Extended Studies, Distance Learning manages, schedules, coordinates and assists in marketing all distance education courses and degree programs. Appropriate student services, including library resources, financial assistance, an online writing lab and technical support, are provided to meet the additional needs of the distance learner. More information can be found at <http://ucmo.edu/ucmonline>.

Elliott Union

The Elliott Union is centrally located on the main campus, serving as the "living room" for the campus community. The union provides facilities for dining, meetings, social functions, conferences, student activities and programs, a computer lab, a copy center, ATMs, student organization offices, study lounges, and quiet areas. The union also houses student services offices which include: Department of Student Life, Office of Campus Activities, Office of Community Engagement, Dining Service/Catering, Office of Career Services, Office of Campus Advocate, Student Government Association, Facilities and Conference Services Office, and the Office of Accessibility Services. The Elliott Union also features an Information Desk that provides campus-wide information to students, staff, faculty and guests.

English Language Center

The mission of the English Language Center (ELC) is to provide international students with an intensive English program of study which teaches the appropriate English language and study skills to pursue an academic degree program at the undergraduate or graduate level in a U.S. university through a dynamic curriculum which responds to the needs of the students and requirements of academic programs. Stop by Ward Edwards 0800, or call 660-543-8796 for information about these programs.

The ELC offers intensive instruction in English and other short-term programs for English language studies. For qualifying

students, the Intensive English Program (IEP) provides the opportunity to improve students' English language skills and become accustomed to a university setting in the United States. The courses are designed to help non-native speakers of English build on their existing language skills. The IEP offers courses at a variety of proficiency levels in reading, writing, grammar, communication skills, testing skills, vocabulary, accent reduction, American culture, and academic preparation. These courses are credit bearing, but do not count toward completion of an academic degree.

International Student and Scholar Services

Located within the International Center, Ward Edwards 1200, International Student and Scholar Services assists all international students and visiting international faculty through orientation, advocacy and programming activities. Other areas of service include immigration and student status certification activities, work authorization, sponsorship of the International Student Organization and International Student Ambassadors, and promoting the role of international education.

KMOS-TV/KTBG-FM

KMOS-TV is a non-commercial public broadcasting station operating on Channel 6 with 100,000 watts of power. Studios are located on campus in the Martin Building. The station can be received by over 1 million residents in central Missouri. A satellite receiving dish on campus permits direct reception of TV programs from the main PBS transmitting station in Alexandria, VA, and from other producers around the country. The station airs a full range of programs including instructional courses, PBS programs, and locally produced shows.

KTBG-FM 90.9 The Bridge, the radio voice of Central Missouri, is a 100,000-watt stereo operation. The station broadcasts

to a potential listening audience of one million people. Studios and offices are located in the Martin Building. KTBG-FM broadcasts a full range of National Public Radio programs and Adult Alternative music. The station also produces and airs a number of local programs. KTBG-FM can also be heard at the Lake of the Ozarks on 104.9 FM.

Both KMOS-TV and KTBG-FM are managed by professional core staffs with most of the actual operations carried on by volunteers and paid students.

Library Services

Central Missouri's Library Services supports the instructional, research, and public service programs of the university. James C. Kirkpatrick Library has a centralized reference area, which includes periodicals, government documents, and special collections. The government documents area houses the depository collections for federal and Missouri documents. Library holdings include approximately 1,282,208 books, documents and bound volumes, 826,831 pieces of microform, and 1,605 periodical subscriptions. Many more periodicals are available via the online database subscriptions of the library.

The library faculty and staff provide reference and bibliographic services, teach library skills and research techniques, lecture to classes, and conduct library orientation tours. Quest, a computerized catalog, provides online access to library collections. The library is a participant in the Missouri Bibliographic Information User System (MOBIUS) giving students access to the library holdings of 60 Missouri academic libraries, two large public libraries, and the Missouri State Library. A large portion of the library's print holdings may be loaned to patrons and many of the databases are available to students and university employees through a secure Internet access. Library Services is committed to providing quality services using a variety of information resources and technologies including assistive technology for accommodating those library users with disabilities. For more information about Library Services, please visit <http://library.ucmo.edu>.

Harmon Computer Commons (HCC) provides networked IBM and Macintosh workstations on a first-come first-served basis, access to software, the Internet, Quest (the library online catalog), email, and class assignments. Faculty may schedule any of the four computer classrooms for hands-on instruction. Research aids, tutorials, and supplementary material are available in the reference area of HCC. Typewriters are available, and staff is available for assistance. Contact HCC in Library 1250, call 660-543-4196 or email HCC@libserv.ucmo.edu. Visit HCC's web page <http://library.ucmo.edu/hcc>.

Non-Traditional Student Services

Non-Traditional Student Services is a resource office for Central Missouri's students who are age 24 and over, have a gap of five or more years since high school, are married, single, have children, or are a veteran. This office provides information, support, advocacy, and referrals to campus and community support services. The office has information on non-traditional scholarships, commuter ride-sharing network, housing, child care, and tutoring or other skill enhancers. Non-Traditional Student Services is located in Elliott Union 217. Call 660-543-4007 for more information.

Office of Accessibility Services (ADA/504)

The Office of Accessibility Services provides students and visitors with disabilities with the services necessary to achieve equal opportunity while at UCM. OAS works with faculty, Housing, Facilities and other campus programs to provide opportunities for persons with disabilities. Some of the disabilities that are included



are learning disabilities, attention deficit disorder, orthopedic and mobility issues, mental health, vision, hearing and health issues such as migraines, seizures, HIV, IBS and diabetes.

Students seeking accommodations will need to provide recent professional documentation of the disability to OAS. The documentation will need to be on a professional letterhead and indicate the nature of the impairment, that it is permanent or long term, and how it affects the student. More information is available on the OAS web site. Accommodations depend upon the disability and the documentation and might include testing services, text in alternative format, sign language interpreters, or other services.

For additional information, contact OAS at Elliott Union 222, 660-543-4421, fax 660-543-4724, visit www.ucmo.edu/access, or email access@ucmo.edu.

Office of Career Services

The Office of Career Services is located in the Elliott Union 302 and can be reached at 660-543-4985. Career Services helps students identify careers and stay in touch with the job market before and after they graduate. Its services include:

- Employment Referrals
- Career Fairs
- Teacher Placement Day
- On-campus Interviews
- Career Counseling
- Information on Employment Opportunities
- Career Library
- Career Workshops
- Résumé Writing Assistance
- Interviewing (via videotaped mock interviews)
- Job Search Skills
- Credential Services
- Part-time Student Employment
- Experiential Education Opportunities
- Comprehensive Web Page Including Job Listings

These services are optional, but students are encouraged to use them for selecting careers and for help in finding positions. Students should register when they begin looking for any type of employment opportunity or hands-on experience. After they graduate, they should notify the office of their employment status and any changes in address or phone number.

More than 600 employers will visit Central Missouri's campus to interview students for full-time, internship and summer positions. Both employers and students may call or write the Director of Career Services regarding their employment needs.

Please note that no course, program, certificate, and/or degree available at Central Missouri carries with it a promise, real or implied, of immediate or eventual employment within the specific areas covered or in any other specific or general areas. Although UCM offers its services to those seeking jobs, gaining employment is the responsibility of the student.

Office of Community Engagement

Central Missouri's Office of Community Engagement encourages understanding and appreciation of all aspects of human diversity within the Central Missouri community and engages surrounding communities to collaboratively address social justice and community issues, as it relates to human diversity. Located in Elliott Union 224, phone 660-543-4156, the office encourages understanding and appreciation of all members of Central Missouri's community. The office's goal is to foster an open and

inclusive community on Central Missouri's campus. The Office of Community Engagement achieves its mission through:

- Oversight of the university Campus Diversity Plan.
- Oversight of the Kansas City Task Force and the Kansas City Task Force Advisory Board.
- Assistance on university accreditation related to human diversity.
- Facilitation of campus and community educational programming and activities related to human diversity.
- Maintenance of campus diversity resource library.
- Incorporation of human diversity understanding into university operations and policies.
- Fostering of the Central Missouri Community Creed.
- Assistance to campus student multicultural programming.
- Assistance to all university programs on incorporation of diversity awareness programs and initiatives.
- Facilitation of goals related to human diversity as stated in the University Mission Statement.
- Interaction with diversity-related offices and organizations on campus and in surrounding communities to build partnerships.

The International Center

The International Center is located in Ward Edwards 1200. Housed together are the International Programs and Study Abroad services, International Admissions, and International Student and Scholar Services. The Intensive English Program is located in the English Language Center in Ward Edwards 800.

Students interested in attending school in another country are encouraged to visit the International Center and inquire about UCM Study Abroad programs. Placement opportunities exist in approximately 220 schools in over 50 countries.

Office of Student Financial Services

The Office of Student Financial Services administers a wide variety of federal, state, and UCM scholarship, grant, loan, and employment programs, all of which provide funds to help eligible students satisfy the educational and living expenses of attending UCM. Knowledgeable staff members are available to assist students and their families with all aspects of applying for financial assistance and VA educational benefits. The office is located in Ward Edwards Building 1100 and may be contacted by telephone at 660-543-8266, fax 660-543-8080, or email at sfs@ucmo.edu.

School of Graduate and Extended Studies

With the cooperation of Central Missouri academic departments, the School of Graduate and Extended Studies administers courses and degree programs off campus, online and through interactive television. A separate catalog is available for the graduate-level programs. The office also coordinates the university's Summer Session, workshops, non-credit courses, contract training, high school dual credit courses, continuing education units (CEUs), vocational education courses and entrepreneurial courses. The office is located in Ward Edwards Building 1800 and may be contacted by telephone at 660-543-4621.

UCM Summit Center

The University of Central Missouri's School of Graduate and Extended Studies operates a center in Lee's Summit, MO, in an effort to serve students in the greater metropolitan area. The UCM Summit Center is located in the Summit Technology Campus at the

junction of Missouri highways 50 and 470. The 40,000-square-foot facility features multi-use classrooms and seminar rooms equipped with state-of-the-art technology, interactive television classrooms, computer labs and conference rooms. Offerings include courses toward the completion of 16 degree programs and non-credit courses, workshops and seminars. The Summit Center may be reached at 660-543-8228.

Union Station: Crossroads to Technology

Union Station sells educationally priced computer hardware and software and is located in Elliott Union 119. Current faculty, staff and students are eligible to purchase hardware and software. Check the web site at www.ucmbookstore.com and click on “Tech Store.”

University Health Center

Clinical Services. The University Health Center, located at 600 S. College St., just south of The Elliott Union, offers a full range of primary health care services to students and their spouses, as well as selected services for faculty and staff. The Health Center is staffed by physicians, nurse practitioners, nurses, and other qualified professional and support staff, and operates primarily on an appointment system, although urgent illnesses and injuries are given priority. Fall and spring semester hours are Monday - Friday, 8 a.m. to 5 p.m. Contact the Health Center for summer and semester break hours. Check out the web site at www.ucmo.edu/uhs or call 660-543-4770 to schedule an appointment.

Emergencies. In the event of an emergency, call 911 from any campus phone, or visit Western Missouri Medical Center at 403 Burkarth Road in Warrensburg.

Health Insurance. All students attending Central Missouri should have adequate health insurance coverage. All international students are required to show proof of insurance, or must enroll in the student health insurance plan. Domestic students may also enroll in the student health insurance plan for themselves and their dependents.

The student insurance plan provides benefits to insured students and their insured dependents on or away from campus, 24 hours a day. The insurance year runs from August to August, and may be paid for the entire year, or on a per semester basis. For more information about the student insurance plan, call 660-543-4771, or stop by the University Health Center to pick up a brochure.

Health Promotion and Wellness Services. The Health Promotion Office offers information and programs for students to

help them make healthy choices while on campus, and to help them establish healthy habits to last a lifetime. Programs and information areas include alcohol risk reduction, healthy relationships, sexual health, stress management and more. For information on programs, or to get involved as a volunteer, call 660-543-8338, or stop by the office in the University Health Center at 600 S. College St.

University Store

The University Store is the primary source for undergraduate and graduate textbooks. The University Store also sells a variety of tradebooks and magazines, supply items for the classroom and Central Missouri apparel and gifts. A textbook reservation service is available for fall semester classes. A special order desk accepts orders for a variety of merchandise. “A partner in education,” the University Store is located on the lower level of the Elliott Union and can be reached at 660-543-4370. Check the web site at www.ucmbookstore.com and click on “Tech Store.”





Welch-Schmidt Center for Communication Disorders

UCM has a comprehensive speech-language and hearing clinic in the Welch-Schmidt Center for Communication Disorders (Martin 34). Undergraduate and graduate student clinicians, supervised by faculty of the Department of Communication Disorders, provide assessment and treatment to students, faculty and members of the community with articulation, voice, swallowing, stuttering, language and/or hearing disorders.

The center has treatment rooms with two-way mirrors, video and audio monitoring; an early childhood preschool for children with speech and language disorders who are between the ages of two and one half and five years; a voice and swallowing laboratory including rigid and flexible endoscopy for vocal fold visualization, air-flow/pressure measurements and acoustic evaluation; four audiologic suites where hearing evaluations, impedance audiometry, otoacoustic emissions, video otoscopy, auditory brainstem response and electronystagmography are performed. The hearing aid laboratory is equipped with the latest technology for the fitting and dispensing of hearing instruments. Students have available a variety of current assessment and treatment materials and a student clinician workroom complete with Macintosh and PC workstations.

Students, faculty, staff and their immediate families may use the services of the center at reduced fees. The center welcomes self referrals and referrals from university faculty and staff, University Health Services and community health and educational agencies.

Other Services and Facilities

Airport

UCM owns and operates the Max B. Swisher Skyhaven Airport located three miles west of Warrensburg on Highway 50. It includes 402 acres of land; a 4,200-foot lighted runway, with a full-length parallel taxiway; a 2,800-foot lighted runway; and buildings for administration, maintenance, and other uses. The airport is a teaching laboratory for the university and a community airport serving the Warrensburg area.

Alumni Association

The Alumni Association of the University of Central Missouri provides opportunities for alumni to stay connected with their alma mater after graduation by hosting alumni gatherings throughout Missouri and around the country. Reunions are held for classes and organizations to reunite alumni and bring them to campus. Events are planned in conjunction with athletic events for alumni and fans alike. The Alumni Association seeks to recognize the accomplishments of alumni through awards such as the Distinguished Alumni Award, Distinguished International Alumni Award, and the Outstanding Recent Alumni Award. Children of alumni who are attending the University of Central Missouri may apply for designated scholarships.

Membership in the Alumni Association is complimentary to graduates of the University of Central Missouri. Members receive *Today*, the alumni publication, four times per year as well as invitations to events in their area. Other benefits include assistance with reunion planning and locating fellow alumni, access to university facilities, bookstore discounts, and career assistance.

More information on the Alumni Association can be found in the Smiser Alumni Center located in the Elliott Union, by calling 660-543-8000 or e-mail alumni@ucmo.edu.

The Center for Teaching and Learning

The Center for Teaching and Learning advances Central Missouri's academic mission by encouraging and supporting the advancement of instruction, the scholarship of teaching and learning, and service learning. Professional, technological and developmental assistance for faculty and staff is provided by means of a coordinated training program, modern laboratory facilities and

expert technical advice and support. The center seeks to integrate sound teaching practice with current instructional technology to foster faculty growth and to contribute to Central Missouri's statewide mission in professional technology.

Central Regional Professional Development Center

The CRPDC is the primary operating agency of the Central Professional Development Consortium. The center's mission is to provide information and resources in proven instructional and administrative practices which promote quality instruction in the classroom, overall school improvement and school-linked services for children and youth and their families. The center offers professional development opportunities, including inservices and workshops, to practicing teachers and administrators designed to address needs in all areas, particularly in science, math, technology and reading/writing. The center's toll-free number is 800-762-4146. The executive director may be emailed at vinson@ucmo.edu.

Child Care Centers

The university supports two child care centers on campus. The facilities are located at the Foster/Knox Building and the Central Village Apartment Complex. Both of these centers are licensed with the Missouri Department of Health and Senior Services. Central Village holds a certificate of accreditation from Missouri Accreditation and Foster/Knox is working toward their certification.

The child care facilities are available to all students, staff, and faculty. Children six weeks to 10 years may enroll. Enrollment is accomplished through a waiting list. The child care centers have adopted Creative Curriculum to assist in planning appropriate learning experiences for every child in our program. All children in our care are provided meals.

Both centers offer full-day care, Monday - Friday and offer attendance options of Monday/Wednesday/Friday or Tuesday/Thursday. Central Village offers evening care for children of students attending night classes Monday - Thursday evenings. Foster/Knox Center is the only center open during the Summer Sessions and offers a Summer Camp program for school-age children. For more information or to take a tour, call Foster/Knox at 660-543-4605 or Central Village at 660-543-4793.

In addition to the two services above the university offers the Child Development Lab on the first floor of the Lovinger Education Building. The CDL is licensed with the Missouri Department of Health and Senior Services and holds a certificate of accreditation from Missouri Accreditation. The mission is to serve children, the community, families, college students, departments, and campus by meeting their needs and by becoming a model program using current practices in Early Childhood Education. The CDL is able to enroll children ages two through six.

The Child Development Lab is a learning environment dedicated to progressive work in the field of Early Childhood Education. The program is inspired by Constructivist theories. It emphasizes a belief that the child's environment and collaboration with others are essential tools in learning. The materials and design of the classroom allow children to gain more knowledge and understanding of the world around them.

The program offers care Monday - Friday, with options of full-time or part-time (Monday/Wednesday/Friday or Tuesday/Thursday). The school opens at 8 a.m. for the before-school program. The pre-school program begins at 8:30 a.m. and ends at 1:30 p.m. The extended day program continues from 1:30 p.m. to 5 p.m. For further information, please call 660-543-4824.

Information Services

With the Chief Information Officer and most offices located in the Ward Edwards Building, the Division of Information Services provides information processing, computer support, network, and telecommunications support for the entire university.

The Office of the CIO provides divisional oversight, project management services, security coordination, planning and communication services for campus-wide technology.

The Department of Management Information Systems designs, develops, acquires and supports application software systems, including financial, student services, human resources, financial aid, and alumni/development management for the many administrative offices of the university. MIS also provides database management and web application/interface support for many university software applications.

The Department of Information Technology Services provides support for network servers and data storage resources including back-ups, as well as campus-wide applications such as email. ITS also provides support for servers dedicated to use in specific campus areas, such as academic departmental servers.

The Department of Telecommunications administers and maintains the university fiber-optic and copper wire cabling system which provides voice, data and video support to all campus buildings, as well as managing the campus telephone PBX and voice mail systems. This department is also responsible for the campus-wide system that allows wireless access to university network resources.

The Department of User Services supports more than 7,500 workstations, the vast majority of which are connected to a high-speed network. It provides computer support through a central Help Desk facility that is operated 24/7/365, along with supporting Field Services and dedicated technician staff, remote desktop support, and general and customized training for faculty, staff, and students. For assistance, contact 660-543-4357 (HELP).

Institute for Entrepreneurial Studies and Development

The Institute for Entrepreneurial Studies and Development provides entrepreneurial development services and technical support to technology-based businesses and high-growth enterprises. The institute also provides educational programs in finance, marketing, advanced manufacturing and intellectual property. Services provided range from one-on-one counseling to customized training in technology and business skills. Experts located both on- and off-campus provide consulting, training, and research assistance as needs are identified. These programs and services support the local businesses as well as have a direct positive impact on the Missouri economy. You can contact IESD at 660-543-4663 or visit us at www.ucmo.edu/iesd.

Institute of Justice and International Studies

The Institute of Justice and International Studies, housed in the Department of Criminal Justice, has an interdisciplinary focus that serves students, faculty, the community and various professionals. The institute regularly organizes and hosts on-campus symposia and academic conferences. These events focus on a myriad of topics, such as juvenile justice, homeland security, culture and crime, and counter-terrorism. During such events, experts from around the world gather on campus at least one time per year to discuss critical international justice issues. The Institute also hosts a Fulbright Fellow and regularly supports academic international study tours. Additionally, the Institute produces an annual internationally distributed scholarly refereed journal, the *Journal of the Institute of Justice and International Studies*.

Missouri Safety Center

Promoting safety in Missouri and the nation, the Missouri Safety Center seeks to prevent injury and death through technology transfer, instruction, research and public service. The center utilizes a staff of safety professionals dedicated to injury prevention. These safety professionals deliver programming to a diverse clientele which includes personnel from law enforcement, pupil transportation, industry, government and the general public. State-of-the-art information and use of advanced technology is at the core of the center's various curricula and programs.

The Missouri Safety Center's Highway Safety Instructional Park is located just south of the main campus. This unique facility houses the professional training programs, off-street driving range, skid pad, and off-road and all-terrain vehicle range. The center maintains a fleet of more than 100 vehicles for road, special training and range use. Also housed within this facility are an advanced computer software training laboratory, and one of the nation's foremost breath alcohol instrument training and repair laboratories.

National Police Institute

The National Police Institute (NPI) is a nationally recognized criminal justice training center. It provides advanced training in a number of areas and houses the regional POST certifying police academy.



University of Central Missouri Prussing Farm

The 260-acre University of Central Missouri Prussing Farm, a teaching unit of the Department of Agriculture utilizing the latest in agriculture technology, provides laboratory experience for students in agriculture classes and work opportunities for students interested in hands-on experience. The newest additions to the farm are a two-classroom Agriculture and Conservation Building and a trapshooting range with skeet overlay funded by a grant from the Missouri Department of Conservation. Additional teaching/research facilities are a mature orchard, greenhouse complex with dwarf orchard, and research plots on campus and at the 100-acre Agricultural Research Farm on Mitchell Street. Agriculture research, funded by the university, private industry, and the Natural Resources Conservation Service is carried on by faculty and students at these facilities.

Public Safety

The Department of Public Safety includes the university police, Key Control, Environmental Health, Safety and Parking Services. It is located at 306 Broad St. and is open 24 hours daily, 365 days per year. Call 660-543-4123.

For emergencies on campus, dialing 9-1-1 from the university phone system will reach the Department of Public Safety. Dialing 9-1-1 from a cell phone will connect the caller to the Johnson County Central Dispatch center. Additional information can be found at www.ucmo.edu/ps.

Publications

The following publications are produced and distributed by the University of Central Missouri:

- *UCM Today*, a quarterly magazine for alumni and friends of the university published by University Relations and the Office of Alumni Relations and Development.
- *The Muleskinner*, a weekly campus newspaper published by Department of Communication student staff.

Research

The Office of Sponsored Programs establishes, administers and coordinates programs that guide Central Missouri in its research, scholarly activity and creative endeavors. The office maintains information about funding opportunities from government and private sources. This information includes newsletters, announcements, computer databases and electronic access to federal and private agencies. The office also maintains a research resource library that contains agency regulations and application forms, reference books and manuals on research administration, how-to books on grant writing and directories of foundation support. For assistance with any of your research needs contact the Office of Sponsored Programs at 660-543-4264 or email research@ucmo.edu.

Research Involving Human Subjects. In order to comply with federal regulations and to protect the health and safety of human subjects involved in research, all research protocols involving the use of human subjects must be in compliance with *Academic Procedures and Policies #9: Procedures for Human Subjects Review*. All projects involving human subjects in research must be approved in advance by the Human Subjects Review Committee. Forms are available at www.ucmo.edu/osp.

Research Involving Animals. Federal law requires that all research projects involving the use of selected mammals and birds be conducted to ensure humane treatment of animals. Accordingly, all such projects, regardless of the funding source, must be approved in advance by the Institutional Animal Use and Care Committee. Forms are available at www.ucmo.edu/osp.

Student Volunteer Programs

Student Volunteer Programs provide students with opportunities to become involved in the Warrensburg community. The office provides referrals to local agencies and schools for special projects and ongoing commitments. Each year a group of students spends spring break working with Habitat for Humanity building a home. This office also offers off-campus community service and federal work study job positions. Students must qualify for work study through the Office of Student Financial Services. For information on how to be a part of this enriching experience, stop by the Office of Campus Activities, Elliott Union 217, or call 660-543-4007.

SECTION II

Degree Program Requirements and Course Descriptions

Degrees

A degree is a formal title conferred upon an individual for the completion of a program of study. Undergraduate degrees are called baccalaureate or bachelor's degrees. These terms can be used interchangeably. Central Missouri offers the following baccalaureate degrees:

- Bachelor of Arts (B.A.)
- Bachelor of Fine Arts (B.F.A.)
- Bachelor of Music (B.M.)
- Bachelor of Music Education (B.M.Ed.)
- Bachelor of Science (B.S.)
- Bachelor of Science in Business Administration (B.S.B.A.)
- Bachelor of Science in Education (B.S.Ed.)
- Bachelor of Social Work (B.S.W.)

General Requirements for All Baccalaureate Degrees

1. A baccalaureate must total a minimum of 120 semester hours.
2. Students must earn a minimum of 30 semester hours from Central Missouri.
3. The last 12 semester hours of the baccalaureate must be earned from Central Missouri.
4. A baccalaureate must include a minimum of 30 semester hours of upper-level credit from an accredited 4-year institution and a minimum of 20 of those hours must be completed at Central Missouri.
5. A baccalaureate must include completion of the General Education Program as prescribed by the university. See "General Education Program" in this section.

Specific Requirements for the Various Baccalaureates

BACHELOR OF ARTS

1. A major for this degree usually shall be 30-35 semester hours.
2. A modern language requirement shall be nine semester hours and may be met as follows:

The modern language requirement is fulfilled by successfully completing nine semester hours of one modern language, or completing six hours of one modern language and three hours of modern literature in translation (ENGL 2220), or completing three hours of an upper-level modern language course.

Students with previous study of a modern language in high school who enroll in a second semester modern language class or higher may be eligible for validated credit. See Department of Modern Languages Statement of Policy. For further information contact the chair of the Department of Modern Languages at 660-543-4780.

BACHELOR OF FINE ARTS

This is a professional performance degree available through the Departments of Art and Theatre.

1. A major for this degree normally shall be 60-80 semester hours.

BACHELOR OF MUSIC

This is a professional performance degree available through the Department of Music.

1. A major for this degree normally shall be 80-82 semester hours.

BACHELOR OF MUSIC EDUCATION

This is a professional education degree available through the Department of Music. Students planning to obtain teacher certification should see *Teacher Education Policies and Procedures*.

1. A major normally shall total 60-66 semester hours.
2. Professional education courses for this degree shall be 25-35 semester hours.
3. A candidate for this degree must have a minimum cumulative grade-point average of 2.50 based upon total hours attempted.
4. All students receiving this degree must obtain minimum scores on the area specialty test in music of the National Teacher Examination to be eligible for teacher certification (HB463). See *Teacher Education Policies and Procedures*.

BACHELOR OF SCIENCE

1. A major for this degree normally shall be 40-45 semester hours.
2. Candidates for this degree who are seeking teacher certification must satisfy teacher education certification standards. See B.S.Ed. degree requirements below.

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

1. A major in this degree normally shall be 60-70 semester hours.
2. Candidates for this degree must achieve a minimum cumulative grade-point average of 2.25 for graduation (2.40 for finance majors).

BACHELOR OF SCIENCE IN EDUCATION

Students planning to obtain teacher certification should see *Teacher Education Policies and Procedures*.

1. A major for this degree shall be in a certifiable area and normally shall be 30-36 semester hours except in those instances where certification requirements exceed this amount.
2. A minor for this degree normally shall be 18-24 semester hours.
3. Professional education courses for this degree shall be 25-35 semester hours.
4. A candidate for this degree must have a minimum cumulative grade-point average of 2.50 based upon total hours attempted.
5. All students receiving this degree must obtain a minimum score on the appropriate exit test, generally the major area specialty test of the National Teacher Examination, to be eligible for teacher certification (HB463). Not obtaining the prescribed minimum score does not preclude receiving the degree. Students with double majors in education normally must plan to take tests in both areas, over a two-semester period.

BACHELOR OF SOCIAL WORK

This is a professional degree available through the Department of Sociology and Social Work.

1. The major for this degree normally shall be 60 semester hours.
2. Candidates for this degree must maintain a minimum grade point average of 2.00 for all required social work courses.
3. Candidates for this degree must successfully complete a 40-hour volunteer experience in a social service agency and a 500-hour field practicum experience.

Double Degrees

Students may earn more than one type of degree, if desired. This is often referred to as a double degree or dual degree program. This option will likely extend time to graduation, as students must earn a minimum of 30 hours beyond the first degree. If the first degree requires 120 hours, a minimum of 150 hours would be required to earn the second. In addition, students must meet the unique requirements of each degree (minors, specified general education courses, etc.).

Students may not earn more than one of the same type of degree (e.g., two B.S. degrees are not allowed (see Double Majors below), but a B.S. with a B.A. is allowed). Students may not earn a double degree with the same major or minors (e.g., students cannot earn both a B.A. and a B.S. degree with a history major).

Majors

A major is a primary field of specialized study. Majors are tied to specific degrees. Some majors may be offered with multiple degree programs. For example, the History major is available as both a B.A. degree or a B.S. degree.

General Requirements for a Major

1. A minimum of 15 semester hours of a major's program requirements must be completed through Central Missouri.
2. A minimum of 12 upper-level hours must be included in a major program. At least nine of these 12 upper-level hours must be completed through Central Missouri.

Double Majors

Students may earn more than one major if desired. The two majors must be tied to the same degree type. For example, a student can pursue a double major in management and marketing, since they are both B.S.B.A. degrees. Upon completion, the student earns two majors with one degree.

Minors

A minor is a secondary field of specialized study. UCM minors range from 12-34 credit hours. Some programs require minors as part of the degree program. See specific program requirements in this catalog. Students may pursue more than one minor if desired. Students may not major and minor in the same subject area.

General Requirements for a Minor

1. Although the university does not require the completion of a minor for a degree, many programs do require a minor. Carefully read the program requirements for specific majors.
2. A minimum of nine hours of a minor program must be completed through Central Missouri.
3. At least one upper-level hour must be included in the minor program and completed at Central Missouri.

Course Overlap

In the instance of a double degree or double major program, courses required in both degrees or majors may count in both programs. In the instance of a major and minor or double minor, courses required in both may count in both programs. Limitations to this policy may be enforced by the departments. Refer to department information in this catalog for restrictions.

General Education Program

The General Education Program at UCM is a required component of all undergraduate degree programs. It is comprised of a minimum of 48 credit hours in four divisions. Some majors and minors have specific General Education requirements that must be completed. Check the major/minor listing in this catalog for specific General Education requirements within the major/minor.

The goals of the General Education Program are to provide students the opportunity to enhance the skills of the intellect; expand their knowledge, understanding, and appreciation of the arts, natural sciences, technology, social sciences, literature and the humanities; and contribute to the improvement of human interactions. These goals can best be accomplished through exposure to a common core of knowledge, as well as through the opportunity to select courses to accommodate individual interests. A common thread throughout the program components is our effort to provide students with the required competencies called for by the Missouri Coordinating Board for Higher Education (CBHE). The CBHE competencies are divided into two parts: Skill Areas (Communicating, Higher-Order Thinking, Managing Information, Valuing) and Knowledge Areas (Social and Behavioral Sciences, Humanities and Fine Arts, Mathematics, Life and Physical Sciences).

The Intellectual Skills component of the General Education Program should enable the student to think independently, to write effectively, to speak fluently, to read with comprehension, and to listen attentively. Intellectual Skills also include the abilities to use mathematical reasoning and thinking as well as computation, and to conceptualize goals and ways to attain those goals. Concurrent with the development of these skills should come improved ability to think logically, to analyze and compare, to question and evaluate.

The Integrative Studies component of the program is expressly designed to help students examine and develop imaginative, yet disciplined, solutions to complex problems. They will do so by synthesizing the skills, knowledge, and methods developed in other components of the General Education Program. Selected information and skills developed in earlier classes should be so integrated that students discover connections among diverse human endeavors.

Policies Concerning the General Education Program

The Faculty Senate General Education Committee is charged with the development and interpretation of policies concerning the General Education Program. Policies must conform to the Statement of Philosophy and General Goals of the General Education Program.

1. Students will take courses in four divisions: I. Intellectual Skills; II. Core; III. Personal Interaction; and IV. Integrative Studies. In general, General Education courses in Divisions I-III are introductory in nature and open to all students.
2. Courses in Division I. Intellectual Skills should be taken during the student's first year of study. Students with more than 30 semester hours of college credit who have not completed their Intellectual Skills requirements will be expected to make continued progress toward completion of any remaining courses in this division.
3. In any division of the General Education Program where a requirement may be met in a variety of ways, colleges and departments shall allow students maximum freedom of choice whenever possible. However, colleges and departments may specify the General Education course(s) meeting that requirement for any or all of their degree

programs. Consult the program requirements in this catalog for major/minor specific General Education requirements.

4. Transfer students who complete their 42-credit-hour General Education or earn an Associate of Arts degree at other colleges and universities in Missouri are considered to have satisfied Central Missouri's 42-credit-hour General Education requirement embodied in Divisions I and II. Transfer students, however, still must complete Central Missouri's additional institutional requirements listed in Divisions III and IV of the General Education Program and any required General Education courses in the major and minor (if applicable).
5. Courses taken to fulfill General Education requirements may not be taken on the pass/fail basis, but students who have fulfilled all General Education requirements in a specific area may elect to take additional General Education courses in the same area on the pass/fail basis.
6. Students who have been approved for an individualized major or minor may not count courses used to fulfill General Education in the individualized major or minor.

General Education Assessment Requirements

Assessment is a key process that is used in the academic, administrative, and student support services areas. Because the core process of higher education institutions is student learning, assessment at UCM serves three primary purposes: A) improvement of student learning and instruction, B) accomplishment of institutional mission, and C) accountability for achievement of educational goals. Central Missouri works hard to keep in contact with employers who hire UCM graduates. The one consistent message received from those employers, regardless of the type of enterprise, is that college graduates need to have a solid background in general education.

This is one of the reasons the university has established a minimum score on a national test of general education critical thinking and reading skills as a preparedness check for enrollment in upper-division courses as well as a condition for graduation. We want our students and the general public to know that we take our responsibility of preparing you to live and work as productive citizens in a diverse society very seriously. Central Missouri wants to ensure that every student is prepared for upper-division course work and that every student who graduates from our institution has a basic set of intellectual and reading skills in those areas defined by employers, educators and our culture as important.

All undergraduate students seeking a degree at Central Missouri, except teacher education majors, post-baccalaureate students, and graduate students, as a condition for graduation, must:

- Take the General Education exam, the Measure of Academic Proficiency and Progress (MAPP) in the semester after which a total of 45 credit hours have been earned to ensure the student has no delays in the student's progress towards enrolling in upper-level courses.
- Pass the Measure of Academic Proficiency and Progress (MAPP) by obtaining a minimum score of 425 (based on a scaled score of 400 – 500).
- Fulfill the General Education Assessment Policy no later than the semester after which a total of 75 credit hours have been earned to ensure the student has no delays in the student's progress towards graduation.

Additional information on MAPP may be viewed by logging on to MyCentral. Select the “Student Services” tab. Scroll to “UCM Testing Services” and select “MAPP Sample Questions” or select “MAPP Measures of Proficiency”.

An enrollment hold will be placed on student’s account for failing to take the General Education Exam the semester after which a total of 45 credit hours have been earned or for not fulfilling the General Education Assessment Policy the semester after which a total of 75 credit hours have been earned. Course enrollment will be prohibited until the respective requirement is met.

Students unsuccessful in obtaining the minimum total score of 425 (based on a range of 400 to 500) on the first exam are required to meet with the Director of Testing Services. The meeting will focus on the student’s needs, test-taking strategies, and specific interventions to help improve the student’s knowledge and skills. A decision regarding further testing will be determined by the director and the student.

After two tests the student is required to meet with the Faculty Senate University Assessment Council subcommittee and the academic department chair of the respective discipline to discuss possible solutions/action.

Transfer Students and General Education Assessment

A transfer student (except teacher education majors) who has taken the Measure of Academic Proficiency and Progress (MAPP) exam, the Academic Profile (AP), the Collegiate Assessment of Academic Proficiency (CAAP), or the College-BASE for General Education (CBGE) at another institution of higher learning may seek fulfillment of the General Education Assessment Policy.

- A valid score report must be on file in the Office of Testing Services.
- The score must have been obtained within the past 10 years.
- The score report must be sent directly from the previous institution to Testing Services. Most institutions require written consent to release a score report.
- A valid score report may be sent via mail to Testing Services, Administration Building 102, 660-543-4919.
- The Director of Testing Services must review the valid score report to determine fulfillment of the General Education Assessment Policy.

Teacher Education Majors

Teacher Education Majors are required by the Missouri State Department of Education to take and pass all five subject areas (English, Writing, Mathematics, Science, Social Studies) of the College-BASE for Teachers as one criterion for admission to the Teacher Education Program.

- Teacher Education students are strongly encouraged to complete General Education courses in English, Mathematics, Science, and Social Studies prior to testing. The five subject areas must be passed within a two year period from the first test date in which the minimum score of 235 was obtained on a subject area.
- Registration for the College-BASE for Teachers must be completed in person in Testing Services. The test fee is automatically billed to the student’s financial account. Registration deadlines and test administration fees apply. Refer to the Teacher Education Requirements section of this catalog for additional information.
- The College-BASE for Teachers satisfies the General Education Assessment Policy when the minimum score of 235 is obtained on each of the five subjects.

- Teacher Education students are not eligible to take the Measure of Academic Proficiency and Progress (MAPP).

General Education Assessment and Admission to Degree Programs

Business and Nursing Majors. A student seeking admission to any B.S.B.A. program in the Harmon College of Business Administration or the Nursing program are required to fulfill the university’s General Education Assessment requirements as a condition for admission into their respective programs.

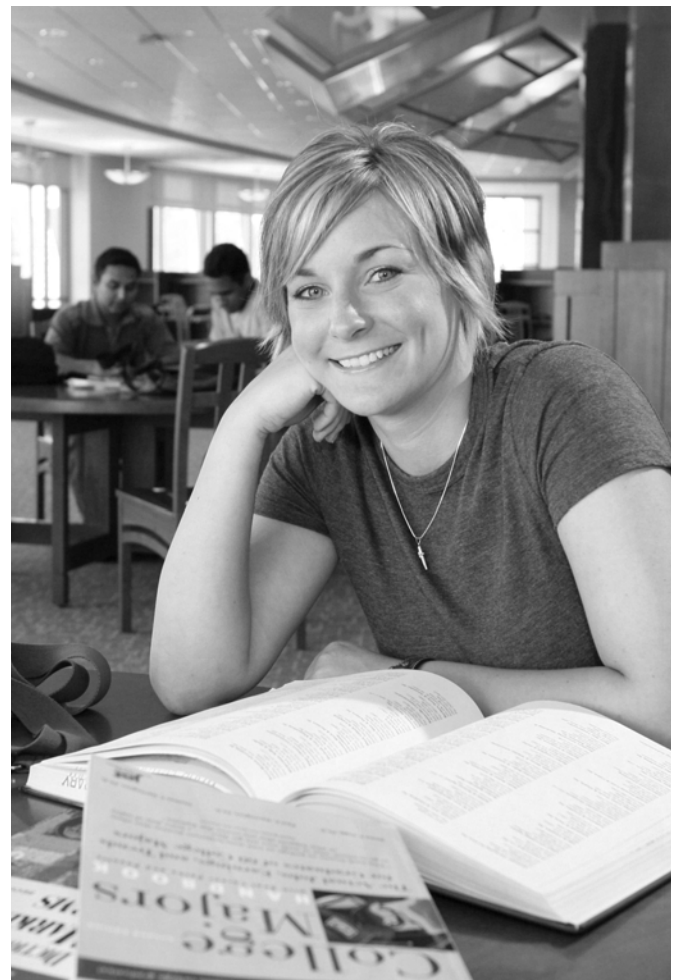
Post-Baccalaureate and Graduate Students. The General Education Assessment Policy does not apply to post-baccalaureate students unless the program requires the assessment policy be fulfilled as a criterion for admission to the program.

Test Registration

Online test registration is available by logging into MyCentral. Select the “Student Services” tab and the “Testing Services Test Registration Calendar”. Please see www.ucmo.edu/testing-services for complete information on the General Education Assessment Policy and requirements.

Students may learn more about the General Education Assessment Policy and its requirements at www.ucmo.edu/testing-services.

Direct any questions concerning this policy to the Director of Testing Services, Administration Building 102, 660-543-4919, or testing-services@ucmo.edu.



University of Central Missouri General Education: SKILL AREAS

State-Level Goals SKILL AREAS

Institutional Competencies

Communicating

To develop 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.

1. Apply the criteria of effective communication to assess the communication of self and others.
2. Conceive of writing as a recursive process that involves many strategies, including generating material, evaluating sources when used, drafting, revising, and editing.
3. Make formal written and oral presentations with consistent effectiveness.
4. Adapt language and communication strategies to a variety of situations.
5. Employ various organizational structures in a variety of communications.
6. Adapt communication to a variety of audiences.
7. Communicate effectively in groups by listening, reflecting, and responding appropriately and in context.
8. Identify the meaning of quantitative data, such as numbers, graphs, and charts, in a communication.
9. Employ quantitative data in communicating.

Higher-Order Thinking

To develop students' ability to distinguish among opinions, facts, and inferences; to identify underlying or implicit assumptions; to make informed judgments; and to solve problems by applying evaluative standards.

1. Recognize that complexity, ambiguity, and uncertainty are persistent human conditions.
2. Identify, develop, implement and evaluate alternative problem-solving strategies for a particular context.
3. Employ both induction and deduction and manipulate quantitative and qualitative evidence to study relationships.
4. Evaluate the strength of another's and one's own thinking in various contexts and disciplinary frameworks by recognizing unstated assumptions, ideological biases, stereotypes, inconsistencies, reasoning fallacies, irrelevancies, governing paradigms, and other factors.
5. Assess the reliability, validity, and adequacy of evidence, for example, by employing standards of measurement, sampling, and alternative hypotheses in evaluating analyses and interpretations of studies.
6. Defend conclusions using relevant evidence and reasoned argument.
7. Assess one's own problem-solving process.

General Education: SKILL AREAS, *continued*

State-Level Goals SKILL AREAS

Institutional Competencies

Managing Information

To develop 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.

1. Access and/or generate information from a variety of sources, including the most contemporary technological information services.
2. Evaluate information for its currency, usefulness, truthfulness, and accuracy.
3. Use appropriate technology to organize, store, and retrieve information effectively.
4. Reorganize information for an intended purpose, such as research projects.
5. Present information clearly and concisely, using traditional and contemporary technologies, while avoiding plagiarism.

Valuing

To develop 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. They should be able to analyze the ethical implications of choices made on the basis of these values.

1. Compare and contrast historical and cultural ethical perspectives and belief systems.
2. Utilize cultural, behavioral, historical, and scientific knowledge to clarify and articulate a personal value system.
3. Assess the alternatives and the consequences of various value judgments and their implications for individuals and groups.
4. Recognize conflicts within and between value systems and recognize and analyze ethical issues as they arise in a variety of contexts.
5. Consider multiple perspectives, recognize biases, deal with ambiguity, and take a reasonable position.

University of Central Missouri

General Education: KNOWLEDGE AREAS

State-Level Goals

Institutional Competencies

SKILL AREAS

Social and Behavioral Sciences

To develop students' understanding of themselves and the world around them through 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.

1. Explain social institutions, structures, and processes across a range of historical periods and cultures.
2. Develop and communicate hypothetical explanations for individual human behavior within the large-scale historical and/or social context.
3. Draw on history and/or the social sciences to evaluate contemporary problems.
4. Describe and analytically compare social, cultural, and historical settings and processes other than one's own.
5. Articulate the interconnectedness of people and places around the globe.

Humanities and Fine Arts

To develop 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.

1. Describe the scope and variety of works in the humanities and/or fine arts.
2. Explain the historical, linguistic, stylistic, cultural, and/or social contexts of the humanities and/or fine arts.
3. Identify the aesthetic values used to make critical judgments in various artistic fields.
4. Form, communicate, and defend a response based upon aesthetic values to works in the humanities and/or fine arts.
5. Identify the creative processes of artists in the visual, literary, and/or performing arts.

Mathematics

To develop 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. (The mathematics requirement for General Education should have the same prerequisite(s) and level of rigor as College Algebra.)

1. Recognize and/or describe the cultural, historical, and/or scientific contributions of mathematics to society.
2. Recognize and use connections within mathematics and between mathematics and other disciplines.
3. Create and interpret graphs and tables.
4. Use generalizations based upon pattern recognition.
5. Apply various mathematical models, techniques, and reasoning to solve problems.

General Education: KNOWLEDGE AREAS, *continued*

State-Level Goals

Institutional Competencies

SKILL AREAS

Life and Physical Sciences

To develop 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.

1. Explain how to use the scientific method and how to develop and test hypotheses in order to draw defensible conclusions.
2. Evaluate scientific evidence and argument.
3. Describe the basic principles of the physical universe.
4. Describe concepts of the nature, organization, and evolution of living systems.
5. Explain how human choices affect the earth and living systems.

Cultural Interaction

A fundamental goal is the recognition that cultures, and attitudes, develop through time; every culture has a heritage. Therefore, multicultural studies involve the past as well as the present, record the inevitable changes in all human societies, and note the successes, failures, and impacts of cultures through time. As an immediate goal, multicultural studies will teach a basic belief in human equality through diversity. Students should learn and display in-depth knowledge of the languages, beliefs, customs, and tolls of other cultures, including non-American and non-Western. If possible, they directly experience other cultures through on-campus activities with international students and/or study abroad. This knowledge and experience helps students develop curiosity and tolerance, rather than mistrust, for other ways of life. They constantly compare aspects of their lives with others. They accept the presence and validity of cultural differences. As an ultimate goal, multicultural education should refine attitudes away from prejudice. These changes in attitude are individual, and hence, measurable goals. They serve as student assessments before and after course work and experience.

1. Develop knowledge, curiosity, and appreciation of cultures and their dynamic heritages.
2. Understand the influence of culture on interactions at the local, national, and global levels.
3. Develop knowledge of languages, beliefs, customs, and/or political and economic systems of other cultures.
4. Explore differences and similarities between/among cultures.
5. Experience other cultures through campus and/or community activities and/or study abroad.

General Education: KNOWLEDGE AREAS, *continued*

State-Level Goals

Institutional Competencies

KNOWLEDGE AREAS

Personal Interaction

Students need to learn how humans change in intellectual, personality and socialization skills and what causes those changes. They need to learn strategies that will enable them to prevent undesirable changes in their cognitive, emotional and physiological well being. Further, they need to know the causes of personal and social conflicts and understand strategies to resolve those conflicts.

1. Recognize the diversity of human interaction and what promotes and what impedes productive personal interactions.
2. Recognize consequences of appropriate and inappropriate behaviors in themselves and others.
3. Learn strategies that will enable them to prevent undesirable changes in their cognitive, emotional and/or physiological well being.
4. Know the causes of personal and/or social conflicts.
5. Identify and analyze appropriate strategies to resolve personal and/or social conflicts.
6. Understand how humans change in physiological, intellectual and/or socialization skills and what causes those changes.

Integrative Studies

Students are to demonstrate, in sustained as well as brief oral and written presentations, a capacity to react to a problem by marshalling facts and approaches of an interdisciplinary nature.

1. Blend concepts from disparate learning areas.
2. Explain and/or demonstrate how methods of one discipline apply to the content of another.
3. Explain how insights from one area of inquiry have informed another.
4. Respond to a problem by marshalling facts, values, resources, and approaches in an interdisciplinary manner.

The General Education Program

Some General Education selections listed on these pages may be limited by major/minor choice. Check the major/minor listing in the catalog for specific General Education requirements within the major/minor.

NOTE: The following two requirements must be completed to fulfill university requirements for graduation. These can be met by making careful selections in the General Education sections listed below.

1. Each student must take a course in fine arts (ART 1800, MUS 1210 or THEA 2400) in Div. II Area C, Part 2*.
2. Each student must take a history course in Div. II Area B or D (HIST 1350, HIST 1351, HIST 2402 or HIST 2410)#.

Division I Intellectual Skills 12

Area A: Written Communication - 6 credit hours

Students exceptionally prepared in written communication, as defined by Planned Placement guidelines, may take ENGL 1080 in place of ENGL 1020 and ENGL 1030. Completion of ENGL 1080 with a grade of C or above will result in 6 hours – ENGL 1080 (3) and ENGL 1020 (3).

ENGL 1020	Composition I	3
ENGL 1030	Composition II	3
-OR-		
ENGL 1080	Advanced Composition	6

Area B: Oral Communication - 3 credit hours

Choose one course from the following:

COMM 1000	Public Speaking	3
THEA 1100	Oral Interpretation	3

Area C: Mathematical Reasoning - 3 credit hours

Choose one course from the following

MATH 1111	College Algebra	3
MATH 1150	Pre-Calculus Mathematics	4
MATH 1300	Basic Statistics	3
MATH 1620	Contemporary Mathematics	3

Division II Core 30

Area A: Part I - Life and Physical Sciences - 7 credit hours

Choose any two courses with **different prefixes** from the following, one of which must have a laboratory component:

BIOL 1003	Introduction to the Sciences: Ecology (Lab not included)	3
BIOL 1004	Introduction to the Sciences: Ecology (Lab included)	4
BIOL 1005	Introduction to Environmental Sciences (Lab not included)	3
CHEM 1103	Introduction to the Sciences: Chemistry (Lab not included)	3
CHEM 1104	Introduction to the Sciences: Chemistry (Lab included)	4
EASC 1004	Introduction to the Sciences: Geology (Lab included)	4
PHYS 1103	Introduction to the Sciences: Physics (Lab not included)	3
PHYS 1104	Introduction to the Sciences: Physics (Lab included)	4

Area A: Part II - Technology - 2-3 credit hours

Choose one technology course from the following:

BTE 1210	Essentials of Managing Information	2
LIS 1600	University Library & Research Skills	2
ENGT 1012	Global Production Technology	2
CTE 2000	Technology and Society	3

Area B: Social and Behavioral Sciences - 9 credit hours

Each student must take a history course in Div. II Area B or D (HIST 1350, HIST 1351, HIST 2402 or HIST 2410)#.

Choose three courses with **different prefixes** from the following:

ANTH 1810	Human Prehistory	3
CJ 1000	Introduction to Criminal Justice	3
ECON 1010	Principles of Macroeconomics	3
GEOG 2212	World Geography	3
#HIST 1350	History of the U.S. to 1877	3
#HIST 1351	History of the U.S. from 1877	3
POLS 1500	Introduction to Politics	3
POLS 1510	American Government	3
PSY 1100	General Psychology	3
SOC 1800	General Sociology	3

Area C: Humanities and Fine Arts - 9 credit hours

Part I. Choose one literature course from the following:

ENGL 2200	American Literature to 1865	3
ENGL 2205	American Literature 1865 to Present	3
ENGL 2210	British Literature to 1798	3
ENGL 2215	British Literature from 1798 to Present	3
ENGL 2220	World Masterpieces	3

Area C: Humanities and Fine Arts Continued

Part II. Choose two courses from the following, one course of which must be Art (ART), Music (MUS) or Theatre (THEA)*.

*ART 1800	Ideas and the Visual Arts	3
COMM 3000	Film Appreciation.....	3
*MUS 1210	Experiencing Music.....	3
PHIL 1000	Introduction to Philosophy	3
REL 1510	Exploring Religion	3
*THEA 2400	Discovering Theatre	3
Any Modern (Foreign) Language:		
CHIN, FREN, GER, ML, SPAN, or CD 1401	.....	3

Area D: Cultural Interaction - 3 credit hours

Each student must take a history course in Div. II Area B or D (HIST 1350, HIST 1351, HIST 2402 or HIST 2410)#.

Choose one course from the following:

AGRI 2130	Global Agriculture	3
ANTH 1820	Cultural Anthropology	3
ECEL 2110	World Diversity and America	3
GEOG 3201	The Cultural Landscape	3
#HIST 2402	History of the Modern World	3
#HIST 2410	Introduction to Africana Studies	3
MUS 1225	Music of World's Cultures	3
POLS 3522	Modern East Asia.....	3
WS 2000	Race, Class, and Gender	3

Additional Institutional Requirements

Division III Personal Interaction 3

Choose one course from the following:

BLAW 2750	Leg. & Eth. Dec. Making in the Workplace 3
CFD 1010	Individual and Family Relationships..... 3
COMM 3010	Interpersonal Communication
HED 1100	Personal Health
PE 1206	Lifetime Fitness.....
PHIL 2300	Ethics
PSY 1320	Psychology of Personal Adjustment..... 3
SAFE 2010	Safety: A Personal and Societal Focus

Division IV Integrative Studies 3

Each student must take a course in Integrative Studies which may be specified in major program or choose from Div. IV Area A. To enroll in a course for Div. IV Area A or B, a student will have successfully completed a minimum of 60 semester hours, all required Intellectual Skills courses, and at least 24 semester hours of General Education Core courses, including a course from each core area. Any additional prerequisites are listed per course.

Area A: General Integrative Studies Courses

IGEN 3116	Creative Problem Solving	3
IGEN 3224	Critical Thinking	3
IGEN 3232	Media Literacy	3
IGEN 3468	Community, School & Family Connections 3	
IGEN 3472	Sports in American Life	3
IGEN 3896	Assessing Global Change for the Info. Age 3	
IGEN 4224	Communication, Science and Technology . 3	
IGEN 4231	Myth, Memory and Realities.....	3
IGEN 4236	Science and Religion: From Conflict to Dialogue	3
IGEN 4244	Comparative Cross-Cultural Cinema	3

Area B: Capstone Integrative Studies Courses offered by student's major department

ICAP 4101	Agricultural Capstone Experience	3
ICAP 4109	Construction Operations.....	3
ICAP 4110	Industrial Problem Solving.....	3
ICAP 4111	Socio-Economic Factors Impacting Health 3	
ICAP 4112	Automotive Systems for Contemporary Society	3
ICAP 4113	Air Operations Management	3
ICAP 4115	Safety and Health Management	3
ICAP 4221	Artists in Contemporary Society	3
ICAP 4222	The Biology Perspective	3
ICAP 4225	Computer Science Capstone Experience....	3
ICAP 4233	The Scientific, Historical and Sociological Impact of Mathematics.....	3
ICAP 4240	Literature and Its Discourses.....	3
ICAP 4245	Actuarial Science Capstone Experience....	3
ICAP 4357	Organizational Policy and Strategy	3
ICAP 4468	Student Teaching Secondary II.....	4
ICAP 4478	Integrative Social Work Practicum Seminar 3	

The Honors College Program

The Honors College offers an academic program specifically designed to enrich the knowledge base, skills, and educational experience of high achieving and exceptionally motivated undergraduate students. Students in The Honors College declare a major from among those offered by UCM's five academic colleges and complete requirements specific to The Honors College. The Honors College curriculum is highly flexible and can be customized to meet the specific academic and career goals of individual students. Among many other benefits, students in The Honors College have unique access to Honors-designated course sections and interdisciplinary colloquia, and are provided with the support and resources needed to pursue advanced level research and creative projects in their areas of academic interest.

The Honors College considers applications for admission from qualified high school graduates (minimum ACT score of 25 and a minimum cumulative high school GPA of 3.5), transfer students and current UCM students (minimum cumulative college GPA of 3.5).

Students interested in learning more about The Honors College are encouraged to visit The Honors College web site: www.ucmo.edu/thehonorscollege. Alternatively, prospective students may contact the Office of the Dean of The Honors College by phone 660-543-4633 or email (thehonorscollege@ucmo.edu).

Students interested in applying to The Honors College should do so online at www.ucmo.edu/thehonorscollege/apply.

Among other benefits, students in The Honors College enjoy:

- Early enrollment privileges
- Maximum program flexibility
- Honors-designated course sections
- Honors-only colloquia
- Transcript recognition
- Research resources and support
- One-on-one advisement with the dean

Typically, Honors-designated course sections include:

- ECON 1010: Principles of Macroeconomics
- ECON 1011: Principles of Microeconomics
- ENGL 1030: Composition II
- ENGL 1080: Advanced Composition
- LIS 1600: University Library & Research Skills
- MATH 1111: College Algebra
- PSY 1100: General Psychology
- SOC 1800: General Sociology

Division I Intellectual Skills 12

Area A: Written Communication - 6 credit hours

ENGL 1080	Advanced Composition 3
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Students in The Honors College who do not have college English credit may take ENGL 1080 in place of ENGL 1020 and ENGL 1030. Completion of ENGL 1080 with a grade of C or above will result in 6 hours of credit – ENGL 1080 (3) and ENGL 1020 (3).

Area B: Oral Communication - 3 credit hours

Choose one course from the following:

COMM 1000	Public Speaking 3
THEA 1100	Oral Interpretation 3

Area C: Mathematical Reasoning - 3 credit hours

Choose one course from the following:

MATH 1111	College Algebra 3
MATH 1150	Pre-Calculus Mathematics 4
MATH 1300	Basic Statistics 3
MATH 1620	Contemporary Mathematics 3

Division II Core 30

Students in The Honors College are required to take two semesters of the same modern foreign language instead of a fine arts (Art, Music, or Theatre) course. Students must take a history course (HIST) in Div. II Area B or D.

Area A: Part I - Life and Physical Sciences - 7 credit hours

Students in The Honors College choose two courses with different prefixes, one of which must have a laboratory component. Honors students may choose the courses listed in the regular General Education Program. Alternatively, with the approval of the dean of The Honors College, Honors students may substitute higher-level courses in the appropriate prefix categories (BIOL, CHEM, EASC, or PHYS) to fulfill this requirement.

Area A: Part II - Technology - 2-3 credit hours

Choose one technology course from the following:

BTE 1210	Essentials of Managing Information 2
LIS 1600	University Library & Research Skills 2
ENGT 1012	Global Production Technology 2
CTE 2000	Technology and Society 3

Area B: Social and Behavioral Sciences - 9 credit hours

Students in The Honors College may choose three courses with different prefixes from the courses listed in the regular General Education Program. Alternatively, with the approval of the dean of The Honors College, Honors students may substitute higher-level courses in the appropriate prefix categories (ANTH, CJ, ECON, GEOG, HIST, POLS, PSY, or SOC) to fulfill this requirement.

Area C: Humanities and Fine Arts – 9 credit hours

Part I: Literature – 3 credit hours

Students in The Honors College may choose one of the courses listed in the regular General Education Program. Alternatively, with the approval of the dean of The Honors College, Honors students may substitute higher-level ENGL prefix courses to fulfill this requirement.

Part II: Modern (Foreign) Language – 6 credit hours

Students in The Honors College are required to take two semesters of a single modern foreign language.

Area D: Cultural Interaction - 3 credit hours

Students in The Honors College may choose any course listed in Area D of the regular General Education Program. Alternatively, with the approval of the dean of The Honors College, Honors students may substitute a higher-level non-American course in the appropriate prefix categories (AGRI, ANTH, ECEL, GEOG, HIST, MUS, POLS, or WS) to fulfill this requirement.

Additional Institutional Requirements

Division III Personal Interaction 2

HONR 3000 Honors Colloquium 2 credit hours

An interdisciplinary course taught by selected faculty. Content varies from semester to semester. Required of and open only to students in The Honors College. Note that this course may be repeated for a maximum of six (6) credit hours. Prerequisite: Junior standing or approval of the Dean of The Honors College.

Division IV Integrative Studies 4

HONR 4000 Honors Project 4 credit hours

A capstone research or creative project pursued under the supervision of a UCM faculty mentor selected by the student. Required of all Honors College students. Prerequisite: Senior standing or approval of the dean of The Honors College. Additional information regarding The Honors Project can be found in "The Honors Project: A Student's Guide," available online: www.ucmo.edu/thehonorscollege. (Note: some majors also require either an IGEN or ICAP course in Division IV in addition to the Honors Project.)

Honors Course Substitutions

Each participant in The Honors College will be required to conform to the policy guidelines of The Honors College and the General Education Program. Please be aware that Honors choices consist of those courses permitted on the major/minor programs or in the General Education Program requirements. The dean of The Honors College must approve exceptions or departures from those requirements.



THE HONORS COLLEGE RETENTION POLICY

The Honors College requires its members to maintain a cumulative GPA of 3.25. Additionally, all members are required to demonstrate "satisfactory progress" completing The Honors College Program.

- Freshmen entering The Honors College who do not maintain a 3.25 cumulative GPA after two semesters will be dropped from The Honors College.
- Transfer students and students entering The Honors College after their freshman year who do not maintain a 3.25 cumulative GPA will be dropped from The Honors College.
- Students dropped from The Honors College for not maintaining a 3.25 cumulative GPA may apply for reinstatement when they have achieved a 3.25 cumulative GPA.
- Students in The Honors College are expected to make "satisfactory progress" completing The Honors College Program. By the time Honors students have reached 60 credit hours, they must have completed 6 credit hours of one foreign language. At 60 credit hours, students must also discuss their Honors Project ideas with The Honors College office. The Honors Project Proposal should be on file in the Honors office by the end of the student's junior year.
- If a student fails to meet the appropriate GPA level required by The Honors College and/or fails to make satisfactory progress completing The Honors College Program, the student will no longer be eligible to participate in The Honors College.
- Honors students not currently enrolled at UCM will be dropped from The Honors College (unless they notify the office that they are studying abroad, etc.). Upon returning to UCM, students in good standing may request reinstatement in The Honors College.
- Any course substitutions made while an Honors student are no longer valid for students dropped from The Honors College. In such cases, students must fulfill all of the regular General Education Program requirements set forth in the *Undergraduate Catalog*.

For more information contact:

The Honors College
James C. Kirkpatrick Library 1450
University of Central Missouri
Warrensburg, MO 64093
Phone: 660-543-4633
Fax: 660-543-8550
Email: thehonorscollege@ucmo.edu
Web site: www.ucmo.edu/thehonorscollege

Additional Academic Opportunities

Pre-Professional Education

The Biology and Earth Science and Biochemistry, Chemistry and Physics Departments take an active role in preparing UCM students majoring in biology†, chemistry* and physics* for admission to professional schools in the following areas:

- Medicine †*
- Dentistry †*
- Veterinary Medicine †*
- Physical Therapy †*
- Optometry †*
- Pharmacy †*
- Chiropractic Medicine †*
- Physician's Assistant †*
- Engineering*
- Molecular Biology/Molecular Technology †

Students wishing to pursue pre-professional programs are assigned to an appropriate faculty advisor whose job it is to mentor the advisees:

- by helping them plan and prepare a program of study,
- by assisting them to prepare for appropriate post-baccalaureate admissions tests, e.g., MCAT, DAT, GRE, administered by national agencies. The faculty advisor shares pertinent information and resources of such tests, i.e., topics covered in the tests with the advisee. Many professional schools use the results of such tests as important criteria for admission,
- by emphasizing the importance of General Education in analytical and critical thinking, which is also evaluated in the written portions of some post-baccalaureate admission tests,
- by communicating the competitive nature of admission to the professional schools and the necessity of an "achiever's attitude" in the classroom,
- by providing student handbooks which summarize the entire admissions process to a professional school, e.g., *The Pre-Med Handbook*,
- by sponsoring student clubs in pre-professional fields (e.g., The Para-Medico Club, The Pre-Vet Club, The Tri-Beta Honor Society, etc.), and coordinating meetings between student organizations and professional school admissions officers,
- by encouraging hands-on student participation in profession-related work outside the classroom (e.g., volunteering or working in a health care facility),
- by polishing the communication skills of student applicants for professional school interviews.

In addition, the departments offer courses and research opportunities in many contemporary branches of the sciences, e.g., molecular biology, physiology, microbiology, cell biology, and biochemistry. These courses and research experiences provide students with the necessary investigative and critical thinking skills to prepare them for advanced degree programs, or as entry-level scientists in the pharmaceutical and biotechnology industries.

Pre-Law

While the American Bar Association does not recommend any particular undergraduate major to prepare for law school, a student should major in an area that is both personally satisfying and that provides the basic skills necessary to be successful in law school.

Students interested in preparing for law school should consult a pre-law advisor from the following list:

- Dane C. Miller, Criminal Justice Department
- Steven Popejoy, Marketing and Legal Studies Department
- Don Wallace, Criminal Justice Department
- Jim Staab, Political Science Department

These advisors assist students in choosing courses and/or professors that will assist in developing the following skills and values:

- Analytical and Problem-Solving Skills
- Critical Reading Abilities
- Writing Skills
- Oral Communication and Listening Skills
- Research Skills
- Organizational Abilities and Management Skills
- Valuing Service to Others and Promoting Justice

Individualized Major and Minor Programs

Individualized programs allow students to work with faculty members to create an academic program that is personalized to meet their educational and career goals. UCM offers two types of individualized major and minor programs: Named programs and General Studies programs. A key difference between the two types of programs is the amount of course work that can be completed prior to approval of the individualized program. The two programs also have a few curricular differences explained below.

Students may request an individualized undergraduate major or minor program not listed in the *Undergraduate Catalog*, but consisting of courses offered herein. An individualized major or minor may include course work across various disciplines, but must satisfy all of the following:

- All General Education Program requirements must be met.
- All university minimum requirements for a baccalaureate degree must be met.
- An individualized major must contain a minimum of 40 credit hours. An individualized minor must contain a minimum of 20 credit hours.
- Courses used for the individualized major or minor may not overlap with courses used in general education.

Major and minor course work may not overlap when one or more of them is an individualized program.

Both types of individualized programs require the written approval of:

- the faculty advisor
- the chair of the department in which the faculty advisor resides
- the dean of the college in which the faculty advisor resides
- the Associate Provost for Academic Programs.

The student must include a signed statement indicating he/she accepts full responsibility for the proposal and the fact that the individualized program may not be accepted or recognized by institutions other than UCM. Upon final approval of the individualized major or minor program, the student is notified and a copy of the approved program is filed with the Registrar.

Types of Individualized Majors and Minors

1. Named Individualized Major or Minor. Fifty percent of the credit hour requirements for a named individualized major or minor must be completed through the University of Central Missouri after full approval of the individualized major or minor plan of study. The student must select a faculty member to serve as an advisor. Together they will develop a proposed plan of study, including a title for the individualized major or minor. Some examples of named programs are a "Pre-Physical Therapy" major or a "Criminal Psychology" minor. These are not regular programs in the UCM *Undergraduate Catalog*, but can be created from courses offered herein.
2. General Studies Individualized Major or Minor. An individualized major or minor in general studies may be awarded through any of the academic colleges. The plan for a General Studies individualized major must include upper-level courses (3000/4000) from at least three different disciplines (course prefixes). The plan of study for an individualized major or minor in General Studies must be developed under the supervision of a faculty advisor in the college in which a majority of the major or minor course work is housed.

For more information about individualized major and minor programs, students should contact the Office of the Associate Provost for Academic Programs (ADM 203, 660-543-4116).



International Study

UCM believes strongly in the development of an international perspective among its students and faculty. One of the most exciting educational experiences available is the opportunity for students to spend a semester or year studying abroad. More information about Study Abroad programs can be obtained from the International Center in Ward Edwards 1200. Students can visit www.ucmo.edu/international or call 660-543-4195.

General Information about Study Abroad

1. Students interested in attending school in another country are encouraged to visit the International Center and inquire about UCM Study Abroad programs. Placement opportunities exist in approximately 220 schools in over 50 countries.
2. Students who plan to study on a UCM-sponsored Study Abroad program may elect to take the courses completed abroad as pass/fail or letter grade credit. If the student elects to take these courses for pass/fail credit, they must provide written notification to the Study Abroad staff in the International Center before beginning the Study Abroad program.
3. Study Abroad credits taken as pass/fail do not count toward the university maximum of nine pass/fail credit hours allowed towards an undergraduate degree.
4. Withdrawal from a course during a Study Abroad program is not permitted during the last one-third of the period.

Study Abroad Application Process

The following is the application process for Study Abroad through a UCM-sponsored program.

1. Fill out the Study Abroad application available at www.ucmo.edu/international/studyabroad, and turn it in to the International Center in Ward Edwards 1200. Deadlines are posted on the application form.
2. Apply for a passport if the student does not have one. All Study Abroad students need a valid passport before leaving the United States.
3. Meet with academic and departmental advisors about courses to take while abroad and acceptable grading options for major/minor work.
4. Turn in supporting application materials. These include: two academic recommendations, two non-academic recommendations, a statement of purpose, official transcript, application fee, and four passport-sized photos.
5. Complete a host university application and return it to the International Center.
6. Once accepted to Study Abroad, the student will receive a letter of acceptance.
7. Attend the mandatory Study Abroad Orientation held each fall and spring semester.
8. Purchase airline ticket to host country (only after the letter of acceptance has been received).
9. Attend a visa workshop to learn how to apply for a visa to the host country, and begin application process.
10. Complete orientation forms and return them to the International Center.

The following programs are some of the many available through the International Center:

AsiaLearn www.asialearn.org

Students in all majors may apply to study in China, Hong Kong, Japan, Malaysia, Singapore, and South Korea with class instruction conducted in English. Language and cultural studies are also available.

AustraLearn www.australearn.org

This organization offers study sites in Australia, New Zealand and Fiji for semester, year-long programs or internships abroad.

Australia, Maroochydore www.usc.edu.au

A variety of majors including sciences, business and the humanities are available at the University of the Sunshine Coast on the scenic northern shore.

College Consortium of International Studies (CCIS) www.ccisabroad.org

This program provides study sites in over 40 countries including Belize, India, Ireland, Italy, Morocco, Russia, and Scotland.

Croatia, Zagreb www.zsem.hr

Zagreb School of Economics and Management is an AACSB International accredited school of business, economics and finance. Courses are taught in English by European professors.

Denmark, Copenhagen – DIS www.dis.dk

The Danish Institute for Study Abroad provides study at the University of Copenhagen in business, liberal arts, architecture, marine biology, and nursing. Courses are taught in English by Danish professors.

France, Angers. www.univ-angers.fr

University of Angers is the prime location for UCM students to pursue French language studies. Additional courses are available in history, geography, tourism, biology, ecology, computer science, mathematics, and business administration.

France, Lyon www.esdes.fr

The Catholic University of Lyon School of Business and Management offers international business courses taught in English and French. Classes include marketing, business law, finance, human resources, the European Union and French art and architecture.

France, INSEEC www.inseec-france.com

This institution is an AACSB International accredited business school system located in Bordeaux, Lyon and Paris. Classes are conducted in English and French.

Germany, Bremen www.uni-bremen.de

At the University of Bremen courses are offered in language and cultural studies, economics, human and health sciences, mathematics, computer sciences, and social studies. Courses are taught in German and English.

Ghana, Legon

www.umsl.edu/services/abroad/universities/ghana.html

Each fall semester Missouri students may attend classes in a variety of subjects taught in English at the University of Ghana on the western coast of Africa.

Greece, Athens www.studygreece.org

The Missouri-Greece Program provides a unique spring semester study opportunity in ancient Athens. Studies include courses in history, anthropology, Greek language, and art history. A summer archaeological dig is also available.

Hungary, Budapest www.bke.hu

Corvinus University of Budapest offers courses in business administration, economics, food science, horticulture, landscape architecture, public administration and social sciences.

Hungary, Debrecen www.englishstudies.sci.unideb.hu

A variety of classes taught in English are available in arts, humanities and sciences.

International Student Exchange Program (ISEP) www.isep.org

Students may study in over 35 countries in a variety of academic areas with language studies or courses taught in English.

International Studies Abroad (ISA) www.studiesabroad.com

This organization specializes in programs offered in Spanish-speaking countries, but also provides study in Belgium, Italy and Morocco among others. Internship and volunteer opportunities are also available.

Japan, Osaka www.kansaigaidai.ac.jp/asp

Kansai Gaidai University offers courses in business, political science, psychology, history and art. Japanese language and culture studies are available in addition to courses taught in English.

Japan, Osaka www.andrew.ac.jp/english

Momoyama Gakuin University offers courses taught in English in history, economics and business. Japanese language and cultures studies are also offered.

Mexico, various sites www.itesm.edu

Over 30 campuses located throughout Mexico are part of the Tecnológico de Monterrey system. Courses include Mexican culture, business, nursing and tourism. Special summer programs and internships are available.

The Netherlands, Eindhoven w3.tue.nl/en

Eindhoven University of Technology provides courses in safety science, industrial hygiene, industrial management, engineering, architecture, mathematics and computer science.

The Netherlands, Middelburg www.transatlanticstudies.org

The Middelburg Center for Transatlantic Studies combines faculty and students from Australia, Europe, Mexico, New Zealand and the U.S. for block scheduled courses in a variety of subjects.

New Zealand, Auckland www.unitec.ac.nz

Unitec offers scenic study surroundings in architecture and design, fine art and studio art, the sciences, business, health and environmental sciences, and applied technology.

Norway, Oslo www.hio.no

The Oslo University College provides courses taught in English in the areas of business administration, engineering, fine art, design, drama, health sciences, media studies, social sciences and teacher education.

Poland, Lód www.iso.uni.lodz.pl

Courses taught in English at the University of Lódz include biology, economics, sociology, geography, international studies, political science, management, physics, chemistry, mathematics and computer science.

South Korea, Seoul english.uos.ac.kr

At University of Seoul students may conduct studies in Asian culture, Korean language and history, business, political science and globalization. Non-Korean language courses are taught in English.

Spain, Alcalá www.iuuen-uah.com

The University of Alcalá provides personalized language study courses for international students. Areas of study specific to the school are the humanities, computer science, law, medicine, and environmental studies.

Sweden, Halmstad www.hh.se/english.5_en.html

Halmstad University is a high-tech, modern campus providing instruction in business and economics, construction engineering, computer systems, English, environmental studies, mathematics, political science, sports science, teacher education and Swedish language studies.

Sweden, Örebro www.oru.se/english

Historic Örebro University offers English instruction for courses in business, communication, education and social work.

Sweden, Växjö www.vxu.se/english

Växjö University offers courses to students in English and Swedish in international studies, education, international business, computer science, psychology, management and economics.

United Kingdom, Buckinghamshire, England bucks.ac.uk

Buckinghamshire New University offers courses in the social sciences, arts and humanities. Theatre, studio and graphic arts, and literature are special focuses of the institution for full-year study.

United Kingdom, London, England www.ie2uk.com

The Missouri-London Program is located in the Kensington area of London and offers courses during the semester or summer in humanities, business, and social sciences. Individualized internships are also available.

United Kingdom, Pontypridd, Wales www.glam.ac.uk

The University of Glamorgan provides studies in communication, criminology, history, art, tourism and business for students interested in full-year study.

United Kingdom, Preston, England www.uclan.ac.uk

In northern England, the University of Central Lancashire provides full-year or spring semester studies in health sciences, sport science, fire science, business, and social sciences.

ACCOUNTANCY Major, B.S.B.A. Degree	GEOLOGY Major, B.S. Degree
ACCOUNTANCY Major, Combination B.S.B.A. and M.A. Degrees	GRAPHIC ARTS TECHNOLOGY MANAGEMENT Major, B.S. Degree
ACTUARIAL SCIENCE AND MATHEMATICS Major, B.S. Degree	GRAPHIC DESIGN Major, B. F. A. Degree
AGRICULTURE-BUSINESS Major, B.S. Degree	HISTORY Major, B.A. Degree
AGRICULTURAL EDUCATION Major, B.S.Ed. Degree	HISTORY Major, B.S. Degree
AGRICULTURAL TECHNOLOGY Major, B.S. Degree	HOTEL AND RESTAURANT ADMINISTRATION Major, B.S. Degree
AIRPORT MANAGEMENT Major, B.S. Degree	INTERIOR DESIGN Major, B.F.A. Degree
ART Major, B.S.Ed. Degree	JOURNALISM Major, B.S. Degree
ATHLETIC TRAINING Major, B.S. Degree	MANAGEMENT Major, B.S.B.A. Degree
AUTOMOTIVE TECHNOLOGY MANAGEMENT Major, B.S. Degree	MARKETING Major, B.S.B.A. Degree
AVIATION MAINTENANCE 2+2 Major, B.S. Degree	MATHEMATICS Major, B.A. Degree
BIOCHEMISTRY Major, B.S. Degree	MATHEMATICS Major, B.S.Ed. Degree
BIOLOGY Major, B.A. Degree	MATHEMATICS Major, B.S. Degree
BIOLOGY Major, B.S.Ed. Degree	MEDICAL TECHNOLOGY Major, B.S. Degree
BIOLOGY Major, B.S. Degree	MIDDLE SCHOOL-JUNIOR HIGH SCHOOL Major, B.S.Ed. Degree
BROADCAST MEDIA Major, B.S. Degree	MUSIC EDUCATION Major, B.M.E. Degree
BUSINESS TEACHER EDUCATION Major, B.S.Ed. Degree	MUSIC Major, B.A. Degree
CHEMISTRY Major, B.A. Degree	MUSIC Major, B.M. Degree
CHEMISTRY Major, B.S.Ed. Degree	NURSING Major, B.S. Degree
CHEMISTRY Major, B.S. Degree	OCCUPATIONAL EDUCATION Major, B.S. Degree
CHILD AND FAMILY DEVELOPMENT Major, B.S. Degree	OCCUPATIONAL SAFETY AND HEALTH Major, B.S. Degree
COMMUNICATION Major, B.A. Degree	PHILOSOPHY Major, B. A. Degree
COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY Major, B.S. Degree	PHOTOGRAPHY Major, B.S. Degree
COMPUTER INFORMATION SYSTEMS Major, B.S.BA. Degree	PHYSICAL EDUCATION Major, B.S. Degree
COMPUTER SCIENCE Major, B.S. Degree	PHYSICS Major, B.A. Degree
CONSERVATION ENFORCEMENT Major, B.S. Degree	PHYSICS Major, B.S.Ed. Degree
CONSTRUCTION MANAGEMENT Major, B.S. Degree	PHYSICS Major, B.S. Degree
COOPERATIVE ENGINEERING 3-2 Major, B.A. Degree	POLITICAL SCIENCE Major, B.A. Degree
CORPORATE COMMUNICATION Major, B.S. Degree	POLITICAL SCIENCE Major, B.S. Degree
CRIMINAL JUSTICE Major, B.S. Degree	PROFESSIONAL PILOT Major, B.S. Degree
CRISIS & DISASTER MANAGEMENT Major, B.S. Degree	PSYCHOLOGY Major, B.A. Degree
DIETETICS Major, B.S. Degree	PSYCHOLOGY Major, B.S. Degree
EARTH SCIENCE Major, B.A. Degree	PUBLIC RELATIONS Major, B.S. Degree
EARTH SCIENCE Major, B.S.Ed. Degree	SAFETY MANAGEMENT Major, B.S. Degree
ECONOMICS Major, B.A. Degree	SOCIAL STUDIES Major, B.S.Ed. Degree
ECONOMICS Major, B.S. Degree	SOCIAL WORK Major, B.S.W. Degree
ELECTRONICS TECHNOLOGY Major, B.S. Degree	SOCIOLOGY Major, B.A. Degree
ELEMENTARY EDUCATION EARLY CHILDHOOD BIRTH - GRADE 3 Major, B.S.Ed. Degree	SOCIOLOGY Major, B.S. Degree
ELEMENTARY EDUCATION GRADES 1-6 Major, B.S.Ed. Degree	SPANISH Major, B.A. Degree
ENGINEERING TECHNOLOGY Major, B.S. Degree	SPANISH Major, B.S.Ed. Degree
ENGLISH Major, B.A. Degree	SPANISH Major, B.S. Degree
ENGLISH Major, B.S.Ed. Degree	SPECIAL EDUCATION Major, B.S.Ed. Degree
FASHION: TEXTILES AND CLOTHING IN BUSINESS Major, B.S. Degree	SPEECH COMMUNICATION AND THEATRE Major, B.S.Ed. Degree
FINANCE Major, B.S.B.A. Degree	SPEECH COMMUNICATION Major, B.A. Degree
FLIGHT OPERATIONS MANAGEMENT Major, B. S. Degree	SPEECH COMMUNICATION Major, B.S. Degree
FORENSIC CHEMISTRY Major, B. S. Degree	SPEECH-LANGUAGE PATHOLOGY Major, B.S. Degree
FRENCH Major, B.A. Degree	STUDIO ART Major, B.F.A. Degree
FRENCH Major, B.S.Ed. Degree	TECHNOLOGY 2+2 Major, B.S. Degree
FRENCH Major, B.S. Degree	TECHNOLOGY Major, B.S. Degree
GENERAL RECREATION Major, B.S. Degree	TECHNOLOGY EDUCATION Major, B.S.Ed. Degree
GEOGRAPHY Major, B.A. Degree	THEATRE Major, B.A. Degree
GEOGRAPHY Major, B.S. Degree	THEATRE Major, B.F.A. Degree
	TOURISM Major, B.S. Degree
	VOCATIONAL FAMILY AND CONSUMER SCIENCES Major, B.S.Ed. Degree

Four-Year Academic Guides

To assist students in their course planning, UCM academic departments have developed four-year guides which are available on UCM's web site at www.ucmo.edu/majors.

These four-year guides are intended to illustrate how students majoring in specific areas of study might organize their courses so that they may finish their degree program in four years. Obviously, every student's situation is unique and individual four-year plans will vary. Planned placement and transfer credits might change the sequence of courses a student takes.

Please keep in mind that these four-year guides are illustrative and not legally binding. An academic department may or may not be able to offer a particular course in every semester. Curricular offerings and requirements do change over time and the University of Central Missouri Board of Governors reserves the right to make necessary changes in the curriculum at any time.

Courses Prefixes

ACCT - Accounting	EDFL - Educational Foundations and Literacy	LIS - Library Science and Information Services
AE - Academic Enrichment	EDSP - Special Education	MATH - Mathematics
AERO - Aerospace	EET - Electronics Engineering Technology	MGT - Management
AGRI - Agriculture	ENGL - English	MKT - Marketing
ANTH - Anthropology	ENGT - Engineering Technology	ML - Modern Languages
ART - Art	ENT - Entrepreneurial	MMGT - Manufacturing Management
AT - Athletic Training	ET - Electronics Technology	MS - Military Science
AVIA - Aviation	FACS - Family and Consumer Sciences	MUS - Music
BADM - Business Administration	FAME - Fashion and Apparel Merchandising	NET - Networking
BIOL - Biology	FIN - Finance	NUR - Nursing
BLAW - Legal Studies	FLDX - Field Experience	PE - Physical Education
BTE - Business Teacher Education	FOOD - Food	PHIL - Philosophy
CD - Communication Disorders	FREN - French	PHOT - Photography
CDM - Crisis and Disaster Management	GEOG - Geography	PHYS - Physics
CFD - Child and Family Development	GER - German	POLS - Political Science
CHEM - Chemistry	GRAP - Graphics	PR&T - Power & Transportation
CHIN - Chinese	HED - Health Education	PSY - Psychology
CIS - Computer Information Systems	HIST - History	REC - Recreation
CJ - Criminal Justice	HM - Hospitality Management	REL - Religious Studies
CMGT - Construction Management	HONR - Honors	SAFE - Safety Science
COMM - Communication	HRM - Human Resource Management	SOC - Sociology
CS - Computer Science	ICAP - Integrative Studies Capstone	SOSC - Social Sciences
CTE - Career and Technology Education	IGEN - Integrative Studies General	SOT - School of Technology
D&N - Dietetics and Nutrition	INDM - Industrial Management	SOWK - Social Work
DRED - Driver Education	INST - Instructional Technology	SPAN - Spanish
EASC - Earth Science	ISP - International Studies Abroad	T&OE - Technology and Occupational Education
ECEL - Elementary and Early Childhood Education	IS - International Studies	TECH - Technology
ECON - Economics		THEA - Theatre
		TOUR - Tourism
		WS - Women's Studies

College of Arts, Humanities, and Social Sciences

Integrative Studies General

IGEN 4244 Comparative Cross-Cultural Cinema* (3) Comparison of films with various sub-themes relating to cross-cultural topics such as internationalism, racism and gender. *Not available for graduate credit.

Religious Studies

Center for Religious Studies Statement of Policy

Students are encouraged to seek advisement concerning courses taken toward a minor in Religious Studies from the Director of the Center for Religious Studies in Wood 124 or at selvidge@ucmo.edu.

RELIGIOUS STUDIES

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (839)

The graduate with a minor in Religious Studies will use the knowledge, experience, and skills obtained when this program is completed to:

- Recognize differences between the academic study of religions and the personal or corporate practice of religions.
- Reflect upon personal values and value systems in a global environment by using symbolic approaches to describe problems, identify alternative solutions, and make reasoned choices among those solutions.
- Compare and contrast definitions of religion and the opinions of scholars within the fields of Religious Studies.
- Demonstrate awareness and recollection of a wide variety of religious beliefs and practices within a global, pluralistic, non-racist, and non-sexist perspective.
- Recognize conflicts within and between value systems that may have their roots within religious traditions.
- Comprehend a variety of methodologies used in the study of religions which will help to develop skills in problem solving, analyzing, and interpreting data.
- Consider multiple perspectives, recognize biases, and cope with ambiguous points of view while listening carefully and thoughtfully to the ideas of others.
- Develop a vocabulary rooted in the study of religions that will facilitate understanding of literatures, themes, and influences upon our society and the world.
- Converse in an intelligent manner about a variety of cultures, beliefs, rituals, religious literatures, world systems, and ethical issues with people from around the globe.

Sem. Hours

MINOR REQUIREMENTS 21

Choose from the following:

REL 1130	The Bible as Literature	3
REL 1510	Exploring Religions	3
REL 2110	Global Images of Jesus	3
REL 2210	Religions in America	3
REL 2310	World Views & Values	3
REL 2410	Religions of Africa	3
REL 2510	Gender & Religions	3
REL 2220	New Religions	3
REL 3210	Comparative World Religions	3
REL 3900	Special Projects in Religion	3
REL 4410	Modern Religious Thought	3
REL 4520	Legal Issues & Religions	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor,

REL 1510 fulfills 3 s.h. of Div. II C

REL 1130 The Bible as Literature (3) A literary and historical critical analysis of the Old Testament/Hebrew Bible, the Apocrypha, and the New Testament.

REL 1510 Exploring Religions (3) Definitions, experiences, expressions, beliefs, socio-cultural contexts, and concept of self within religious traditions and practices.

REL 2110 Global Images of Jesus (3) An investigation of the gospels of the New Testament, apocryphal writings, and interpretations of "Jesus" around the world.

REL 2210 Religions in America (3) Historical development of American religious pluralism.

REL 2220 New Religions (3) An international survey of "cults" and new religions during the past 200 years.

REL 2310 World Views and Values (3) Studies in contemporary religious-ethical problems. Topics include biomedical, technological, ecological, gender, corporate responsibility, war and peace, terrorism, racism, and death and dying.

REL 2410 Religions of Africa (3) Explores the diversity and religious traditions in Africa, the Caribbean and among African-Americans in the U.S., emphasizing beliefs, rituals and ethical constraints.

REL 2510 Gender and Religions (3) Studies in how major world religions view the social responsibilities, activities, and relationships of males and females.

REL 3210 Comparative World Religions (3) Similar and contrasting aspects of the world's major religions.

REL 3900 Special Projects in Religion (1-3) Individual or group study of problems in special areas of interest, such as research projects and travel seminars. *May be repeated for a maximum of 6 semester hours.*

REL 4410 Modern Religious Thought (3) Selected contemporary international works of influential writers. Topics may include peace and justice, feminist criticism, minority issues, globalization, nationalistic religions, and sports as a religion. Prerequisite: one course in religious studies.

REL 4520 Legal Issues and Religions (3) A survey of historic and recent legal issues dealing with the relationship between religion (church) and the state. Prerequisite: One course in religious studies or approval by the Director.

Art and Design

NOTE: The University of Central Missouri is an accredited institutional member of the National Association of Schools of Art and Design, 11250 Roger Bacon Dr., Suite 21, Reston, VA, 20190-5248 phone 703-437-0700.

Department of Art and Design Statement of Policy

Students in studio courses in art are required to furnish their own materials except certain studio equipment and some highly specialized materials provided by the Department. All work when completed is under the control of the Department until the end of the academic year. The student is expected to have a representative portfolio of his/her work available for presentation at any time prior to graduation.

Each candidate for a degree may be required to leave with the Department of Art and Design one or more pieces of original work. These are added to the collection of the work of graduates and will form a permanent University collection.

During the sophomore year or during the first semester after transferring from another institution, all candidates for degrees will present a portfolio of work to be reviewed by the faculty for the purpose of acceptance into the Bachelor of Fine Arts program.

During the senior year, all candidates for degrees will present an exhibition of representative work to be reviewed by the faculty as partial graduation approval. Specific information about reviews and exhibitions may be obtained in the Department of Art and Design office.

ART

Major, Bachelor of Science in Education Degree

Certification to teach art in grades K-12. (41-260)

The graduate with a Bachelor of Science in Education degree in Art will use the knowledge and skills obtained in these programs to:

- Demonstrate critical and creative thinking by incorporating theories and practices in art and design production adequate for innovative expression in the visual arts.
- Communicate and support informed and artistically sensitive interpretations and judgments about his/her own work as well as visual forms made by others by using perceptual, critical and aesthetic concepts that underlie the disciplines of art and design.
- Recognize and describe major periods, styles and artists in art history, as well as the historical forces that influence aesthetics, creativity and critical theory.
- Facilitate a culturally rich and visually sensitive society by recognizing and utilizing the unique and important artistic contributions made by women and men from diverse racial, geographical and cultural groups.
- Use technology in creative, critical and teaching processes as well as a resource for producing art and gathering information about art, art history, aesthetics and art criticism.
- Exhibits evidence of an understanding of the professional standards and practices for seeking employment and achieving long-term success in their degree program career field.
- Students attaining the Bachelor of Science in Education (BSE) for Art will also meet the Missouri Standards for Teacher Education Programs, including the Subject Specific Competencies for Beginning Art Teachers.

Sem. Hours

MAJOR REQUIREMENTS 57

ART 1110	Drawing I	3
ART 1120	Drawing II	3
ART 3209	Figure Construction	3
ART 1315	Design I	3
ART 1325	Design II	3
ART 3314	Fibers	3
ART 2412	Ceramics I	3
ART 2420	Sculpture I	3
ART 2511	Painting I	3
ART 2710	Printmaking I	3
ART 1800	Ideas & the Visual Arts	3

ART 1825	Art History Survey II	3
ART 3915	Methods of Teaching Art I: Elementary	3
ART 3920	Methods of Teaching Art II: Secondary	3
ART 1815	Art History Survey I, 3 or	
ART 1835	Survey of Non-Western Art History, 3	3
ART 4850	20th Century Art & Architecture, 3 or	
ART 4860	Contemporary Art & Design, 3	3
ICAP 4221	Artists in Contemporary Society	3
Upper-level concentration in studio art in one of the following areas: drawing, painting, watercolor, sculpture, fibers, printmaking, ceramics 6		

GENERAL EDUCATION REQUIREMENTS (page 41)

In the major, ART 1800 fulfills 3 s.h. of Div. II C; ICAP 4221 fulfills 3 s.h. of Div. IV B.) 42

Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
PSY 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. of Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) 28

MINIMUM TOTAL 127

ART

Minor, Bachelor of Science in Education Degree

Certification to teach art in grades K-9. Secondary majors should see the Director of Clinical Services and Certification. (369)

Sem. Hours

MINOR REQUIREMENTS 27

ART 1110	Drawing I	3
ART 1315	Design I	3
ART 3314	Fibers	3
ART 2412	Ceramics I	3
ART 2420	Sculpture I	3
ART 2710	Printmaking I	3
ART 3915	Methods of Teaching Art I: Elementary	3
ART 2511	Painting I, 3 or	
ART 3510	Watercolor, 3	3
ART 1815	Art History Survey I, 3 or	
ART 1825	Art History Survey II, 3	3

ART

Minor for a Bachelor's Degree

Except for a Bachelor of Science in Education Degree. (484)

Sem. Hours

MINOR REQUIREMENTS 24

ART 1110	Drawing I	3
ART 1120	Drawing II	3
ART 3209	Figure Construction	3
ART 1315	Design I	3
ART 1325	Design II	3
ART 1815	Art History Survey I	3
ART 1825	Art History Survey II	3
Elective in Art		3

GRAPHIC DESIGN

Major, Bachelor of Fine Arts Degree
(47-324)

The graduate with a Bachelor of Fine Arts degree in Art will use the knowledge and skills obtained in these programs to:

- Demonstrate critical and creative thinking by incorporating theories and practices in art and design production adequate for innovative expression in the visual arts.
- Communicate and support informed and artistically sensitive interpretations and judgments about his/her own work as well as visual forms made by others by using perceptual, critical and aesthetic concepts that underlie the disciplines of art and design.
- Recognize and describe major periods, styles and artists in art history, as well as the historical forces that influence aesthetics, creativity and critical theory.
- Facilitate a culturally rich and visually sensitive society by recognizing and utilizing the unique and important artistic contributions made by women and men from diverse racial, geographical and cultural groups.
- Use technology in creative, critical and teaching processes as well as a resource for producing art and gathering information about art, art history, aesthetics and art criticism.
- Exhibits evidence of an understanding of the professional standards and practices for seeking employment and achieving long-term success in their degree program career field.

Sem. Hours

MAJOR REQUIREMENTS 84

GRAP 1010	Fundamentals of Printing Processes	3
ART 1110	Drawing I	3
ART 1120	Drawing II	3
ART 1315	Design I	3
ART 1325	Design II	3
ART 1800	Ideas & the Visual Arts	3
ART 1825	Art History Survey II	3
ART 1815	Art History Survey I, 3 or	
ART 1835	Survey of Non-Western Art History, 3	3
ART 2335	Design III	3
ART 2412	Ceramics I, 3 or	
ART 2420	Sculpture I, 3	3
ART 2511	Painting I	3
ART 2610	Intro Graphic Design & Illustration	3
ART 2710	Printmaking I	3
ART 3510	Watercolor	3
ART 3610	Typography	3
ART 3620	Logo/Trademark Design	3
ART 3630	Design For Advertising	3
ART 3640	Package Design	3
ART 3660	Publication Design	3
ART 4020	Studio Seminar	3
ART 4610	Interactive Design, 3 or	
ART 4620	Motion Design	3
ART 4850	20th Century Art & Architecture, 3 or	
ART 4860	Contemporary Art & Design, 3	3
ICAP 4221	Artists in Contemporary Society	3
Elective in Art	. . . . .	3
Electives from the following	. . . . .	12
ART 4010	Special Projects In Art	1-3
ART 4310	Design Internship	2-3
ART 4610	Interactive Design, 3 or	
ART 4620	Motion Design, 3	3
COMM 1200	Introduction to Mass Communication	3
COMM 2400	Foundations of Broadcasting	3
COMM 2410	Multimedia I	3
COMM 3413	Multimedia II	3
COMM 3640	Mass Media Advertising	3
COMM 4250	Mass Communication Law	3
GRAP 2030	Digital Pre-Press for Printing App.	3
GRAP 2031	Digital Image Processing	3
GRAP 2032	Imaging Technology	3
GRAP 2610	Principles of Multimedia	3
GRAP 2620	Multimedia Applications I	3
GRAP 2670	Multimedia Animation	3
GRAP 4045	Adv. Digital Imaging Processing	3

MGT 4315	Entrepreneurship	3
PHOT 1203	Introduction to Photography	3
PHOT 1210	Found. of Prof. Photography (1) and	
PHOT 1211	Found. of Technique & Critique (3)	4

GENERAL EDUCATION REQUIREMENTS (page 41)

In the major, ART 1800 fulfills 3 s.h. of Div. II C;	
ICAP 4221 fulfills 3 s.h. of Div. IV B	42
MINIMUM TOTAL	126

INTERIOR DESIGN

Major, Bachelor of Fine Arts Degree
(47-261)

The graduate with a Bachelor of Fine Arts degree in Art will use the knowledge and skills obtained in these programs to:

- Demonstrate critical and creative thinking by incorporating theories and practices in art and design production adequate for innovative expression in the visual arts.
- Communicate and support informed and artistically sensitive interpretations and judgments about his/her own work as well as visual forms made by others by using perceptual, critical and aesthetic concepts that underlie the disciplines of art and design.
- Recognize and describe major periods, styles and artists in art history, as well as the historical forces that influence aesthetics, creativity and critical theory.
- Facilitate a culturally rich and visually sensitive society by recognizing and utilizing the unique and important artistic contributions made by women and men from diverse racial, geographical and cultural groups.
- Use technology in creative, critical and teaching processes as well as a resource for producing art and gathering information about art, art history, aesthetics and art criticism.
- Exhibits evidence of an understanding of the professional standards and practices for seeking employment and achieving long-term success in their degree program career field.

Sem. Hours

MAJOR REQUIREMENTS 86

ART 4020	Studio Seminar	3
ART 1110	Drawing I	3
ART 1120	Drawing II	3
ART 1315	Design I	3
ART 1325	Design II	3
ART 2310	Introduction to Interior Design	3
ART 2320	Residential Interior Design	3
ART 2335	Design III	3
ART 3305	Interior Design Presentation Tech.	3
ART 3310	Traditional Interiors	3
ART 3320	Prof. Practice for Interior Designers	3
ART 3330	Restaurant & Store Planning	3
ART 3340	Interior Detailing & Furniture Design	3
ART 4340	Corporate & Institutional Design	3
ART 1800	Ideas & the Visual Arts	3
ART 1825	Art History Survey II	3
ART 3800	History of Furniture & Interiors	3
FAME 2442	Textiles	3
FAME 4410	Architectural Interiors	3
GRAP 1105	Basic AutoCAD	1
GRAP 1110	Fundamentals of Drafting	2
GRAP 2170	Intro. to Computer-Aided Drafting	2
GRAP 3160	Residential Arch. Drawing	3
ICAP 4221	Artists in Contemporary Society	3
ART 2412	Ceramics I, 3 or	
ART 2420	Sculpture I, 3	3
ART 2511	Painting I, 3 or	
ART 3510	Watercolor, 3	3
ART 1815	Art History Survey I, 3 or	
ART 1835	Survey of Non-Western Art History, 3	3
ART 4850	20th Century Art & Architecture, 3 or	
ART 4860	Contemporary Art & Design, 3	3
Electives from the following	. . . . .	6
ART 2610	Intro Graphic Design & Illustration	3
ART 2710	Printmaking I	3

ART	3314	Fibers	3
ART	4310	Design Internship	3
GRAP	4162	Commercial Arch. Drawing	3
GRAP	4170	CADD for Eng. Tech.	3
THEA	1600	Stagecraft	3
GENERAL EDUCATION REQUIREMENTS (page 41)			
In the major, ART 1800 fulfills 3 s.h. of Div. II C;			
ICAP 4221 fulfills 3 s.h. of Div. IV B) 42			
MINIMUM TOTAL			128

STUDIO ART

Major, Bachelor of Fine Arts Degree (47-263)

The graduate with a Bachelor of Fine Arts degree in Art will use the knowledge and skills obtained in these programs to:

- Demonstrate critical and creative thinking by incorporating theories and practices in art and design production adequate for innovative expression in the visual arts.
- Communicate and support informed and artistically sensitive interpretations and judgments about his/her own work as well as visual forms made by others by using perceptual, critical and aesthetic concepts that underlie the disciplines of art and design.
- Recognize and describe major periods, styles and artists in art history, as well as the historical forces that influence aesthetics, creativity and critical theory.
- Facilitate a culturally rich and visually sensitive society by recognizing and utilizing the unique and important artistic contributions made by women and men from diverse racial, geographical and cultural groups.
- Use technology in creative, critical and teaching processes as well as a resource for producing art and gathering information about art, art history, aesthetics and art criticism.
- Exhibits evidence of an understanding of the professional standards and practices for seeking employment and achieving long-term success in their degree program career field.

Sem. Hours

MAJOR REQUIREMENTS 84

ART	1110	Drawing I	3
ART	1120	Drawing II	3
ART	3110	Drawing III	3
ART	3209	Figure Construction	3
ART	1315	Design I	3
ART	1325	Design II	3
ART	2335	Design III	3
ART	2412	Ceramics I	3
ART	2420	Sculpture I	3
ART	2511	Painting I	3
ART	2710	Printmaking I	3
ART	1800	Ideas & the Visual Arts	3
ART	1825	Art History Survey II	3
ICAP	4221	Artists in Contemporary Society	3
ART	1815	Art History Survey I, 3 or	
ART	1835	Survey of Non-Western Art History, 3	3
ART	4850	20th Century Art & Architecture, 3 or	
ART	4860	Contemporary Art & Design, 3	3
Electives in art			15
Elect one of the following areas of specialization			21

Area 1 Sculpture

ART	4020	Studio Seminar	3
ART	3420	Sculpture II	9
ART	4420	Sculpture III	9

Area 2 Painting

ART	3510	Watercolor	3
ART	3511	Painting II	9
ART	4511	Painting III	9

Area 3 Ceramics

ART	4020	Studio Seminar	3
ART	3412	Ceramics II	9
ART	4412	Ceramics III	9

Area 4 Printmaking

ART	4020	Studio Seminar	3
ART	3710	Printmaking II	9
ART	3720	Printmaking III	9

Area 5 Illustration

ART	2610	Intro Graphic Design & Illustration	3
ART	3610	Typography	3
ART	3625	Illustration Techniques	3
ART	3635	Illustration Concepts	3
ART	4625	Adv. Illustration I	3
ART	4635	Adv. Illustration II	3
ART	4020	Studio Seminar	3

GENERAL EDUCATION REQUIREMENTS (page 41)

In the major, ART 1800 fulfills 3 s.h. of Div. II C;	
ICAP 4221 fulfills 3 s.h. of Div. IV B) 42	
MINIMUM TOTAL	126

- ART 1110 Drawing I (3)** Basic principles of perspective and composition through problems in landscape and still life.
- ART 1120 Drawing II (3)** Compositional drawing in various media including ink wash and pen and ink. Prerequisite: ART 1110.
- ART 1315 Design I (3)** Introduces the use of the visual elements within the context of the principles of design.
- ART 1325 Design II (3)** The study of color, its application within the design process and its use as an integral component in design. Prerequisite: ART 1315.
- ART 1800 Ideas and the Visual Arts (3)** Explores the idea and practice of the visual arts in modern society. A study of style, form, content, and aesthetic judgment emphasizing the visual arts as a means of communicating ideas.
- ART 1815 Art History Survey I (3)** Prehistoric to the fourteenth century.
- ART 1825 Art History Survey II (3)** Art history from 1400 to the present.
- ART 1835 Survey of Non-Western Art History (3)** The survey of the aesthetic and stylistic development of the traditional arts and architecture of non-western culture.
- ART 2310 Introduction to Interior Design (3)** A practical guide to the fundamentals of interior design and an overview of the interior design profession. Prerequisites: ART 1110 and ART 1315.
- ART 2320 Residential Interior Design (3)** The design process as it is applied to interior design problems. An emphasis on the elements of residential design. Prerequisites: ART 1120, ART 1325 and ART 2310 for art majors; GRAP 1110 or consent of instructor for nonmajors.
- ART 2335 Design III (3)** Exploration of design on a three-dimensional level utilizing design principles in the development of structural forms and the manipulation of physical space. Prerequisite: ART 1325.
- ART 2412 Ceramics I (3)** Basic skills on the three pottery making methods: e.g., slab, coil, and pottery wheel with emphasis on aesthetic qualities. Wheel throwing will be accented. Basic experiences in kiln stacking and firing. An additional fee is associated with this course.
- ART 2420 Sculpture I (3)** Fundamentals in sculpture including additive, subtractive, and construction techniques. An additional fee is associated with this course.
- ART 2511 Painting I (3)** The creative art process with emphasis on the basic visual concepts and styles, ranging from the care and use of painting tools to the execution of paintings, and including some painting history. Prerequisites: ART 1110 and ART 1315.
- ART 2610 Introduction to Graphic Design and Illustration (3)** Basic orientation to the field of commercial art. Presentation skills, use of tools and materials. Creative problem solving in the areas of advertising, publication, graphic design, and illustration. Prerequisites: ART 1110 and ART 1315. Graphic arts majors - GRAP 2030 and GRAP 2031. An additional fee is associated with this course.
- ART 2710 Printmaking I (3)** This course is designed to acquaint the student with the basics of various printmaking processes. Prerequisites: ART 1110 and ART 1315. An additional fee is associated with this course.
- ART 3110 Drawing III (3)** The application of fundamentals of drawing to creative problems in figure, still life, and landscape composition. *May be repeated for a maximum of 9 semester hours.* Prerequisites: ART 1120 and ART 3209.

ART 3209 Figure Construction (3) The skeletal and muscular construction of the human figure as it relates to the action and proportions of the figure. Drawing from life. Prerequisite: ART 1110. An additional fee is associated with this course.

ART 3210 Life Drawing (3) Drawing from a live model with the emphasis on techniques. *May be repeated for a maximum of 6 semester hours.* Prerequisite: ART 3209. An additional fee is associated with this course.

ART 3305 Interior Design Presentation Techniques (3) The techniques necessary for the presentation of interior design solutions. Both traditional media and computer-aided technology will be implemented. An additional fee is associated with this course. Prerequisites: ART 1325 and ART 2310.

ART 3310 Traditional Interiors (3) A study of traditional interior design problems. An emphasis in architectural interior elements, interior surfaces, finishes, and application. Prerequisites: ART 2320 and GRAP 3160 for art majors; GRAP 1110 or consent of instructor for nonmajors.

ART 3314 Fibers (3) Basic course in the fundamentals and techniques of creating on and off loom structures and fabrics. *May be repeated for a maximum of 9 semester hours.* An additional fee is associated with this course.

ART 3320 Professional Practice for Interior Designers (3) The study of interior design business practices. The history of the profession and considerations required when organizing and managing a business. Prerequisite: ART 2310.

ART 3330 Restaurant and Store Planning (3) Intermediate work in interior design, studio problems, lighting, and full presentation techniques with emphasis on store and restaurant planning. An additional fee is associated with this course. Prerequisite: ART 3310 for art majors; GRAP 1110 or consent of instructor for nonmajors.

ART 3340 Interior Detailing and Furniture Design (3) The detailing of interior environments and furniture design to include casework and furnishings through a coordinated study of structure, style, and materials. Prerequisite: ART 2320.

ART 3412 Ceramics II (3) Extended studio research in pottery design and forming. Technical methods in the preparation of clay bodies, glazes, and kiln firing and maintenance. *May be repeated for a maximum of 9 semester hours.* Prerequisite: ART 2412. An additional fee is associated with this course.

ART 3420 Sculpture II (3) Individual problems in techniques of sculpture utilizing a variety of media. *May be repeated for a maximum of 9 semester hours.* Prerequisite: ART 2420. An additional fee is associated with this course.

ART 3510 Watercolor (3) Application of principles of composition in the medium of transparent watercolor. *May be repeated for a maximum of 9 semester hours.* Prerequisites: ART 1110 and ART 1315.

ART 3511 Painting II (3) Study and practice in basic painting techniques. *May be repeated for a maximum of 9 semester hours.*

ART 3513 Painting II: Plein Air (3) Working in the landscape utilizing direct observation to study and practice basic painting skills. Prerequisite: ART 2511.

ART 3515 Painting II: Figure (3) Working from the figure utilizing direct observation to study and practice basic painting skills. Prerequisite: ART 2511.

ART 3610 Typography (3) Principles of design and usage of letter forms and alphabet styles provide the basis for experiments in spacing, arrangement, and integration of typographic and other graphic elements on the printed page. Prerequisites: ART 1110 and ART 1315. Graphic arts majors - GRAP 2030 and GRAP 2031. An additional fee is associated with this course.

ART 3620 Logo/Trademark Design (3) The design of symbolic and lettergraphic identifiers, practical application of symbols, signs, and visual metaphors from simple logotypes to sophisticated corporate identity programs. Prerequisites: ART 2610 and ART 3610. An additional fee is associated with this course.

ART 3625 Illustration Techniques (3) The application of wet and dry media with various surfaces to achieve a range of visual effects with an emphasis on exploration and experimentation. Nineteenth and twentieth century illustrators' works are studied as a means of understanding visual possibilities and styles. Prerequisite: ART 2610. An additional fee is associated with this course.

ART 3630 Design for Advertising (3) Advertising concepts, layout, client presentation for print application. Developing, visualizing, and communicating effective advertising for magazines, newspapers, and outdoor posters. Only offered Fall semester. Prerequisites: ART 2610 and ART 3610. An additional fee is associated with this course.

ART 3635 Illustration Concepts (3) The interpretation of written and verbal information resulting in appropriate and successful visual solutions. Concept and visual vocabulary are stressed as a means of satisfying client needs. Students will begin to identify and build a personal illustrative style. Prerequisite: ART 3625. An additional fee is associated with this course.

ART 3640 Package Design (3) Packaging and point-of-sale graphics from concept to client presentation. Only offered Spring semester. Prerequisite: ART 3620. An additional fee is associated with this course.

ART 3660 Publication Design (3) Publications as design problems. The design of folders, brochures and soft-bound print pieces through the manipulation of type, photos, art, paper and grid systems. Prerequisites: ART 3620. An additional fee is associated with this course.

ART 3710 Printmaking II (3) Advanced techniques are explored in one or more of the four printmaking processes. *May be repeated for a maximum of 12 semester hours.* Prerequisite: ART 2710. An additional fee is associated with this course.

ART 3720 Printmaking III (3) Individual artistic direction is developed in one of the four printmaking processes. *May be repeated for a maximum of 12 semester hours.* Prerequisite: ART 3710. An additional fee is associated with this course.

ART 3800 History of Furniture and Interiors (3) The survey of the furniture and interiors from ancient to modern times. Emphasis is given to the styles from the Renaissance to the nineteenth century.

ART 3910 Art for Elementary Schools (2) Elements of art structure and the principles of composition and their application in creative visual art experiences, especially adapted for children ages 4 through 12. An additional fee is associated with this course.

ART 3915 Methods of Teaching Art I: Elementary (3) The art teacher's role in teaching art history, art criticism and aesthetics, along with the production of artwork for children ages 4 through 12, will be explored. Prerequisites: ART 1110 and ART 1315. An additional fee is associated with this course.

ART 3920 Methods of Teaching Art II: Secondary (3) The art teacher's role and methods of teaching art production, art history, art criticism and aesthetics for students grades 6-12, will be explored. Prerequisite: ART 3915; should be taken concurrently with EDFL 3500 and FLDX 3550. An additional fee is associated with this course.

ART 4010 Special Projects in Art (1-3) *May be repeated for a maximum of 6 semester hours.*

ART 4020 Studio Seminar (3) By arrangement, with consent of the instructor involved, and through individual directed study. *May be repeated for a maximum of 6 semester hours.* Prerequisite: senior year with consent.

ART 4310 Design Internship (2-3) An elective course for interior design and commercial art majors operated in conjunction with various business firms, wherein students are afforded the opportunity of working alongside professional designers in the field. *May be repeated for a maximum of 6 semester hours.* Prerequisite: a major on the undergraduate level of either interior design or commercial art and with approval of departmental committee.

ART 4324 Papermaking (3) Introduces the student to western techniques in hand papermaking: sheet forming and two- and three-dimensional paper structures. *May be repeated for a maximum of 9 semester hours.* Prerequisite: 20 semester hours of art.

ART 4340 Corporate and Institutional Design (3) Increasing emphasis on space arrangement for commercial and institutional use; introduction to specifications of materials and specification writing; emphasis in office design. *May be repeated for a maximum of 6 semester hours.* An additional fee is associated with this course. Prerequisite: ART 3330 for art majors; GRAP 3160 or consent of instructor for nonmajors.

ART 4412 Ceramics III (3) Production of advanced ceramics projects with emphasis on the search for individual styles and choices of forming methods. Advanced study of glaze chemistry, clay body formulation, and kiln construction. *May be repeated for a maximum of 9 semester hours.* Prerequisite: ART 3412 or consent of instructor. An additional fee is associated with this course.

ART 4420 Sculpture III (3) Advanced individual problems in techniques of sculpture utilizing a variety of media. *May be repeated for a maximum of 9 semester hours.* Prerequisite: ART 3420. An additional fee is associated with this course.

ART 4511 Painting III (3) Application of principles of composition in the medium of oil or acrylic paint. *May be repeated for a maximum of 9 semester hours.*

ART 4513 Painting III: Plein Air (3) Working in the landscape utilizing direct observation to develop advanced painting skills. Prerequisite: ART 3511 or ART 3513 or ART 3515.

ART 4515 Painting III: Figure (3) Working from the figure utilizing direct observation to develop advanced painting skills. Prerequisite: ART 3511 or ART 3513 or ART 3515.

ART 4610 Interactive Design (3) An introduction to the field of digital visual communication. Integration of new technologies, concepts and methods will be explored. Prerequisites: ART 3660 and consent of instructor or department adviser. An additional fee is associated with this course.

ART 4620 Motion Design* (3) Introduction to the field of motion graphics including: time-based works, animation, sound, and digital multimedia. Exploration of technologies, methods and concepts in motion design. Prerequisites: ART 3620 and ART 3630 or instructor consent. *Not available for graduate credit.

ART 4625 Advanced Illustration I* (3) The application of illustration techniques and concepts to advertising and editorial assignments in a simulated professional setting. Projects will stress the research and generation of visual references, working with art directors and editors, meeting tight deadlines. Prerequisite: ART 3635. An additional fee is associated with this course. *Not available for graduate credit.

ART 4635 Advanced Illustration II* (3) A continuation of ART 4625 with an emphasis on the business aspects of free-lance illustration. Prerequisite: ART 4625. An additional fee is associated with this course. *Not available for graduate credit.

ART 4850 Twentieth Century Art and Architecture (3) A history of the visual arts of the world in the twentieth century.

ART 4860 Contemporary Art & Design (3) The exploration of contemporary art and design in a context of art historical style by utilizing specialized information networks which chart and chronicle its development.

ART 4920 Methods of Teaching Art III: Student Teaching Seminar* (2) Application of previous art methods and education course knowledge to preparing for student teaching placements, fulfilling program exit requirements, and developing skills for seeking employment. Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; should be taken concurrently with ART 4930 during the Professional Semester. *Not available for graduate credit.

ART 4930 K-12 Field Experience in Art* (1) Participation in the elementary and secondary art locations where student teaching will take place, ensuring an effective transition from University campus setting to student teaching. Prerequisites: admission to the Teacher Education Program; should be taken concurrently with Art 4920 during the Professional Semester (the student teaching semester). *Not available for graduate credit.

Integrative Studies Capstone

ICAP 4221 Artists in Contemporary Society* (3) Artists examine diverse theories of art and ethics as it impacts their careers in a global society. Prerequisite: Consent to enroll, based on the following conditions: all general studies completed; art major; scheduled for graduation the semester enrolled (or the following semester if an art education major). *Not available for graduate credit.

Communication

Mission Statement

The Department of Communication embraces the traditions, study, and practice of symbolic interaction through a variety of communication genres, such as broadcast media, corporate communication, journalism, mass communication, public relations, rhetoric, and speech communication.

Admission

Students entering the University of Central Missouri to pursue a degree in communication (Communication, B.A.; Broadcast Media, B.S.; Journalism, B.S.; Public Relations, B.S.; Corporate Communication, B.S.; Speech Communication B.S.; Speech Communication and Theatre B.S.) should indicate their intentions to become a communication major at the time of first enrollment. Departmental advisers can be obtained at the department office, Martin 136.

Admission to all communication degree programs is conditional upon the completion of the following prerequisites:

1. Completion of the following General Education requirements with no grade lower than C: COMM 1000; ENGL 1020 and ENGL 1030, or ENGL 1080.
2. Proficiency in keyboarding is required for all writing courses. Application into the communication programs should be made after departmental pre-admission requirements have been completed.
3. Applications made after completion of 75 semester hours of academic credit will normally entail the taking of more than the minimum of 49 additional semester hours. Application forms are available in Martin 136.

Course Work

1. A student may not graduate with a degree in a communication major in which the grade of record for any required communication course work is an F. Excluding COMM 1200, COMM 2400, COMM 2415, COMM 1520, COMM 2620, COMM 4500, a maximum of six semester hours in which the grade of record for any communication course is a D may be counted toward a degree with a communication major.
2. Course substitutions for the catalog requirements may be made only upon approval by the appropriate departmental adviser and department chair.
3. Some production or writing courses require participation in activities outside the class meeting hours. Students should be prepared to participate in these activities that sometimes include assignments in conjunction with the campus media.
4. Some lecture courses require attendance at departmental colloquia and/or other University presentations. Students should be prepared to participate in these assignments as a part of their degree programs.
5. Students must earn a C grade or above in each of the following core courses: COMM 1100, COMM 2100 and COMM 3100.

BROADCAST MEDIA

Major, Bachelor of Science Degree

Please see the Department of Communication for updates regarding this program.
(43-342)

Broadcast Media Statement of Policy

Admission

Application into the Broadcast Media major should be made after departmental program pre-admission requirements have been completed.

Admission to the Broadcast Media program is conditional upon the completion of the following prerequisites:

1. Completion of the following General Education requirements with no grade lower than C: COMM 1000, ENGL 1020 and ENGL 1030, or ENGL 1080.
2. Completion of the following Broadcast Media gateway courses: COMM 1200, COMM 2400, COMM 2415. Students must maintain a 2.50 grade point average with no course credit lower than a C in these courses.

Course Work

1. A first semester student majoring in Broadcast Media should meet with a departmental adviser before registering for additional classes.
2. A student may not graduate with a degree in Broadcast Media in which the grade of record for any required communication course work is an F.
3. Excluding COMM 1200, COMM 2400, COMM 2415, a maximum of six semester hours in which the grade of record for any communication coursework is a D may be counted toward a Broadcast Media major.
4. Course substitutions for the catalog requirements may be made only upon approval by the appropriate departmental adviser and department chair.
5. Some production or writing courses require participation in activities outside the class meeting hours. Students should be prepared to participate in these activities, which sometimes include assignments in conjunction with the campus media.
6. Some lecture courses require attendance at departmental colloquia and/or other University presentations. Students should be prepared to participate in these assignments as a part of their degree programs.
7. In order to graduate with a degree in Broadcast Media, a student must attain a 2.25 (or above) grade-point average for all credit hours (completed at UCM or elsewhere) and attain a 2.50 (or above) grade-point average for all course work in the major.

The graduate with a Bachelor of Science degree in Broadcast Media will use the knowledge and skills obtained in the program to:

- Demonstrate an understanding of the theories of communication through broadcast media.
- Demonstrate an understanding of how research is applied and critiqued in media industries.
- Demonstrate preparedness for the industries of mass media through practical knowledge of the process of production.
- Demonstrate an understanding of the history of and effects of electronic media in today's society.

Sem. Hours

MAJOR REQUIREMENTS 42-54

COMM 1100	Intro. to Communication	1
COMM 2100	Introduction to Communication Theory	3
COMM 3100	Communication Research Methods	3
COMM 1200	Intro. to Mass Communication	3
COMM 4250	Mass Communication Law	3
COMM 2400	Foundations of Broadcasting	3
COMM 2410	Multimedia I	3
COMM 2411	Audio Production I	3
COMM 2412	Video Production I	5
COMM 2415	Broadcast Copywriting	3
COMM 4490	Senior Capstone Seminar	1
COMM 3200	Practicum, 1-3 or	
COMM 4295	Internship, 1-3	1-3

Production

Electives from the following	3-9	
COMM 3410	Audio Production II	3
COMM 3411	Video Production II	3
COMM 3413	Multimedia II.	3
COMM 3412	Single Camera Drama Prod.	3
COMM 4410	Video Production III	3
COMM 4470	Corp. & Org. Media Production	3

Industry Practice and Analysis

Electives from the following	3-5	
COMM 4240	Media Management	3
COMM 4245	Media Economics & Sales	3
COMM 3430	Broadcast Prog. & Operations	3
COMM 4415	Screenplay Writing	3
COMM 4475	New Media Technologies	2
COMM 3640	Mass Media Advertising	3

Theory and Criticism

Electives from the following	3-5	
COMM 4200	Spec. Topics in Mass Media	1-6
COMM 4260	Comparative Media Systems	2
COMM 4280	Criticism of Mass Media	2
COMM 4285	Women & Minorities in Media	3
COMM 4290	Special Proj. in Mass Comm.	1-3
COMM 3400	History of American Film	3

MINOR REQUIREMENTS (see Statement of Policy) 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000	Div. I B (required)	3
COMM 3000	Div. II C (required)	3
GEOG 3201	Div. II D (required)	3
COMM 3010	Div. III (required)	3
IGEN 4224	Div. IV A or	
IGEN 3232	Div. IV A or	
IGEN 3224	Div. IV A (required)	3

UPPER-LEVEL ELECTIVES 1-13

MINIMUM TOTAL 124

BROADCAST MEDIA

Minor for a Bachelor's Degree

Please see the Department of Communication for updates regarding this program.

UCM does not confer teacher certification for this minor.
(343)

Sem. Hours

MINOR REQUIREMENTS 21

COMM 1200	Intro. to Mass Communication	3
COMM 2400	Foundations of Broadcasting	3
COMM 2415	Broadcast Copywriting	3
COMM 4250	Mass Communication Law	3
Electives from the following	3	
COMM 2410	Multimedia I	3
COMM 2411	Audio Production I	3
COMM 2412	Video Production I	5
Electives from the following	6	
COMM 3200	Mass Media Practicum	1
COMM 3410	Audio Production II	3
COMM 3411	Video Production II	3
COMM 3412	Single Camera Drama Prod.	3
COMM 3413	Multimedia II.	3
COMM 3430	Broadcast Prog. & Operations	3
COMM 4240	Media Management	3
COMM 4280	Criticism of Mass Media	2
COMM 4410	Video Production III	3
COMM 4415	Screenplay Writing	3
COMM 4470	Corporate & Org. Media Prod.	3

COMMUNICATION

Major, Bachelor of Arts Degree

Please see the Department of Communication for updates regarding this program.
For admission and classwork requirements, see Statement of Policy. (42-348)

Bachelor of Arts Communication Statement of Policy

Admission

Students entering the University of Central Missouri to pursue a Bachelor of Arts degree in Communication should make application after the completion of the core courses.

Program Goals

The graduate with a Bachelor of Arts degree in Communication will use the knowledge and skills obtained in the program to:

- Demonstrate a general knowledge and appreciation of mass and/or speech communication theories.
- Demonstrate ability to critique and/or apply various research methods and/or approaches.
- Demonstrate preparedness for professional life and/or further academic study.
- Demonstrate a basic knowledge of the combined disciplines of mass and speech communication through each of the following core areas: production, criticism, classical rhetoric, survey, and relational dynamics.

Sem. Hours

MAJOR REQUIREMENTS37-46

COMM 1100	Introduction to Communication	1
COMM 2100	Introduction to Communication Theory	3
COMM 3100	Communication Research Methods	3
COMM 1200	Introduction to Mass Communication	3
COMM 2325	Improving Listening Skills	3
COMM 3327	Improving Interviewing Skills	3
COMM 4335	Gender Communication	3
COMM 4390	Contemporary Communication	2
COMM 3200	Mass Media Practicum, 1 or	
COMM 3390	Forensics	1
	Departmentally approved upper-level electives in communication	3-6

Criticism*

Electives from the following	2-3	
COMM 4260	Comparative Media Systems	2
COMM 4280	Criticism of Mass Media	2
COMM 3320	Audience Adaptation	3
COMM 3355	Speech Writing and Criticism	3

Production*

Electives from the following	3-6	
COMM 3350	Prin. of Presentational Speaking	3
COMM 2415	Broadcast Copywriting	3
COMM 4415	Screen Play Writing	3
COMM 1520	Elements of News Reporting	3
COMM 2410	Multimedia I, 3 or	
COMM 2411	Audio Production I, 3 or	
COMM 2412	Video Production I, 5	3-5

Survey*

Electives from the following	3	
COMM 2320	Found. of Rhetorical Theory	3
COMM 2400	Foundations of Broadcasting	3
COMM 3400	History of American Film	3
COMM 4500	Heritage of Am. Journalism	3
COMM 2620	Public Relations	3

Relational*

Electives from the following	2-3	
COMM 3325	Nonverbal Communication.	2
COMM 3340	Intercultural Communication	3
COMM 4330	Theories of Interpersonal Comm.	3

Classical*

Electives from the following	2-3	
COMM 2340	Argument and Debate	3
COMM 4320	Persuasion	2
COMM 4340	Classical Rhetorical Theory	3
COMM 4345	Modern Rhetorical Theory	3

MINOR REQUIREMENTS (see Statement of Policy)18-25

GENERAL EDUCATION REQUIREMENTS (page 41) The Modern Language Requirement fulfills 3 s.h. of Div. II C 45

COMM 1000	Div. I B (required)	3
COMM 3000	Div. II D (required)	3
ANTH 1820	Div. II E or	
GEOG 3201	Div. II E or	
WS 2000	Div. II E (required)	3
COMM 3010	Div. III (required)	3
IGEN 4224	Div. IV A or	
IGEN 3232	Div. IV A or	
IGEN 3224	Div. IV A (required)	3

MODERN LANGUAGE REQUIREMENT 6

Refer to Bachelor's Degree Requirements section for fulfillment options.

UPPER-LEVEL ELECTIVES8-18

MINIMUM TOTAL 124

COMMUNICATION

Minor for a Bachelor's Degree

Students majoring in any Communication degree are not eligible to take this minor.

Please see the Department of Communication for updates regarding this program.

UCM does not confer teacher certification for this minor.

(349)

Sem. Hours

MINOR REQUIREMENTS 21

COMM 1100	Introduction to Communication	1
COMM 2100	Introduction to Communication Theory	3
COMM 3100	Comm. Research Methods	3
	Departmentally approved electives in COMM	14

CORPORATE COMMUNICATION

Major, Bachelor of Science Degree

Please see the Department of Communication for updates regarding this program. (43-356)

The graduate with a Bachelor of Science degree in Corporate Communication will use the knowledge and skills obtained in the program to:

- Demonstrate a general knowledge and application of communication theory within an organizational context.
- Demonstrate ability to critique and apply various research methods and/or approaches within an organizational context.
- Demonstrate preparedness for professional life and/or further academic study.

Statement of Policy

Admission to the degree program is contingent upon the completion of the following prerequisites:

1. A cumulative grade-point average of 2.50.
2. Application to the program should be made as soon as all seven hours of the core courses have been completed.
3. Permission to proceed with the internship requirement is contingent upon the student presenting grades of "C" or better in the pre-internship requirements (COMM 2330, COMM 2380, COMM 3327, and COMM 4780).
4. Transfer students without Communication 3010 equivalency must take COMM 3010 Interpersonal Communication.

	Sem. Hours
MAJOR REQUIREMENTS	39

Core Courses

COMM 1100	Introduction to Communication	1
COMM 2100	Intro. to Communication Theory	3
COMM 3100	Communication Research Methods	3
Electives in Professional Courses		26-29
COMM 2325	Improving Listening Abilities	3
COMM 2330	Small Group Communication	3
COMM 2380	Intro to Organizational Comm.	3
COMM 2620	Public Relations	3
COMM 3327	Improving Interviewing Skills	3
COMM 3350	Principles of Presentational Speaking	3
COMM 3730	Comm. Conflict Management	3
COMM 4475	New Media Technologies	2
COMM 4780	Adv. Theories of Org. Comm.	3
COMM 4783	Communication Training	3

Internship

COMM 4785 Internship in Speech Comm. 3-6
If a 3 hour internship is selected, one additional 3 semester hour upper-level course must be selected from the Professional Courses category.

MINOR REQUIREMENTS	20-25
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GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000	Div IB (required)	3
ANTH 1820	Div. II D or	
GEOG 3201	Div. II D or	
WS 2000	Div. II D (required)	3
COMM 3010	Div. III (required)	3
IGEN 4224	Div. IV A or	
IGEN 3232	Div. IV A or	
IGEN 3224	Div. IV A (required)	3

UPPER-LEVEL ELECTIVES	11
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FREE ELECTIVES	0-5
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MINIMUM TOTAL	124
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CORPORATE COMMUNICATION

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (556)

	Sem. Hours
MINOR REQUIREMENTS	26-27

COMM 1000	Public Speaking.	3
COMM 2330	Small Group Communication	3
COMM 2380	Intro. to Organizational Comm.	3
COMM 3350	Principles of Presentational Speaking	3
COMM 3730	Communication Conflict Management	3
COMM 4781	Assessment of Organizational Communication	3
COMM 4783	Communication Training	3
*MGT 3325	Business Communications	3
Elective from the following		2-3
COMM 2325	Improving Listening Abilities	3
COMM 3325	Nonverbal Communication	2
COMM 3327	Improving Interviewing Skills	3

*If MGT 3325 is required as part of a student's major, then the student must select one additional course from the Electives.

JOURNALISM

Major, Bachelor of Science Degree

Please see the Department of Communication for updates regarding this program.

For admission and classwork requirements, see Statement of Policy. (43-345)

Journalism Statement of Policy

Admission

Application into the Journalism major should be made after departmental program pre-admission requirements have been completed. Departmental advisers can be obtained through the office professional in Martin 136.

Admission to the program is conditional upon the following prerequisites:

1. Completion of the following general education requirements with a grade no lower than a C: COMM 1000, ENGL 1020, ENGL 1030 or ENGL 1080, and COMM 3010.
2. Departmental approval of admission will be made after completion of the six semester hours of course work which are called the gateway courses (see item 3).
3. All journalism majors must obtain a C or better in COMM 1520 and COMM 2520 and maintain a 2.25 GPA in all of their coursework in their major.

Program Goals. The graduate with a Bachelor of Science degree in Journalism will use the knowledge and skills obtained in the program to:

- Understand newsgathering and reporting.
- Appreciate photojournalism.
- Understand media law and ethics.
- Edit writing for news value, style, grammar and writing quality.
- Appreciate electronic journalism.
- Understand mass media and society.
- Be able to conceptualize page design.

	Sem. Hours
MAJOR REQUIREMENTS	37-42

COMM 1100	Introduction to Communication	1
COMM 1520	Elements of News Reporting	3
COMM 2100	Intro. to Communication Theory	3
COMM 2520	Copy Editing & Layout	3
COMM 3100	Communication Research Methods	3
COMM 3200	Mass Media Practicum	1
COMM 3525	Feature Writing	3
COMM 4210	Mass Media Practicum II	1
COMM 4250	Mass Communication Law	3
COMM 4295	Internship	1-3
COMM 4500	Heritage of American Journalism	3
COMM 4535	Advanced News Reporting	3
Electives from the following:		9-12
COMM 3530	Photo Journalism	3
COMM 4200	Special Topics in Mass Media	1-6

COMM 4260 Comparative Media Systems 2
 COMM 4280 Criticism of Mass Media 2
 COMM 4555 Advanced Editing 3

COMM 3535 Broadcast Journalism 3
 COMM 4520 Editorial & Interp. Writing 3
 COMM 4555 Advanced Editing 3

Students who want to concentrate in broadcast journalism or editing for newspapers and magazines may do so with the aid of a departmental adviser who may substitute some approved courses to meet those needs.

MINOR REQUIREMENTS (see University Statement of Policy) 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000 Div. I B (required) 3
 COMM 3010 Div. III (required) 3
 IGEN 3232 Div. IV A or
 IGEN 3224 Div. IV A or
 IGEN 4224 Div. IV A (required for Area 3) 3

FREE ELECTIVES 6-18

MINIMUM TOTAL 124

JOURNALISM

Minor, Bachelor of Science in Education Degree

Certification to teach journalism in grades 9-12.

Please see the Department of Communication for updates regarding this program.
 (346)

The graduate with a Bachelor of Science in Education degree with a Journalism minor will use the knowledge and skills obtained in the program to:

- Understand newsgathering and reporting.
- Appreciate photojournalism.
- Demonstrate management and business skills for publication advisers.
- Appreciate electronic journalism.
- Understand mass media and society.
- Be able to conceptualize page design.

Sem. Hours

MINOR REQUIREMENTS 32

COMM 1100 Intro to Communication 1
 COMM 1520 Elements of News Reporting 3
 COMM 2520 Copy Editing and Layout 3
 COMM 3280 Sports Writing 3
 COMM 3505 Introduction to High School
 Video Production 1
 COMM 3525 Feature Writing 3
 COMM 3535 Broadcast Journalism 3
 COMM 4250 Mass Communication Law 3
 COMM 4500 Heritage of American Journalism 3
 COMM 4522 Desktop Design for Teachers 3
 COMM 4555 Advanced Editing 3
 COMM 4571 Methods of Teaching Journalism 3

JOURNALISM

Minor for a Bachelor's Degree

Except for a Bachelor of Science in Education Degree.

Please see the Department of Communication for updates regarding this program.
 (2008)

Sem. Hours

MINOR REQUIREMENTS 22-25

COMM 1100 Intro to Communication 1
 COMM 1520 Elements of News Reporting 3
 COMM 2520 Copyediting & Layout 3
 COMM 3525 Feature Writing 3
 COMM 4250 Mass Communication Law 3
 COMM 4500 Heritage of American Journalism 3
 COMM 4535 Advanced News Reporting 3
 Electives from the following 3-6
 COMM 3200 Mass Media Practicum 1-2
 COMM 3280 Sports Writing 3
 COMM 4280 Criticism of Mass Media 2
 COMM 3530 Photo Journalism 3

PUBLIC RELATIONS

Major, Bachelor of Science Degree

Please see the Department of Communication for updates regarding this program.

For admission and classwork requirements, see Statement of Policy.
 (43-351)

Admission

Application in the Public Relations major should be made after departmental pre-admission requirements have been completed.

Admission to the Public Relations degree program is conditional upon the completion of the following prerequisites:

1. All public relations majors must obtain a 2.25 GPA (with no grade lower than a C) in COMM 2620, COMM 2625 and COMM 3620.
2. Public Relations B.S. majors must obtain a 2.25 (or above) grade point average for all credit hours (completed at UCM or elsewhere) and attain a 2.5 grade point average for all course work in the major.

The graduate with a Bachelor of Science degree in Public Relations will use the knowledge and skills obtained in the program to:

- Demonstrate public relations driven knowledge and application of strategic communication concepts.
- Demonstrate ability to effectively evaluate and utilize research for public relations purposes.
- Demonstrate critical thinking, problem-solving, and decision making abilities in the professional arena.
- Demonstrate preparedness for professional life and/or further academic study.

Sem. Hours

MAJOR REQUIREMENTS 42

COMM 1100 Introduction to Communication 1
 COMM 2100 Introduction to Communication Theory 3
 COMM 3100 Communication Research Methods 3
 COMM 2620 Public Relations 3
 COMM 2625 Writing & Editing for Public Relations 3
 COMM 3620 Strategic Planning for Public Relations 3
 COMM 3625 Design & Layout for Publications 1
 COMM 4250 Mass Communication Law 3
 COMM 4295 Internship 3
 COMM 4510 Magazine Design & Production 3
 COMM 4680 Publicity 3
 COMM 4685 Case Studies in Public Relations 2
 COMM 4690 Campaigns 3
 Electives from the following 8
 COMM 3200 Mass Media Practicum 1-3
 COMM 3327 Improving Interviewing Skills 3
 COMM 3350 Principles of Presentational Speaking 3
 COMM 3640 Mass Media Advertising 3
 COMM 4200 Spec. Topics in Mass Media 1-6
 COMM 4280 Criticism of Mass Media 2
 COMM 4295 Internship 1-3
 COMM 4470 Corporate & Org. Media Production 3
 COMM 4781 Assessment & Organizational Comm. 3

Proficiency in typing is required (see Statement of Policy).

MINOR REQUIREMENTS (see Statement of Policy) 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000 Div. I B (required) 3
 COMM 3000 Div. II D (required) 3
 COMM 3010 Div. III (required) 3
 IGEN 4224 Div. IV A or
 IGEN 3232 Div. IV A or
 IGEN 3224 Div. IV A (required) 3

UPPER-LEVEL ELECTIVES 16-24

MINIMUM TOTAL 124

PUBLIC RELATIONS

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (253)

The graduate with a Bachelor of Science degree with a Public Relations minor will use the knowledge and skills obtained in the program to:

- Demonstrate public relations driven knowledge and application of strategic communication concepts.
- Demonstrate ability to effectively evaluate and utilize research for public relations purposes.
- Demonstrate critical thinking, problem-solving, and decision making abilities in the professional arena.
- Demonstrate preparedness for professional life and/or further academic study.

Sem. Hours

MINOR REQUIREMENTS 20

All public relations minors must obtain a 2.25 (with no grade lower than a C) in COMM 2620, COMM 2625 & COMM 3620.

COMM 2620	Public Relations	3
COMM 2526	Writing & Editing for Public Relations	3
COMM 3100	Comm. Research Methods	3
COMM 3620	Strategic Planning for Public Relations	3
COMM 4680	Publicity	3
COMM 4685	Case Studies in Public Relations	3
	Departmentally approved elective (see PR major departmentally approved electives)	3

SPEECH COMMUNICATION

Major, Bachelor of Arts Degree

Please see the Department of Communication for updates regarding this program. (42-358)

The graduate with a Bachelor of Arts degree in Speech Communication will use the knowledge and skills obtained in the program to:

- Formulate appropriate communication strategies for dealing with potential conflict situations within and between specific cultures.
- Implement appropriate communication strategies for reducing existing conflicts within and between specific cultures.
- Communicate appropriately and ethically within culturally diverse contexts.
- Communicate effectively yet ethically in goal-relevant situations involving diverse cultures.
- Articulate/present significant principles of international/intercultural communication gained from direct, personal interaction with members of diverse ethnic, racial and cultural backgrounds.
- Analyze organizational and family structures in terms of cultural influences, which affect the relationships.

Sem. Hours

MAJOR REQUIREMENTS 35

COMM 1000	Public Speaking	3
COMM 3010	Interpersonal Communication	3
COMM 2100	Foundations of Comm. Theory	3
COMM 2320	Foundations of Rhetorical Theory	3
COMM 2325	Improving Listening Abilities	3
COMM 2330	Small Group Communication	3
COMM 3340	Intercultural Communication	3
COMM 4330	Theories of Interpersonal Communication	3
COMM 4335	Gender Communication	3
COMM 4340	Classical Rhetorical Theory	3
COMM 3730	Communication Conflict Mgt.	3
COMM 3320	Audience Adaptation, 3 or	
COMM 4345	Modern Rhetorical Theory, 3	3

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, COMM 1000 fulfills 3 s.h. of Div. I B; the Modern Language Requirement fulfills 3 s.h. of Div. II C; in the major, COMM 3010 fulfills 3 s.h. of Div. II E 39

ANTH 1820	Div. II D or	
GEOG 3201	Div. II D or	
WS 2000	Div. II D (required)	3
IGEN 4224	Div. IV A or	
IGEN 3232	Div. IV A or	
IGEN 3224	Div. IV A (required)	3

MODERN LANGUAGE REQUIREMENT 3-9

Refer to Bachelor's Degree Requirements section for fulfillment options.

FREE ELECTIVES 16-29

MINIMUM TOTAL 124

SPEECH COMMUNICATION

Major, Bachelor of Science Degree

Please see the Department of Communication for updates regarding this program. (43-359)

Application into the Speech Communication major should be made after completion of the core.

The graduate with a Bachelor of Science degree in Speech Communication will use the knowledge and skills obtained in the program to:

- Demonstrate a general knowledge and application of communication theories/concepts.
- Demonstrate ability to effectively evaluate and utilize research.
- Demonstrate preparedness for professional life and /or further academic study.

Admission

Students entering the University of Central Missouri to pursue a B.S. degree in Speech Communication should make application after the completion of the core courses.

All speech communication majors must attain a 2.0 GPA for all course work in the major.

Sem. Hours

MAJOR REQUIREMENTS 37-42

COMM 1100	Introduction to Communication	1
COMM 2100	Introduction to Communication Theory	3
COMM 3100	Communication Research Methods	3
COMM 2320	Foundations of Rhetorical Theory	3
COMM 2325	Improving Listening Abilities	3
COMM 2330	Small Group Communication	3
COMM 3350	Principles of Presentational Speaking	3
COMM 4320	Persuasion	2
	Electives in applied communication	2-3
	COMM 3327 Improving Interviewing Skills	3
	COMM 3355 Speech Writing and Criticism	3
	COMM 3390 Forensics	1-3
	Electives in interaction skills	2-3
	COMM 3325 Nonverbal Communication	2
	COMM 3340 Intercultural Communication	3
	COMM 4330 Theories of Interpersonal Comm.	3
	COMM 4335 Gender Communication	3
	COMM 3730 Comm. Conflict Management	3
	Electives in social influence	7-9
	COMM 1200 Intro. to Mass Communication	3
	COMM 4250 Mass Communication Law	3
	COMM 4260 Comparative Media Systems	2
	COMM 4280 Criticism of Mass Media	2
	COMM 2340 Argumentation and Debate	3
	COMM 3320 Audience Adaptation	3
	COMM 4500 Heritage of American Journalism	3
	PHIL 2300 Ethics	3
	POLS 2550 Political Parties & Pressure Groups	3
	POLS 3550 Public Opinion & Mass Media	3
	REL 2310 World Views and Values	3
	Electives in rhetorical studies	5-6
	COMM 4340 Classical Rhetorical Theory	3
	COMM 4345 Modern Rhetorical Theory	3
	COMM 4390 Contemporary Communication	2

MINOR REQUIREMENTS18-25

GENERAL EDUCATION REQUIREMENTS (page 41) 48

 COMM 1000 Div. I B (required) 3

 COMM 3000 Div. II D (required) 3

 ANTH 1820 Div. II D or,

 GEOG 3201 Div. II D or,

 WS 2000 Div. II D (required) 3

 COMM 3010 Div. III (required) 3

 IGEN 4224 Div. IV A or

 IGEN 3232 Div. IV A or

 IGEN 3224 Div. IV A (required) 3

FREE ELECTIVES9-21

MINIMUM TOTAL 124

SPEECH COMMUNICATION

Minor for a Bachelor's Degree

Except for a Bachelor of Science in Education Degree. Please see the Department of Communication for updates regarding this program. (360)

	Sem. Hours
MINOR REQUIREMENTS	21
COMM 1000 Public Speaking	3
COMM 3010 Interpersonal Communication	3
COMM 2330 Small Group Communication	3
Electives in speech communication	12

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, COMM 1000 fulfills 3 s.h. of Div. I B; COMM 3010 fulfills 3 s.h. of Div. II E.

SPEECH COMMUNICATION AND THEATRE

Major, Bachelor of Science in Education Degree

Certification to teach speech and theatre in grades 9-12. Please see the Department of Communication for updates regarding this program. (41-362)

	Sem. Hours
CORE REQUIREMENTS	21
THEA 1500 Acting	3
THEA 1600 Stagecraft	3
THEA 3700 Directing	3
COMM 2100 Foundations of Comm. Theory	3
COMM 2330 Small Group Communication	3
COMM 2340 Argumentation & Debate	3
COMM 3325 Nonverbal Communication	2
COMM 3390 Forensics	1

SPEECH COMMUNICATION

Major Option, Bachelor of Science in Education Degree.

The graduate with a Bachelor of Science in Education degree in Speech & Theatre (with a Speech Communication Major Option) will use the knowledge and skills obtained in the program to:

- Demonstrate knowledge and application of the fundamentals of communication.
- Demonstrate knowledge and application of public speaking concepts and principles.
- Demonstrate knowledge and application of the theory and practice of argumentation and debate.
- Demonstrate an understanding of communication ethics.
- Demonstrate knowledge and application of the theory and practice of interpersonal and group communication.
- Demonstrate knowledge and application of school forensics through experiential co-curricular activities.
- Demonstrate knowledge and application of mass communication concepts, principles and basic techniques.

	Sem. Hours
MAJOR REQUIREMENTS	36

Core Requirements listed above	21
COMM 3010 Interpersonal Communication	3
COMM 3320 Audience Adaptation	3
COMM 3350 Prin. of Presentational Speaking	3
THEA 4400 Lit. & History of the Theatre I, 3 or	
THEA 4420 Lit. & History of the Theatre II, 3	3
Electives in THEA or Comm	3

MINOR REQUIREMENTS	18-25
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GENERAL EDUCATION REQUIREMENTS (page 41) In the major, COMM 3010 fulfills 3 s.h. of Div. III; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B) 42

Students must have one course in a physical or earth science and one in a biological science in Div. II A.

COMM 1000 Div. I B (required)	3
HIST 1350 Div. II B or	
HIST 1351 Div. II B (required)	3
POLS 1510 Div. II B (required)	3
COMM 3000 Div. II C (required)	3
THEA 2400 Div. II C (required)	3
ANTH 1820 Div. II D or	
GEOG 3201 Div. II D or	
WS 2000 Div. II D (required)	3
PSY 4230 Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110)	28
MINIMUM TOTAL	124

THEATRE

Major Option, Bachelor of Science in Education Degree
See requirements as outlined in the Department of Theatre.

SPEECH COMMUNICATION AND THEATRE

Minor, Bachelor of Science in Education Degree
See requirements as outlined in the Department of Theatre.

COMM 1000 Public Speaking (3) A study and practice of basic principles involved in discovering, arranging, delivering, and evaluating ideas in speech situations.

COMM 1100 Introduction to Communication Studies (1) This course introduces the student to communication and the way it impacts the social, economic and political lives of consumers and how they can have impact upon the media.

COMM 1200 Introduction to Mass Communication (3) Theory of mass communication, roles and functions of mass media in a contemporary society.

COMM 1520 Elements of News Reporting (3) News, news sources, principles and techniques of news writing; duties and responsibilities of the reporter. Keyboarding ability necessary. Laboratory required. Prerequisite: completion of General Education Div. I A.

COMM 2100 Introduction to Communication Theory (3) The process by which communication principles are formulated and the principles themselves, with emphasis on both their theoretical and pragmatic dimensions.

COMM 2320 Foundations of Rhetorical Theory (3) Nature and functions of rhetoric across various communication situations.

COMM 2325 Improving Listening Abilities (3) Theories and principles for improving listening in a variety of communication situations.

COMM 2330 Small Group Communication (3) Communication process as it relates to small group behavior, including the study of principles, methods, and forms of discussion used in small groups.

COMM 2340 Argumentation and Debate (3) Principles of analysis, evidence, reasoning, briefing, refutation, case construction, preparing and evaluating arguments. Practical experience with different types of debate.

COMM 2380 Intro to Organizational Communication (3) Examines human communication within an organizational context. Contemporary approaches, the enduring processes, and emergent communication processes facing contemporary organizations are considered.

COMM 2400 Foundations of Broadcasting (3) Legal, historical, economic, societal and technological foundations of broadcasting. Prerequisite: COMM 1200 or consent.

COMM 2410 Multimedia I (3) Principles and practices of designing multimedia for the Broadcast industries. The course covers both hardware and software appropriate to the discipline, including hands-on experience. Prerequisite: COMM 2400 or consent.

COMM 2411 Audio Production I (3) Techniques of vocal skills and operation of audio equipment used in broadcasting. Prerequisite: COMM 2400.

COMM 2412 Video Production I (5: 3 lecture, 2 lab) Basic techniques and studio procedures used in performance and production of interviews and news programs most commonly found in television stations. Prerequisite: COMM 2411.

COMM 2415 Broadcast Copywriting (3) A survey course of different styles of broadcast writing and practical applications.

COMM 2520 Copy Editing and Layout (3) Copyediting, rewriting, headline writing, and page make-up. Laboratory work on campus newspaper required. Prerequisite: COMM 1520.

COMM 2620 Introduction to Public Relations (3) Public relations communications, principles, and techniques in historical perspective, including research and report writing.

COMM 2625 Writing and Editing for Public Relations (3) Introduces students to journalistic intent and writing while contextualizing those from a public relations perspective. Equips students to write and edit for journalistic purposes, as well as work with edits received from editors, while keeping in mind the purposes of public relations.

COMM 2700 Dale Carnegie: Effective Communication and Human Relations (3) Students will enhance communication and interpersonal relation skills, build self-confidence, and develop knowledge and practice in communicating effectively both in interpersonal and public settings.

COMM 3000 Film Appreciation (3) Students will critically examine motion pictures as a communicative art. For mass communication majors or minors, this course is available only as a free elective or General Education requirement.

COMM 3010 Interpersonal Communication (3) Principles of symbolic interaction and their implications for social, personal, and physiological adaptation across the human life span. Includes the patterns involved in establishing and maintaining effective relationships, managing conflict, and promoting tolerance for human diversity.

COMM 3100 Communication Research Methods (3) Use of research techniques applied to the study of communication, with stress upon those factors affecting the mass media.

COMM 3200 Mass Media Practicum (1) Laboratory experience in the mass media. Prerequisite: consent of instructor.

COMM 3280 Sports Writing (3) Develops sports writing skills, both news and column writing. Prerequisite: COMM 2520 or COMM 2625.

COMM 3320 Audience Adaptation (3) Audience dimensions and their relationship to communicative acts. Prerequisite: COMM 1000.

COMM 3325 Nonverbal Communication (2) An examination of selected areas of nonverbal communication; e.g., space and territory relationships, physical behavior, appearance and dress; paralinguistics; and artifacts.

COMM 3327 Improving Interviewing Skills (3) Theory and purposes of interviewing, emphasizing the principles and practice of interviewing skills.

COMM 3340 Intercultural Communication (3) Communication between and among cultures, including enculturation and relational implications of cross-cultural communication across a variety of contexts. Prerequisite: COMM 2320 or GEOG 2212 or consent of instructor.

COMM 3350 Principles of Presentational Speaking (3) Designed to increase awareness and understanding of speech theory and, by means of speaking exercises, to increase proficiency as a speaker in a variety of professional settings. Prerequisite: COMM 1000.

COMM 3355 Speech Writing and Criticism (3) A study of critical practices and methodology including the composition of speech manuscripts and the application of standards for evaluation.

COMM 3370 Special Topics in Speech Communication (1-3) The study of subjects not included in department's regular offering such as parliamentary procedure, intercultural and/or therapeutic communication. *May be repeated for a maximum of 6 semester hours.* Prerequisite: Consent.

COMM 3390 Forensics (1) Participation in intercollegiate forensics-debate, oratory, extemporaneous speaking, discussion, and oral interpretation. *May be repeated for a maximum of 3 semester hours.*

COMM 3400 History of American Film (3) Development of the American film from the silent era to the present.

COMM 3410 Audio Production II (3) Techniques of digital-audio post-production and practical studio performance applications. Prerequisite: COMM 2411.

COMM 3411 Video Production II (3) Intermediate course in digital video production/performance covering electronic field production, electronic news gathering, producing, directing, shooting and editing techniques. Prerequisite: COMM 2412.

COMM 3412 Single Camera Dramatic Production (3) Production of dramatic programs shot on 16mm film or digital video. Topics include scripting, directing, shooting, non-linear editing and animation. Prerequisite: COMM 2412.

COMM 3413 Multimedia II (3) Advanced multimedia applications, including audio/video, animation, and incorporation of moving images, two-dimensional images and text to create interactive, multi-media environments. Prerequisite: COMM 2410.

COMM 3430 Broadcast Programming and Operations (3) Operation and programming of radio and television stations with emphasis on analysis of programming principles and practices, schedule development and audience behavior. Prerequisite: COMM 2400.

COMM 3500 Reporting Public Affairs (3) Techniques of reporting city, county, state, and federal government, as well as boards of education and other governmental entities. Prerequisites: COMM 2520 and COMM 3200 or consent of instructor.

COMM 3505 Introduction to High School Video Production (1) The high school journalism teacher will learn about single camera operation, lighting, graphics, talent position, voice, body and performance. Prerequisite: admission to the journalism minor, Bachelor of Science in Education.

COMM 3525 Feature Writing (3) Advanced course in writing special articles for newspapers and magazines. Prerequisites: COMM 2520 and completion of General Education Div. I A.

COMM 3530 Photo Journalism (3) Effective use of photography in journalism communication. Prerequisites: GRAP 1210 or consent.

COMM 3535 Broadcast Journalism (3) Philosophy and techniques of radio and television journalism. Prerequisite: COMM 1520.

COMM 3620 Strategic Planning for Public Relations (3) Students will apply theoretical knowledge from entry-level coursework to real world public relations applications. Helps students develop preliminary strategic planning skills. Prerequisites: COMM 2620 and COMM 2625 with a grade of C or better.

COMM 3625 Design and Layout for Publications (1) Designed to equip students with the preliminary design, software and layout skills needed to produce magazines, house organs, and the like.

COMM 3640 Mass Media Advertising (3) The techniques and roles of advertising in the mass media.

COMM 3730 Communication Conflict Management (3) An examination of communication factors which contribute to conflicts and an analysis of their resolution.

COMM 4200 Special Topics in Mass Media (1-9) Departmentally selected topics of contemporary interest in mass media or specialized areas of the media; variable content. *May be repeated for a maximum of 9 semester hours (only 6 hours will apply to the major).*

COMM 4210 Mass Media Practicum II (1) Provides hands-on experience at the Muleskinner. Prerequisite: COMM 3200.

COMM 4240 Media Management (3) Elements involved in the organization and successful operation of mass media enterprises; special emphasis upon interpersonal problems.

COMM 4245 Media Economics and Sales (3) Business aspects of mass media in a competitive economy, including techniques for selling advertising space and time.

COMM 4250 Mass Communication Law (3) Application of principles of law to the mass communication media, media practice, advertising, and freedom of information, including libel, right of privacy, copyright. Prerequisite: Junior, senior or graduate standing.

COMM 4260 Comparative Media Systems (2) Role of mass media in major countries and in developing areas; sociopolitical, economic, cultural and historical perspective.

COMM 4280 Criticism of Mass Media (2) Evaluation of the products of the audiovisual and print media, social effects, and the historical bases of public criticism of the individual media.

COMM 4285 Women and Minorities in Media (3) The study of women and minorities, their contributions and images, in a variety of media. Prerequisite: COMM 1200 or COMM 3010 or consent of instructor.

COMM 4290 Special Projects in Mass Communication (1-3) Individual study/research in mass communication. *May be repeated for a maximum of 3 semester hours.* Prerequisite: written consent.

COMM 4295 Internship (1-6) A practical training experience for the application of mass media and/or public relations principles. *May be repeated for a maximum of 6 semester hours.* Prerequisites: completion of the preadmission requirements for internship placement and departmental approval.

COMM 4300 Special Projects in Speech Communication (1-3) *May be repeated for a maximum of 6 semester hours.* Prerequisite: Consent.

COMM 4320 Persuasion (2) Emotive, cognitive, and behavioral sources of persuasive appeal.

COMM 4330 Theories of Interpersonal Communication (3) An in-depth study of selected theories and supporting research findings of the communication process as it occurs in informal face-to-face situations. Prerequisite: COMM 3010

COMM 4335 Gender Communication (3) Gender as it influences communication processes in intrapersonal, interpersonal, group, public and mediated contexts. Prerequisite: COMM 3010 or consent of instructor.

COMM 4340 Classical Rhetorical Theory (3) Foundations and development of rhetorical theory during the Classical Period with special emphasis given to Plato, Aristotle, Cicero, and Quintilian.

COMM 4345 Modern Rhetorical Theory (3) An examination of significant movements in the development of twentieth century rhetorical theory including the contributions of Kenneth Burke, Richard Weaver, and Marshall McLuhan.

COMM 4390 Contemporary Communication (2) Public address as it functions in contemporary society in a variety of traditional and mass media settings.

COMM 4410 Video Production III (3) Preparation and production of short programs, with emphasis on advanced shooting and editing techniques. Prerequisite: COMM 3411 or COMM 3412.

COMM 4415 Screenplay Writing (3) Principles, techniques and formats of dramatic screenwriting for film and television.

COMM 4470 Corporate and Organizational Media Production (3) Production of instructional, training and informational videos for use within corporations and other organizations. Prerequisite: COMM 2412 or consent of instructor.

COMM 4475 New Media Technologies (2) Technological developments and their uses (existing and potential) as information distribution systems.

COMM 4490 Senior Capstone Seminar* (1) Preparation of a portfolio and 're'sume' tape representing the student's best work; in addition, students will participate in assisting and tutoring students in lower-level courses in the major. Prerequisite: instructor's permission. *Not available for graduate credit.

COMM 4500 Heritage of American Journalism (3) Development of the American press from colonial days to modern times; factors affecting the shape and contents of the press in contemporary society.

COMM 4510 Magazine Design and Production (3) The magazine process from the collection of raw material through layout and design to the circulation of the finished product. Prerequisites: COMM 2625, COMM 3625.

COMM 4520 Editorial and Interpretative Writing (3) Principles and techniques of editorial and interpretative article writing; relationship between the news, the editorial and the business aspects of a newspaper. Prerequisite: COMM 3525.

COMM 4522 Desktop Design for Teachers (3) Instructs students in the use of QuarkXpress for newspaper design and makeup. Prerequisite: COMM 2520 or consent.

COMM 4535 Advanced News Reporting (3) Problems and techniques of researching and gathering material for in-depth news reporting concerning the political, economic, and social aspects of contemporary society. Prerequisite: COMM 3525.

COMM 4555 Advanced Editing (3) Provides advanced editing skills for news media. Emphasis on news judgment, language use, copy improvement, headline and outline writing, wire services, photo editing, page layout and design. Prerequisite: COMM 2520.

COMM 4571 Methods of Teaching Journalism (3) Practical methods in the teaching of journalism. Prerequisite: admission to the journalism minor, Bachelor of Science in Education.

COMM 4680 Publicity (3) Overview of the publicity process including written, spoken, and/or videotaped messages using the mass media as a public relations tool. Prerequisites: COMM 2620 and COMM 3620.

COMM 4685 Case Studies in Public Relations (2) Public relations problems of individual business and civic organizations; analysis of actual and proposed solutions. Prerequisite: COMM 2620 and COMM 3620.

COMM 4690 Campaigns (3) Overview of the public relations campaign process with actual "hands on" application. Students will plan, organize and conduct an actual campaign for an organization. Prerequisite: COMM 4680 and COMM 4685.

COMM 4780 Advanced Theories of Organizational Communication (3) A consideration of theories and principles of communication structures and systems within organizations.

COMM 4781 Assessment of Organizational Communication (2) The assessment and measurement of human interaction within professional settings.

COMM 4783 Communication Training (3) Communication as the coupling that holds organizations together and the agent of change that ensures health and growth. Students will assess needs and determine communication links; design, develop, and implement learning modules for human resource development; and design and interpret evaluation means to determine the effectiveness of the training. Prerequisite: Consent of instructor.

COMM 4785 Internship in Speech Communication (1-6) The application of speech communication principles and theories in business, industry, and government settings. *May be repeated for a maximum of 6 semester hours.* Prerequisites: COMM 2330, COMM 2380, COMM 3327, and COMM 4780 with a grade of "C" or better. COMM 4780 may be taken concurrently with COMM 4785 with the permission of the department chair.

Integrative Studies General

IGEN 3224 Critical Thinking (3) Provides insight into and application of the skills needed to think critically about interpersonal and media messages, as well as analyze information.

IGEN 3232 Media Literacy (3) Explores the relationships among media, its consumers, and producers. Integrates cultural, technological, and economic perspectives on mass media and visual communication.

IGEN 4224 Communication, Science and Technology (3) Students will focus on the interactions among science, technology and society by examining scientific communication and scientific technological controversies. Prerequisite: completion of General Education Div. II A.

English and Philosophy

English

ENGLISH

Major, Bachelor of Arts Degree
(42-303)

The graduate with a Bachelor of Arts in English degree will use the knowledge and skills obtained in the program to:

- Appreciate the aesthetics of literature; understand its origins, trends, critical approaches, classifications, and limitations; and evaluate significant patterns of meaning found in its study.
- Write and speak with clarity, originality, grammatical correctness, and logic, demonstrating rhetorical skills necessary for successful communication.
- Accomplish primary and secondary research, incorporating the results into formal written and oral presentations.
- Understand language diversity as well as language uses, the relationship between spoken and written language, historical developments and social/cultural adaptations.
- Understand the relationship between a work of literature and the historical/cultural milieu in which it was written.

Sem. Hours

MAJOR REQUIREMENTS 39

ENGL 2220 World Masterpieces 3
 ENGL 3120 History of English language 3
 ENGL 3240 Critical Approaches to Literature 3
 ENGL 4360 Shakespeare 3
 3000-4000 level electives in English 9

British Literature

Select British Literature Area A or B 9

British Literature Area A

ENGL 2210 British Literature to 1798 3
 Electives from the following 6
 ENGL 4500 19th Century English Novel 3
 ENGL 4510 Romantic Poets & Essayists 3
 ENGL 4540 Victorian Poets & Essayists 3
 ENGL 4560 British Women Writers 3
 ENGL 4700 British Fiction 1890 to Present 3
 ENGL 4720 Modern British Poetry 3

British Literature Area B

ENGL 2215 British Lit. 1798 to Present 3
 Electives from the following 6
 ENGL 4310 Chaucer 3
 ENGL 4330 Renaissance English Writers 3
 ENGL 4340 Old & Middle English Lit. 3
 ENGL 4450 The Age of Milton 3
 ENGL 4460 Wits & Satirists: 1660-1800 3

American Literature

Select American Literature Area A or B 9

American Literature Area A

ENGL 2200 American Literature to 1865 3
 Electives from the following 6
 ENGL 4640 American Realists & Naturalists 3
 ENGL 4660 Women Writers of the U.S. 3
 ENGL 4670 Ethnic American Lit. 3
 ENGL 4680 African American Lit. 3
 ENGL 4710 Modern American Fiction 3
 ENGL 4730 Modern American Poetry 3

American Literature Area B

ENGL 2205 American Lit. 1865 to Present 3
 Electives from the following 6
 ENGL 4610 American Renaissance 3
 ENGL 4620 Early American Literature 3
 ENGL 4670 Ethnic American Lit. 3
 ENGL 4680 African American Lit. 3

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENT The Modern Language Requirement fulfills 3 s.h. of Div. II C. ENGL 2220 in the major fulfills 3 s.h. of Div. II C 42

ICAP 4240 Div. IV B (required) 3
MODERN LANGUAGE REQUIREMENT 3-6
 Refer to Bachelor's Degree Requirements section for fulfillment options.
FREE ELECTIVES 12-22
MINIMUM TOTAL 124

ENGLISH

Major, Bachelor of Science in Education Degree

Certification to teach English in grades 9-12 (41-311)

The graduate with a Bachelor of Science in Education degree in English will use the knowledge and skills obtained in the program to:

- Appreciate the aesthetics of literature; understand its origins, trends, critical approaches, classifications, and limitations; and evaluate significant patterns of meaning found in its study.
- Write and speak with clarity, originality, grammatical correctness, and logic, demonstrating rhetorical skills necessary for successful communication.
- Accomplish primary and secondary research, incorporating the results into formal written and oral presentations.
- Understand language diversity as well as language uses, the relationship between spoken and written language, historical developments and social/cultural adaptations, and particular and universal linguistic features.
- Understand the relationship between a work of literature and the historical/cultural milieu in which it was written.
- Identify the components of a sound language arts curriculum at the secondary school level.
- Understand and apply currently accepted teaching theory and practice.
- Develop a personal philosophy and teaching style that accounts for diverse student backgrounds, needs, and abilities and that reflects growing teacher expertise.

Sem. Hours

MAJOR REQUIREMENTS 48

ENGL 2220 World Masterpieces 3
 ENGL 2830 Literature for Adolescents 3
 ENGL 3040 Advanced Rhetoric 3
 ENGL 3110 English Grammar 3
 ENGL 3120 History of English Language 3
 ENGL 3240 Critical Approaches to Literature 3
 ENGL 4360 Shakespeare 3
 ENGL 4840 Composition & Evaluation 3
 3000-4000 level electives in English 6

British Literature

Select British Literature Area A or B 9

British Literature Area A

ENGL 2210 British Literature to 1798 3
 Electives from the following 6
 ENGL 4500 19th Century English Novel 3
 ENGL 4510 Romantic Poets & Essayists 3
 ENGL 4540 Victorian Poets & Essayists 3
 ENGL 4560 British Women Writers 3
 ENGL 4700 British Fiction 1890 to Present 3
 ENGL 4720 Modern British Poetry 3

British Literature Area B

ENGL 2215 British Lit. 1798 to Present 3
 Electives from the following 6
 ENGL 4310 Chaucer 3
 ENGL 4330 Renaissance Engl. Writers 3
 ENGL 4340 Old & Middle English Lit. 3
 ENGL 4450 The Age of Milton 3
 ENGL 4460 Wits & Satirists: 1660-1800 3

American Literature

Select American Literature Area A or B 9

American Literature Area A
 ENGL 2200 American Literature to 1865 3
 Electives from the following 6
 ENGL 4640 American Realists & Naturalists 3
 ENGL 4660 Women Writers of the U. S. 3
 ENGL 4670 Ethnic American Literature 3
 ENGL 4680 African American Literature 3
 ENGL 4710 Modern American Fiction 3
 ENGL 4730 Modern American Poetry 3

American Literature Area B

ENGL 2205 American Literature 1865 to Present 3
 Electives from the following 6
 ENGL 4610 American Renaissance 3
 ENGL 4620 Early American Literature 3
 ENGL 4670 Ethnic American Literature 3
 ENGL 4680 African American Literature 3

GENERAL EDUCATION REQUIREMENTS (page 41) In the

professional education requirements, ICAP 4468 fulfills 4 s.h. of Div. IVB; ENGL 2220 in the major fulfills 3 s.h. in Div. IIC . . . 41

Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

HIST 1350 Div. II B or
 HIST 1351 Div. II B (required) 3
 POLS 1510 Div. II B (required) 3
 ENGL 2220 Div. II C (required) 3
 PSY 4230 Psychology of Adolescence 3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) 28

FREE ELECTIVES 3

MINIMUM TOTAL 120

ENGLISH

Minor, Bachelor of Science in Education Degree

Certification to teach English in grades 5-9 with a middle school-junior high school major.

Elementary education majors may use this as an area of concentration. (305)

Sem. Hours

MINOR REQUIREMENTS 24

ENGL 2220 World Masterpieces 3
 ENGL 3110 English Grammar 3
 ENGL 3120 History of English Language 3
 ENGL 4840 Composition & Evaluation 3
 3000 - 4000 Level Elective in English 3

American Literature

Select American Literature Area A or B 6

American Literature Area A

ENGL 2200 American Literature to 1865 3
 Elective from the following 3
 ENGL 4640 American Realists & Naturalists 3
 ENGL 4660 Women Writers of the U. S. 3
 ENGL 4670 Ethnic American Literature 3
 ENGL 4680 African American Literature 3
 ENGL 4710 Modern American Fiction 3
 ENGL 4730 Modern American Poetry 3

American Literature Area B

ENGL 2205 American Lit. 1865 to Present 3
 Elective from the following 3
 ENGL 4610 American Renaissance 3
 ENGL 4620 Early American Literature 3
 ENGL 4670 Ethnic American Literature 3
 ENGL 4680 African American Literature 3

British Literature

ENGL 2210 British Literature to 1798, 3 or
 ENGL 2215 British Lit. 1798 to Present, 3 3

GENERAL EDUCATION REQUIREMENTS (page 41) ENGL 2220, in the minor fulfills 3 s.h. of Div. II C.

ENGLISH

Minor for a Bachelor's Degree

Except for a Bachelor of Science in Education Degree. (2009)

	Sem. Hours
MINOR REQUIREMENTS	24
ENGL 2220 World Masterpieces	3
ENGL 3120 History of English Language	3
ENGL 4360 Shakespeare	3
3000-4000 level electives in English	3
British Literature	
Select British Literature Area A or B	6
British Literature Area A	
ENGL 2210 British Literature to 1798	3
Elective from the following	3
ENGL 4500 19th Century English Novel	3
ENGL 4510 Romantic Poets & Essayists	3
ENGL 4540 Victorian Poets & Essayists	3
ENGL 4560 British Women Writers	3
ENGL 4700 British Fiction 1890 to Present	3
ENGL 4720 Modern British Poetry	3
British Literature Area B	
ENGL 2215 Brit. Lit. 1798 to Present	3
Elective from the following	3
ENGL 4310 Chaucer	3
ENGL 4330 Renaissance English Writers	3
ENGL 4340 Old & Middle English Lit.	3
ENGL 4450 The Age of Milton	3
ENGL 4460 Wits & Satirists: 1660-1800	3
American Literature	
Select American Literature Area A or B	6
American Literature Area A	
ENGL 2200 American Literature to 1865	3
Elective from the following	3
ENGL 4640 American Realists & Naturalists	3
ENGL 4660 Women Writers of the U.S.	3
ENGL 4670 Ethnic American Literature	3
ENGL 4680 African American Literature	3
ENGL 4710 Modern American Fiction	3
ENGL 4730 Modern American Poetry	3
American Literature Area B	
ENGL 2205 American Lit. 1865 to Present	3
Elective from the following	3
ENGL 4610 American Renaissance	3
ENGL 4620 Early American Literature	3
ENGL 4670 Ethnic American Literature	3
ENGL 4680 African American Literature	3

GENERAL EDUCATION REQUIREMENTS (page 41) ENGL 2220, in the minor fulfills 3 s.h. of Div. II C.

CREATIVE WRITING

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (490)

	Sem. Hours
MINOR REQUIREMENTS	21
ENGL 2050 Creative Writing	3
Electives from the following	3-6
ENGL 3051 Advanced Poetry Writing	3
ENGL 3052 Advanced Fiction Writing	3
Electives from the following	3-6
ENGL 4051 Writing Poetry for Publication	3
ENGL 4052 Writing Fiction for Publication	3
ENGL 4053 Writing Non-fiction for Publication	3
Electives from the following	9-12
English (at least 3 hours must be 3000 or 4000 level)	3-12
COMM 4415 Screenplay Writing	3
THEA 4800 Playwriting	1-3

Rhetoric and Composition

NOTE: For preparatory courses for ENGL 1020, see "Academic Enrichment" in this catalog.

- ENGL 1020 Composition I (3)** The logic and rhetoric of expository writing. Prerequisite: placement according to University policy applies.
- ENGL 1030 Composition II (3)** Advanced writing involving research and the construction of academic arguments. Prerequisite: ENGL 1020 or equivalent.
- ENGL 1080 Advanced Composition (3)** The logic and rhetoric of expository writing taught at an advanced level, involving research. Prerequisite: placement according to University policy applies.
- ENGL 2050 Creative Writing (3)** Introduces students to terminology and techniques in writing and analyzing poetry and fiction; lecture and workshop format.
- ENGL 3040 Advanced Rhetoric (3)** Practice in the devices of effective writing.
- ENGL 3051 Advanced Poetry Writing (3)** Poetry writing at advanced level; written and oral analysis of students' creative work; preparation of individualized portfolio (may include research); workshops. Prerequisites: ENGL 2050 or consent of instructor.
- ENGL 3052 Advanced Fiction Writing (3)** Fiction writing at advanced level; written and oral analysis of students' creative work; preparation of individualized portfolio (may include research); workshops. Prerequisites: ENGL 2050 or consent of instructor.
- ENGL 4051 Writing Poetry for Publication* (3)** Poetry writing at advanced level; written and oral analysis of published works and of students' submissions; preparation of individualized portfolio; individualized research into publishing. Prerequisite: ENGL 2050 or consent of instructor. *Not available for graduate credit.
- ENGL 4052 Writing Fiction for Publication* (3)** Fiction writing at advanced level; written and oral analysis of published works and of students' submissions; preparation of individualized portfolio; individualized research into publishing. Prerequisite: ENGL 2050 or consent of instructor. *Not available for graduate credit.
- ENGL 4053 Writing Non-fiction for Publication* (3)** Non-fiction prose writing at advanced level; written and oral analysis of published works and of students' submissions; preparation of individualized portfolio; individualized research into publishing. Prerequisite: ENGL 2050 or consent of instructor. *Not available for graduate credit.
- ENGL 4054 Practicum in Editing and Publishing* (3)** Hands on experience in editing and publishing in such areas as literary editing and publishing, technical writing, books editing, legal writing, and others. Prerequisite: Consent of instructor. *Not available for graduate credit.

Language Study and Grammar

- ENGL 1180 Spoken English as a Second Language (3)** Guided practice for non-native English speakers in comprehending and producing oral English for academic purpose. *May be repeated for a maximum of 6 semester hours.*
- ENGL 1190 Written English as a Second Language (3)** Guided practice for non-native English speakers in writing English for academic purposes. *May be repeated for a maximum of 6 semester hours.* Prerequisite: ENGL 1180 or consent of the English as a Second Language Committee.
- ENGL 3110 English Grammar (3)** A comparative study of English grammars with strong emphasis on traditional grammar and including structural and transformational approaches.
- ENGL 3120 History of English Language (3)** Growth and nature of the English language.
- ENGL 4110 Linguistics (3)** Introduction to the study of language as a system of human communication.
- ENGL 4120 Language and Culture (3)** Exploration of the nature of culture and its impact on perceptions, communication, behavior, and ways of learning with emphasis on its influence on school achievement.

Literary Study and Criticism

- ENGL 2200 American Literature to 1865 (3)** An introduction to major American authors and works from the colonial period to the Civil War. Prerequisites: ENGL 1020 and ENGL 1030, or ENGL 1080, or equivalents.

ENGL 2205 American Literature 1865 to Present (3) An introduction to major American authors and works from the Civil War to the present. Prerequisites: ENGL 1020 and ENGL 1030, or ENGL 1080, or equivalents.

ENGL 2210 British Literature to 1798 (3) An introduction to major British authors and works from 700 to 1798. Prerequisites: ENGL 1020 and ENGL 1030, or ENGL 1080, or equivalents.

ENGL 2215 British Literature 1798 to Present (3) An introduction to major British authors and works from 1798 to the present. Prerequisites: ENGL 1020 and ENGL 1030, or ENGL 1080, or equivalents.

ENGL 2220 World Masterpieces (3) Major works of world literature, excluding British and American. Prerequisites: ENGL 1020 and ENGL 1030, or ENGL 1080, or equivalents.

ENGL 2230 Literature and Film (3) Reading and discussion of selected novels and film scripts combined with laboratory viewing sessions.

ENGL 2240 Literature and the Arts (3) A course relating literature to the arts of painting, sculpture, architecture, music, and the dance.

ENGL 2270 Fiction by Women Around the World (3) Novels and short stories by women around the globe.

ENGL 2290 Science Fiction and Fantasy (3) An introduction to science fiction and fantasy.

ENGL 3230 Special Topics in Gothic Literature (3) This course is designed to cover topics in the literature of horror and the supernatural of interest to English majors and non-majors.

ENGL 3240 Critical Approaches to Literature (3) Introduces students to literary criticism and its practical application through the study of literary texts and critical essays, and through writing assignments.

English Literature Before 1500

ENGL 4310 Chaucer (3) Life and times of Chaucer with extensive reading in his major works.

ENGL 4340 Old and Middle English Literature (3) Literary genres and contributions from *Beowulf* to 1500 (excluding Chaucer).

English Literature From 1500 to 1640

ENGL 4330 Renaissance English Writers (3) Literary figures of the Elizabethan and Jacobean periods, excluding Shakespeare.

ENGL 4360 Shakespeare (3) Study seven or more Shakespearean plays, including comedies, histories, tragedies and romances, with attention to Renaissance backgrounds, literary analysis, and theatrical traditions.

English Literature From 1640 to 1800

ENGL 4450 The Age of Milton (3) English poetry, prose, and drama of the Puritan and Restoration times.

ENGL 4460 Wits and Satirists: 1660-1800 (3) Fiction, poetry, essays and drama during the times of Pope and Johnson.

English Literature From 1800 to 1900

ENGL 4500 Nineteenth Century English Novel (3) Representative novels from Austen through Gaskell.

ENGL 4510 Romantic Poets and Essayists (3) Major poets and essayists of the English Romantic period.

ENGL 4540 The Victorian Poets and Essayists (3) Major poets and essayists of the English Victorian period.

ENGL 4560 British Women Writers (3) Study of major works by British women writers, with an introduction to feminist criticism.

American Literature From Its Beginnings to 1914

ENGL 3660 Studies in Literature and Philosophy (3) An interdisciplinary approach to the study of literature and philosophy. Course instructors will change to fit the particular topic of the course.

ENGL 4610 American Renaissance (3) The works of Emerson, Hawthorne, Thoreau and Melville.

ENGL 4620 Early American Literature (3) Major figures of colonial, federal, and early 19th century literature.

ENGL 4640 American Realists and Naturalists (3) Works of Twain, Howells, James, Dreiser, Chopin, and Crane.

ENGL 4660 Women Writers of the United States (3)

ENGL 4670 Ethnic American Literature (3) A survey of America's old and new ethnic writing, with particular emphasis on Native, Asian, Hispanic, and African American writers and a general emphasis on other groups.

ENGL 4680 African American Literature (3) A survey of African American writers from the Colonial period to the present with emphasis on twentieth century writers.

Modern Literature

ENGL 4700 British Fiction 1890 to Present (3) Representative fiction by major British authors from 1890 to the present.

ENGL 4710 Modern American Fiction (3)

ENGL 4720 Modern British Poetry (3) British poetry of the twentieth century.

ENGL 4730 Modern American Poetry (3) American poetry of the twentieth century.

ENGL 4740 Modern Drama (3) Readings in the significant drama of the Twentieth and Twenty-first Centuries.

Teaching Methods in English

ENGL 2830 Literature for Adolescents (3) Reading course intended for those who will teach high school English.

ENGL 4810 Seminar in Teaching English (2-3) *May be repeated with different offerings*, such as Individualizing Instruction, Teaching Traditional Grammar, How to Teach the Novel, Techniques of Theme Grading, Teaching Creative Writing, or Teaching Prosody. *May be repeated for a maximum of 6 semester hours of undergraduate credit and 6 semester hours of graduate credit.*

ENGL 4820 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with ENGL 4890 during the Professional Semester. *Not available for graduate credit.

ENGL 4840 Composition and Evaluation (3) Techniques of writing and evaluating composition for those planning to teach.

ENGL 4890 Methods of Teaching English* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with ENGL 4820 during the Professional Semester. *Not available for graduate credit.

Research and Readings

ENGL 3990 Special Topics in English (1-3) Individual or group work by qualified students in areas such as creative writing, literature, or language. *May be repeated for a maximum of 6 semester hours.* Prerequisite: approval of department chair.

ENGL 4990 Special Projects in English (1-3) *May be repeated for a maximum of 6 semester hours.*

Integrated Capstone

ICAP 4240 Literature and Its Discourses* (3) Students will review the skills, content, and methodologies of literary studies and gain a new perspective on them by studying other disciplines and methodologies. Prerequisites: Consent to enroll based on the following conditions: all General Education courses completed; English Major, Bachelor of Arts Degree; scheduled for graduation the semester enrolled or the following semester. Not available for English elective credit. *Not available for graduate credit.

Philosophy

PHILOSOPHY

Major, Bachelor of Arts Degree
(42-325)

	Sem. Hours
MAJOR REQUIREMENTS	33
PHIL 1000 Introduction to Philosophy	3
PHIL 1400 Deductive Logic, 3 or	
PHIL 1410 Critical Thinking, 3	3
PHIL 2300 Ethics	3
PHIL 3120 Hist. of Phil. I: Ancient Thought	3
PHIL 3130 Hist. of Phil. I: Enlightenment Thought	3
PHIL 3600 Special Topics in Philosophy	3
PHIL 3660 Studies in Literature & Philosophy	3
PHIL 4250 Special Projects in Philosophy	3
PHIL 4710 Philosophy of Religion	3
Electives from the following	6
PHIL 1400 Deductive Logic, 3 or	
PHIL 1410 Critical Thinking, 3	3
PHIL 3500 Aesthetics	3
PHIL 3600 Special Topics in Philosophy	3
<i>(may be taken a second time with different topic to satisfy elective requirement)</i>	
PHIL 3660 Studies in Literature & Philosophy	3
<i>(may be taken a second time with different topic to satisfy elective requirement)</i>	
PHIL 4800 Philosophy of Science	3
GENERAL EDUCATION REQUIREMENT PHIL 1000 fulfills	
3 s.h. of Div. II C; PHIL 2300 fulfills 3 s.h. of Div. III	42
MODERN LANGUAGE REQUIREMENT	3-9
Refer to Bachelor's Degree Requirements section for fulfillment options.	
FREE ELECTIVES	36-42
MINIMUM TOTAL	120

PHILOSOPHY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(317)

Students who complete a minor in Philosophy will use the knowledge and skills obtained to:

- Demonstrate knowledge and understanding of the major writings of the eminent philosophers of the classical period and the modern period (16-18th century).
- Demonstrate knowledge and understanding of how philosophical ideas have evolved through the history of philosophy.
- Demonstrate knowledge and understanding of the major theories of ethics (such as virtue ethics, consequentialism, utilitarianism, deontological ethics, etc.) as well as the writings of philosophers such as Plato, Aristotle, Hume, Kant, etc.
- Demonstrate practical competence in applying the techniques of formal and informal logic for evaluating arguments.

	Sem. Hours
MINOR REQUIREMENTS	21
PHIL 1000 Introduction to Philosophy	3
PHIL 2300 Ethics	3
PHIL 3120 History of Philosophy I: Ancient Thought	3
PHIL 3130 History of Phil. II: Enlightenment Thought	3
PHIL 1400 Deductive Logic, 3 or	
PHIL 1410 Critical Thinking, 3	3
Electives in philosophy	6

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor,
PHIL 1000 fulfills 3 s.h. of Div. II C; PHIL 2300 fulfills 3 s.h. of Div. III.

PHIL 1000 Introduction to Philosophy (3) An introductory survey of core philosophical questions and positions in metaphysics, ethics, epistemology, and the theories of the mind.

PHIL 1400 Deductive Logic (3) An introduction to the elements of formal logic, emphasizing the principles, forms, and methods of valid reasoning.

PHIL 1410 Critical Thinking (3) An introduction to the basic principles and patterns of good reasoning, emphasizing informal argument analysis and practical critique.

PHIL 2300 Ethics (3) A systematic overview of various moral theories and their applications in a variety of specific contexts and cases.

PHIL 3120 History of Philosophy I: Ancient Thought (3) This course focuses on problems, positions, and arguments in ancient philosophy from the pre-Socratics to the Middle Ages, with special emphasis on Plato and Aristotle.

PHIL 3130 History of Philosophy II: Enlightenment Thought (3) This course focuses on problems, positions, and arguments in epistemology, metaphysics, and social and political philosophy in the Age of Enlightenment.

PHIL 3500 Aesthetics (3) This course explores the philosophy of art from Plato to the present, addressing topics such as the nature of art, beauty, and aesthetic truth.

PHIL 3600 Special Topics in Philosophy (1-3) This course is devoted to a particular topic of philosophical study. *May be repeated with different topics for a maximum of 6 semester hours.*

PHIL 3660 Studies in Literature and Philosophy (3) An interdisciplinary course devoted to examining the relationship between philosophy and literature. *May be repeated with different foci for a maximum of 6 semester hours.*

PHIL 4250 Special Projects in Philosophy* (3) Senior thesis devoted to a core problem, theory, or figure in philosophy. Prerequisite: Permission of the instructor. *Not available for graduate credit.

PHIL 4710 Philosophy of Religion* (3) This seminar analyzes the concept of religion, arguments for the existence of god, the problem of evil, and the nature of religious language and communities. *Not available for graduate credit.

PHIL 4800 Philosophy of Science* (3) This seminar addresses the nature of scientific theorizing, the relationship of the scientific method to rationality and progress, and technology's relation to science and society. *Not available for graduate credit.

History and Anthropology

Department of History and Anthropology Statement of Policy

A course with a grade lower than a "C" will not be allowed to fulfill a major or minor requirement in any program offered by the Department of History and Anthropology.

HISTORY

Major, Bachelor of Arts Degree (42-420)

The graduate with a Bachelor of Arts in History degree will use the knowledge and skills obtained in the program to:

- Learn and judge the basis of historical knowledge in references, documents, archives, artifacts, and electronic media.
- Differentiate between fact and interpretation, logic and bias; effectively communicate this knowledge in written and technological formats.
- Recognize conceptual frameworks and apply a point-of-view.
- Determine cause-and-effect relationships in the past.
- Read history critically for alternatives.
- Learn lessons from the past by applications to the present.
- Respect the past as prologue to the present.
- Integrate historical knowledge with other fields of study.

MAJOR REQUIREMENTS 39

HIST 1350	History of the U. S. to 1877	3	
HIST 1351	History of the U. S. from 1877	3	
HIST 2400	History of the Early World	3	
HIST 2401	Hist. of the Early Modern World	3	
HIST 2402	Hist. of the Modern World	3	
SOSC 3010	Writing in Social Sciences	3	
IGEN 4231	Myth, Memory & Realities	3	
	Upper-level electives in American history	6	
	Upper-level electives in world history	9	
	A minimum of three hours of world history must be non-western history, or HIST 4452 or HIST 4453.		
	Upper-level elective in history	3	

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, HIST 1350 fulfills 3 s.h. of Div. II B; the Modern Language Requirement fulfills 3 s.h. of Div. II C; HIST 2402 fulfills 3 s.h. of Div. II D; IGEN 4231 fulfills 3 s.h. of Div. IV A 36

MODERN LANGUAGE REQUIREMENT Refer to Bachelor's Degree Requirements section for fulfillment options. 3-9

FREE ELECTIVES 36-42

MINIMUM TOTAL 120

HISTORY

Major, Bachelor of Science Degree (43-421)

The graduate with a Bachelor of Science in History degree will use the knowledge and skills obtained in the program to:

- Learn and judge the basis of historical knowledge in references, documents, archives, artifacts, and electronic media.
- Differentiate between fact and interpretation, logic and bias; effectively communicate this knowledge in written and technological formats.
- Recognize conceptual frameworks and apply a point-of-view.
- Determine cause-and-effect relationships in the past.
- Read history critically for alternatives.
- Learn lessons from the past by applications to the present.
- Respect the past as prologue to the present.
- Integrate historical knowledge with other fields of study.

MAJOR REQUIREMENTS 39

HIST 1350	History of the U. S. to 1877	3	
HIST 1351	History of the U. S. from 1877	3	
HIST 2400	History of the Early World	3	

HIST 2401	History of the Early Modern World	3
HIST 2402	History of the Modern World	3
SOSC 3010	Writing in Social Sciences	3
IGEN 4231	Myth, Memory & Realities	3
	Upper-level electives in American history	6
	Upper-level electives in world history	9
	A minimum of three hours of world history must be non-western history, or HIST 4452 or HIST 4453.	
	Upper-level elective in history	3
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, HIST 1350 fulfills 3 s.h. of Div. II B; HIST 2402 fulfills 3 s.h. of Div. II D; IGEN 4231 fulfills 3 s.h. of Div. IV A 39		
FREE ELECTIVES 42		
MINIMUM TOTAL 120		

HISTORY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (422)

			Sem. Hours
MINOR REQUIREMENTS			20

HIST 1350	History of the U. S. to 1877	3
HIST 1351	History of the U. S. from 1877	3
HIST 2400	History of the Early World	3
HIST 2401	History of the Early Modern World	3
HIST 2402	History of the Modern World	3
	Upper-level electives in history	5

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, HIST 1350 fulfills 3 s.h. of Div. II B; HIST 2402 fulfills 3 s.h. of Div. II D

American History

HIST 1350 History of the United States to 1877 (3) Survey of U.S. history from the age of exploration to 1877.

HIST 1351 History of the United States from 1877 (3) Survey of U.S. history from 1877 to present.

HIST 4300 Missouri History (3) Missouri history from earliest times to the present.

HIST 4307 American Colonial History 1607-1763 (3) American political, economic, and cultural institutions in the colonial period.

HIST 4309 The African-American in American History (3) Economic, political, and social development of the African-American in the United States.

HIST 4310 Women in America (3) Women in America from colonial times to the present with emphasis upon the nineteenth century feminist movement and the recent twentieth century women's rights movement.

HIST 4311 Revolution and Republic (3) American political, economic, and cultural institutions from 1763 to the War of 1812.

HIST 4314 Jacksonian America (3) Cultural, social, political and economic development of the United States from the War of 1812 to 1848.

HIST 4315 The Civil War and Reconstruction (3) The causes of the war, the social, political, economic and military impact of the war; and the post-war reconstruction process.

HIST 4316 The American Military Experience (3) A military history of the American people from colonial times to the present, specifically designed to satisfy the Professional Military Education component of the Military Qualifications Standards required of all candidates for commissioning in the United States Army.

HIST 4317 The Jazz Age and the Great Depression (3) The social, cultural and political trends of the Jazz Age, the social and economic impact of the Great Depression, and the advent of the New Deal.

HIST 4318 The Gilded Age and Progressive Era (3) The course examines the political and social changes in the United States from 1877 to 1920 that contributed to the emergence of modern America.

HIST 4320 History of the Westward Movement (3) Economic, social, cultural, and political contributions to American development by the Westward Movement.

HIST 4322 Grand Expectations 1945-1980 (3) Examines the domestic and foreign developments of the United States from the end of World War II through the aftermath of Vietnam and Watergate.

HIST 4323 Our Times: America from 1980 to 2008 (3) Examines the domestic and foreign developments of the United States from the ascendancy of Reagan to the advent of global terror.

HIST 4324 Truman and Civil Rights (3) This course analyzes the civil rights record of President Harry S. Truman.

HIST 4325 History of American Diplomacy (3) Foreign relations of the United States with emphasis on the period since 1900.

HIST 4326 Native American History of the United States (3) A survey of relations between Native Americans and Euro-Americans from colonial times to the present.

HIST 4327 African American Women, Gender, and Girlhood (3) This course focuses on the history and development of black women and girls from their African origins to the present.

HIST 4330 The United States and World War II (3) The rise of totalitarianism in the 1930's, America's reaction to totalitarianism, the war in Europe 1939-41 and America's reaction, America in World War II, the impact of World War II upon American society, and the post-war settlement and the Cold War.

HIST 4331 The Vietnam Era (3) Vietnam in the pre-French (1880's) era, France in Vietnam until 1954, the gradual U.S. involvement in Vietnam 1954-64, the Vietnam war 1964-73, Vietnam of the post-American involvement era to the present and finally an analysis of the impact of the Vietnam war on American society.

HIST 4340 Public History (3) The course defines public history and its constituents, and it surveys the job experiences of practitioners in the fields of archives, museums, and historic sites.

HIST 4351 Special Projects in American History (1-6) Study, interpretation, and discussion of special topics and problems in American history. *May be repeated for a maximum of 6 semester hours.*

World History: Surveys

HIST 2400 History of the Early World (3) A survey of ancient and medieval civilizations from earliest times to 1300. Particular emphasis will be placed upon political, economic, social, and religious developments and achievements.

HIST 2401 History of the Early Modern World (3) World civilization from 1300 to 1800. Special emphasis will be given to economic contact and cultural clashes among European, Asian, American, and African civilizations.

HIST 2402 History of the Modern World (3) A survey of modern world civilization since 1800. Special attention will be given to industrialization, democratization, imperialism, global wars, and modernization of the non-western world.

HIST 2410 Introduction to Africana Studies (3) Examines the rise of African world civilizations, with emphasis on the development of complex empires and the influence of African cultures in the Western Hemisphere.

Western World History

HIST 4402 Ancient Greece (3) A survey of Greek history from the pre-classical Minoan and Mycenaean civilizations, through the classical period, to the Roman conquest.

HIST 4403 Ancient Rome (3) A survey of Roman history from its origins to the decline of the imperial system. Particular emphasis will be placed upon the political, social, and economic developments in the Republic and the factors that led to the fall of the empire.

HIST 4404 Barbarian Europe (3) European history from the fall of the Roman Empire to the formation of new successor states, with emphasis on interdisciplinary research methods.

HIST 4411 The Renaissance and Age of Exploration (3) An analysis of the relationships between the Italian Renaissance, Iberian exploration, and the forging of the first global economy up to the mid-sixteenth century.

HIST 4412 Era of Renaissance and Reformation (3) The intellectual and cultural institutions of Europe during the Age of the Renaissance and the Protestant Revolt and Catholic Reformation.

HIST 4413 The Age of Absolutism and Enlightenment (3) The development and legacy of the European bureaucratic and centralized monarchical state in the context of the Scientific Revolution.

HIST 4414 The Age of the French Revolution and Napoleon (3) The origins, development, and consequences of the French Revolution and the Napoleonic Empire in France and in the larger European world, with special reference to the broad transformation of the entire continent during the eighteenth century.

HIST 4415 Revolutionary Europe (3) A survey of the political, social, economic, and cultural transformation of Europe in a century of revolution, from the *ancient regime* to World War I.

HIST 4416 Europe in Crisis: 1900-1945 (3) Examines the political, diplomatic and strategic trends of the major European crises up to 1945: the Great War, the Great Depression, and World War II.

HIST 4418 War and Modern Society (3) This course will explore the relationship between warfare and society from the advent of gunpowder weaponry to the 21st century.

HIST 4419 Women in Modern Europe (3) Survey of the history of European women's oppression and agency from the Renaissance to the present.

HIST 4422 England to 1689 (3) The history and institutions of England from Anglo-Saxon times to the Glorious Revolution.

HIST 4423 Modern Britain and the Empire (3) Political, economic, and social development of modern England and the empire.

HIST 4431 Modern Germany and the Nazi Experience (3) A political, social, economic and cultural history of Germany from World War I through the post-World War II era with emphasis on the Third Reich.

HIST 4432 The Holocaust (3) Examines the Holocaust within the context of historical anti-Semitism and the chronology of Nazism's rise, World War II, the Final Solution, and the legacy.

HIST 4441 The Rise of Imperial Russia (3) This course will explore the history of Imperial Russia from Kievan Rus' through the end of the reign of Tsar Alexander II.

HIST 4442 Modern Russia and the Soviet Union (3) Russia and its place in world affairs since the eighteenth century.

HIST 4451 Imperial Spain 1469-1714 (3) The rise of the Spanish Empire in the Old World and the New from the fifteenth through the seventeenth centuries.

HIST 4452 Modern Latin America (3) Latin American history from the independence movement of the eighteenth century to the present.

HIST 4453 History of Mexico (3) A survey of the political, social, economic and cultural history of Mexico from pre-Columbian civilizations to the present.

Non-Western World History

HIST 4461 The Rise of Chinese Civilization (3) The origins, development, and transformation of Chinese civilization from ancient to modern times, including China's impact on peripheral nations and the modifications of traditional culture by Western influences until 1949.

HIST 4462 The Rise of Japanese Civilization (3) The origins, development, and transformation of Japanese civilization from ancient to modern times, emphasizing the unique qualities of Japanese history and culture and the role of Japanese leadership in modern East Asia.

HIST 4463 Communist China (3) Communist China since World War II, including the expulsion of the Nationalist government from the mainland, the consolidation of communist power and authority, internal upheavals such as the "Hundred Flowers," the Great Leap Forward, and the Cultural Revolution and Communist China's foreign policies and role in international affairs.

HIST 4464 Modern Korea (3) Korean history from 1800 to the present, examining politics, society, economy, and culture. Focus on Korea's interaction with East Asia and the world.

HIST 4471 The African Diaspora (3) Examines the global dispersal of Africans with particular emphasis on the rise and abolition of the Trans-Saharan and Atlantic slave trades.

HIST 4472 African History (3) Examines the African continent, its development and its place in world affairs since prehistory, from complex societies to independence in the twentieth century.

HIST 4473 History of South Africa (3) This course is a survey of South African History from the pre-1800's to the present.

HIST 4481 Traditional Middle East (3) The history of West Asia and the Eastern Mediterranean from Muhammad to Napoleon, with special emphasis on the rise and expansion of Islam, including its principles, the Arab and Persian empires, and the impact of the Mongols, the Turks, and the Crusades.

HIST 4482 The Modern Middle East (3) The course will focus on western Asia, north Africa, and the Eastern Mediterranean region since the Napoleonic invasion of Egypt, with special emphasis on the decline of the Ottoman Empire, the impact of the great powers, and the effects of nationalism, oil, and the religious dynamic.

HIST 4491 Special Projects in World History (1-6) Study, interpretation, and discussion of special topics and problems in World history.

Integrative Studies General

IGEN 4231 Myth, Memory and Realities* (3) Examines a selected topic in American or World history and literature to understand how interpretations of the past have been constructed to explain the present.

*Not available for graduate credit.

Anthropology

ANTHROPOLOGY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (424)

The graduate with a Bachelor's degree that includes a Minor in Anthropology will use the knowledge and skills obtained in the minor program to:

- Judge the basis of anthropological knowledge through the study of primates, fossils, artifacts, tools, customs, beliefs, and languages.
- Apply the concept of cultural adaptation to the environment, from prehistory into the diverse present.
- Recognize that all cultures meet the common goals of provision, protection, interaction and reproduction through different strategies.
- Convey multicultural lessons and mutual respect through the comparison of cultures.
- Understand that interacting with other cultures contributes to life-long learning.

Sem. Hours

MINOR REQUIREMENTS	20
ANTH 1810 Human Prehistory	3
ANTH 1820 Cultural Anthropology	3
Electives from the following	14
ENGL 4110 Linguistics	3
ENGL 4120 Language & Culture	3
Elective in sociology	3
Electives in Anthropology	8-14

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, ANTH 1810 fulfills 3 s.h. of Div. II D; ANTH 1820 fulfills 3 s.h. of Div. II B.

ANTH 1810 Human Prehistory (3) Surveys the empirical evidence of fossils and artifacts for human biological and cultural origins from circa five million to five thousand years ago.

ANTH 1820 Cultural Anthropology (3) Surveys the origin, development, and varieties of contemporary cultures, including non-Western; comparisons of technology, customs, groups, and institutions between and among these cultures; implications of earlier cultures for modern society.

ANTH 2845 Physical Anthropology (3) The biology of the human organism; primatology, primate paleontology, and fossil hominids; the role of genetics in evolutionary theory; basic ideas in population genetics, and racial variation.

ANTH 3801 Applied Anthropology (3) Applications of the four major subfields of anthropology: cultural anthropology, physical anthropology, archaeology, and linguistics.

ANTH 3820 World Archaeology (3) An examination of societies that are now extinct and an introduction to the field and laboratory methods used to reconstruct their cultures.

ANTH 3850 Peoples of the World (3) An examination of more than twenty cultures throughout the world.

ANTH 4815 Special Projects in Anthropology (1-6) Study, interpretation, and discussion of special topics and problems in anthropology. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of instructor.

ANTH 4820 Anthropology of Gender (3) Explores cultural factors influencing roles of women and men in a variety of cultures, from small foraging bands to large industrialized states. Topics include cultural influences on sexual equality, sexual hierarchy, heterosexuality, and homosexuality.

ANTH 4830 Archaeological Field Research (3) Field experience in which students learn archaeological methods of surveying, recording and excavation, as well as how and why we investigate and preserve sites.

ANTH 4840 Historical Archaeology (3) The study of artifacts, architecture, and other material culture to address anthropological topics, such as race, gender, and class, within historic North America.

ANTH 4850 The North American Indian (3) The anthropological study of the native peoples of America north of Mexico; the physical types of American Indian populations; the comparative study of native American languages, North American prehistory, and North American ethnology.

ANTH 4860 Museum Studies (3) Introduction to museum professionalism, including ethical and legal concerns, collections care, exhibition and interpretation, and curatorship. Includes field experience and practicum hours in museum collections.

ANTH 4870 Comparative Cultures (3) Compares various aspects of cultures in selected societies and helps students to collect and analyze data on cultural patterns in their own and other societies.

Social Science

**Department of History and Anthropology
Statement of Policy**

A course with a grade lower than a "C" will not be allowed to fulfill a major or minor requirement in any program offered by the Department of History and Anthropology.

To be recommended for student teaching by the Department of History and Anthropology, a student with a major or minor in social studies must achieve at least a 2.50 GPA in all social science courses taken at UCM.

Accreditation

The Social Studies program is accredited by the National Council for the Social Studies located at 8555 16th Street, Silver Springs, MD 20910; phone 301-588-1800.

SOCIAL STUDIES

Major, Bachelor of Science in Education Degree

Certification to teach social studies in grades 9-12. (41-264)

The graduate with a Bachelor of Science in Education degree with a major in Social Studies will use the knowledge and skills obtained in the program to:

- Explain the methodologies and themes of the disciplines comprising the social sciences.
- Write competency-based objectives that state the learning and performance outcomes expected of secondary school students.
- Apply content learned in university social science courses to develop social studies lessons based upon NCSS (National Council for the Social Studies) themes for secondary school students.
- Plan, develop, and write a complete social studies teaching unit for social science courses taught at the secondary school level.
- Demonstrate through the use of questioning strategies and learning activities the ability to teach higher order thinking skills.
- Present controversial issues to secondary school students so that different points of view are properly represented and fairly evaluated.

Sem. Hours

MAJOR REQUIREMENTS	60
SOSC 3010 Writing in the Social Sciences	3
SOSC 4050 The Social Studies	3
HIST 1350 History of the U. S. to 1877	3
HIST 1351 History of the U. S. from 1877	3
POLS 1510 American Government	3
POLS 2511 State Government	3
GEOG 2212 World Geography	3

ECON 1010	Principles of Macroeconomics	3
ECON 1011	Principles of Microeconomics	3
SOC 1800	General Sociology	3
Electives from the following		6
HIST 2400	Hist. of the Early World, 3 and	
HIST 2401	Hist. of the Early Modern World, 3	6
or		
HIST 2401	Hist. of the Early Modern World, 3 and	
HIST 2402	Hist. of the Modern World, 3	6
Upper-level elective in SOC or ANTH		3
Upper-level electives in American history		6
Upper-level elective in world history		6
Upper-level elective in geography		3
Upper-level electives in at least two of the following: GEOG, HIST, POLS, SOC, ANTH, or ECON		6

The program must include at least one course that focuses on a non-western society, nation or region or on the non-western world. A list of the courses which fulfill this requirement is available from the History and Anthropology Department and on file with the Academic Advisers.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, HIST 1350, ECON 1010, SOC 1800 fulfill 9 s.h. of Div. II B; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B **37**

CTE 2000	Div. II A (required)	3
HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
PSY 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. III and must have one course in a physical or earth science and one in a biological science in Div. II A. If elected, HIST 2402 fulfills 3 s.h. of Div. II D.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) **28**

PSY 4200	Psy. of Except. Children (required)	2
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MINIMUM TOTAL **125**

SOCIAL STUDIES

Minor, Bachelor of Science in Education Degree

Certification to teach social studies in grades 5-9 is available only with a major in middle school-junior high school. May fulfill an area of concentration requirement for elementary education majors. (418)

Sem. Hours

MINOR REQUIREMENTS		24-27
HIST 1350	History of the U. S. to 1877	3
HIST 1351	History of the U. S. from 1877	3
HIST 2402	History of the Modern World	3
POLS 1510	American Government	3
GEOG 2212	World Geography, 3 or	
GEOG 3201	The Cultural Landscape, 3	3
ECON 1010	Principles of Macroeconomics, 3 or	
ECON 1011	Principles of Microeconomics, 3	3
Upper-level elective in American history		2-3
Upper-level elective in world history		2-3
2000-4000 level elective in GEOG, POLS, SOC, or ANTH		2-3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor,

HIST 1350, POLS 1510 fulfill 6 s.h. of Div. II B; if elected, ECON 1010 or GEOG 2212 fulfills 3 s.h. of Div. II B; HIST 2402 fulfills 3 s.h. of Div. II D.

SOSC 3010 Writing in the Social Sciences (3) Practicum in writing in the social sciences. Prerequisite: completion of General Education Div. I A.

SOSC 4020 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with SOSC 4074 during the Professional Semester. *Not available for graduate credit.

SOSC 4050 The Social Studies* (3) The "structures" of the disciplines and practice in redesigning university course work for high school lessons. *Not available for graduate credit.

SOSC 4074 Methods of Teaching Social Studies* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with SOSC 4020 during the Professional Semester. *Not available for graduate credit.

Africana Studies

AFRICANA STUDIES

Minor for a Bachelor's Degree

(323)

Sem. Hours

MINOR REQUIREMENTS		21-22
HIST 2410	Introduction to Africana Studies	3
AE 1450	Valuing Differences	1
*ISP 4000	Study Abroad, 3 or	
**HIST 4351	Special Projects in American History, 3 or	
#ENGL 4990	Special Projects in English, 3	3

Africana Studies

Select 12 credit hours from Area A or Area B as a field of concentration. Select 2-3 credit hours from the Area not chosen for concentration for a total of 14-15 credit hours.

Africana Studies Area A

Literary, Geographical, Political and Historical Development

MUS 1281	History and Development of Jazz	3
GEOG 3310	Geography of Africa	3
HIST 4309	African American in American History	3
HIST 4471	The African Diaspora	3
HIST 4472	African History	3
+ENGL 3990	Special Topics in English	3
ENGL 4680	African American Literature	3
POLS 3551	Race & Ethnic Politics in the U.S.	3
POLS 4553	20th Cent. African-American Politics	3

**Africana Studies Area B
Gender, Culture and Social Issues**

SOC 1800	General Sociology	3
Electives from the following		9
+#A&S 1244	Special Topics	3
WS 2000	Race, Class and Gender	3
REL 2410	Exploring Religions of Africa, the Caribbean, and African-America	3
SOC 1830	Social Problems	3
SOC 3825	Race and Ethnic Relations	3
SOC 3845	Social Inequality	3
SOC 4810	Urban Sociology	3

*University of Ghana
 **Research & Writing Course in African/African American History
 #Research & Writing Course in African American Literature
 +Research & Writing Course in Survey of Twentieth Century African American Literature
 +#Elementary Akan

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, HIST 2410 fulfill 3 s.h. of Div. II D.

Modern Languages

Department of Modern Languages Statement of Policy

A placement examination determines the level of a student's initial enrollment in elementary and intermediate language courses. If a student enrolls in FREN 1202 or GER 1302 or SPAN 1602 and completes the class with a grade of "C" or higher, the student may be eligible for validated credit for FREN 1201 or GER 1301 or SPAN 1601. If a student enrolls in FREN 2201 or GER 2301 or SPAN 2601 or a higher level class and completes the class with a grade of "C" or higher, the student may be eligible for validated credit for FREN 1201 and FREN 1202 or GER 1301 and GER 1302 or SPAN 1601 and SPAN 1602. Other restrictions may apply. For further information contact the Chair of the Department of Modern Languages.

Requirements for Certification in Modern Languages

For certification as a modern language teacher in Missouri, grades K-12, 30 semester hours are required in the language taught, or 27 hours in the language taught plus two or more high school units in that language.

Certification for grades K-9 only requires 21 semester hours in the language taught, or 18 semester hours in the language taught plus two or more high school units in that language.

FRENCH

Major, Bachelor of Arts Degree
(42-318)

The graduate with a Bachelor of Arts in French will use the knowledge and skills in the program to:

- Use French orally and in writing in a variety of informal and formal situations.
- Comprehend a variety of authentic materials in French for personal and/or professional use.
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks.
- Engage in socially appropriate forms of communication.
- Demonstrate an understanding of the target cultures in their geographical and historical contexts, including perspectives, practices, and products.

Sem. Hours

MAJOR REQUIREMENTS	42
FREN 1201 Elementary French I	3
FREN 1202 Elementary French II	3
FREN 2201 Intermediate French I	3
FREN 2202 Intermediate French II	3
FREN 3223 French Composition	3
FREN 3243 French Conversation	3
FREN 3261 French Civilization & Lit. I	3
FREN 3262 French Civilization & Lit. II	3
FREN 4223 Advanced French Composition	3
FREN 4243 Advanced French Conversation	3
FREN 4263 French Phonetics	3
FREN 4265 Contemporary French-Speaking World	3
Electives in French at 3000 or 4000 level	6
MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 41) The major, fulfills 3 s.h. of Div. II C	45
MODERN LANGUAGE REQUIREMENT (fulfilled by major)	
FREE ELECTIVES	12-19
MINIMUM TOTAL	124

FRENCH

Major, Bachelor of Science Degree
(43-319)

The graduate with a Bachelor of Science in French will use the knowledge and skills in the program to:

- Use French orally and in writing in a variety of informal and formal situations.
- Comprehend a variety of authentic materials in French for personal and/or professional use.
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks.
- Engage in socially appropriate forms of communication.
- Demonstrate an understanding of the target cultures in their geographical and historical contexts, including perspectives, practices, and products.

Sem. Hours

MAJOR REQUIREMENTS 42

FREN 1201	Elementary French I	3
FREN 1202	Elementary French II	3
FREN 2201	Intermediate French I	3
FREN 2202	Intermediate French II	3
FREN 3223	French Composition	3
FREN 3243	French Conversation	3
FREN 3261	French Civilization & Lit. I	3
FREN 3262	French Civilization & Lit. II	3
FREN 4223	Advanced French Composition	3
FREN 4243	Advanced French Conversation	3
FREN 4263	French Phonetics	3
FREN 4265	Contemporary French-Speaking World	3
Electives in French at 3000 or 4000 level		6

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) The major fulfills 3 s.h. of Div. II C **45**

FREE ELECTIVES 12-19

MINIMUM TOTAL 124

FRENCH

Major, Bachelor of Science in Education Degree

Certification to teach French in grades K-12.
(41-334)

The graduate with a Bachelor of Science in Education in French will use the knowledge and skills in the program to:

- Use French orally and in writing in a variety of informal and formal situations.
- Comprehend a variety of authentic materials in French for personal and/or professional use.
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks.
- Engage in socially appropriate forms of communication.
- Demonstrate an understanding of the target cultures in their geographical and historical contexts, including perspectives, practices, and products.
- Teach essential elements of French at elementary and secondary school levels.

Sem. Hours

MAJOR REQUIREMENTS 42

FREN 1201	Elementary French I	3
FREN 1202	Elementary French II	3
FREN 2201	Intermediate French I	3
FREN 2202	Intermediate French II	3
FREN 3223	French Composition	3
FREN 3243	French Conversation	3
FREN 3261	French Civilization & Lit. I	3
FREN 3262	French Civilization & Lit. II	3
FREN 4223	Advanced French Composition	3
FREN 4243	Advanced French Conversation	3

FREN 4263	French Phonetics	3
FREN 4265	Contemporary French-Speaking World	3
Electives in French at 3000 or 4000 level (Students must take 12 hours at 3000 or 4000 level in their major)		6

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) The major fulfills 3 s.h. of Div. II C; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B **42**

Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
PSY 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) **28**

MINIMUM TOTAL 130

FRENCH

Minor for a Bachelor's Degree

Certification to teach French in grades K-9 is available only on a Bachelor of Science in Education Degree with an elementary education major 1-6 or middle school-junior high major.

(2013)

Sem. Hours

MINOR REQUIREMENTS 27

FREN 1201	Elementary French I	3
FREN 1202	Elementary French II	3
FREN 2201	Intermediate French I	3
FREN 2202	Intermediate French II	3
FREN 3223	French Composition	3
FREN 3243	French Conversation	3
FREN 4265	The Contemporary French-Speaking World	3
FREN 3261	French Civilization & Lit. I, 3 or	
FREN 3262	French Civilization & Lit. II, 3	3
Elective in French at 3000 or 4000 level		3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, 3 s.h. of Div. II C are fulfilled

GERMAN

Major, Bachelor of Arts Degree

(42-321)

This program has been placed in abeyance. See the Department Chair for more information.

GERMAN

Major, Bachelor of Science Degree

(43-322)

This program has been placed in abeyance. See the Department Chair for more information.

GERMAN

Major, Bachelor of Science in Education Degree

Certification to teach German in grades K-12.

(41-335)

This program has been placed in abeyance. See the Department Chair for more information.

GERMAN

Minor for a Bachelor's Degree

Certification to teach German in grades K-9 is available only on a Bachelor of Science in Education Degree with an elementary education major 1-6 or middle school-junior high major. (333)

	Sem. Hours
MINOR REQUIREMENTS	21
GER 2301 Intermediate German	3
GER 2302 German Composition & Grammar	3
GER 3301 Advanced German Readings	3
GER 3323 Contemporary German Society	3
GER 3362 German Civilization	3
GER 4301 German Cinema	3
Choose one of the following	3
GER 4390 Special Topics in German	3
HIST 4431 Mod. Germany & Nazi Experience	3
HIST 4416 Europe In Crisis: 1900-1945	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, 3 s.h. of Div. II C are fulfilled

SPANISH

Major, Bachelor of Arts Degree

(42-338)

The graduate with a Bachelor of Arts in Spanish will use the knowledge and skills in the program to:

- Express himself or herself orally and in writing in a variety of informal and formal situations in Spanish.
- Comprehend a variety of authentic materials in Spanish for personal and/or professional use.
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks.
- Engage in socially appropriate forms of communication
- Demonstrate an understanding of the target cultures in their geographical and historical contexts, including perspectives, practices, and products.

	Sem. Hours
MAJOR REQUIREMENTS	42
SPAN 1601 Elementary Spanish I	3
SPAN 1602 Elementary Spanish II	3
SPAN 2601 Intermediate Spanish I	3
SPAN 2602 Intermediate Spanish II	3
SPAN 2603 Spanish Conversation I	3
SPAN 3603 Spanish Conversation II	3
SPAN 3623 Spanish Composition	3
SPAN 3661 Spanish Civilization & Literature	3
SPAN 3662 Spanish American Civilization & Literature	3
SPAN 4603 Advanced Readings & Oral Expression	3
SPAN 4623 Advanced Spanish Composition	3
Electives from the following	9
SPAN 4650 Introduction to Spanish for Business	3
SPAN 4665 Culture and Issues in the Contemporary Spanish-Speaking World	3
SPAN 4671 Cinema of the Spanish-Speaking World	3
SPAN 4680 Twentieth Century Literature of the Spanish-Speaking World	3

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) The major fulfills 3 s.h. of Div. II C 45

MODERN LANGUAGE REQUIREMENT (fulfilled by major)

FREE ELECTIVES	12-19
MINIMUM TOTAL	124

SPANISH

Major, Bachelor of Science Degree

(43-339)

The graduate with a Bachelor of Arts in Spanish will use the knowledge and skills in the program to:

- Express himself or herself orally and in writing in a variety of informal and formal situations in Spanish.
- Comprehend a variety of authentic materials in Spanish for personal and/or professional use.
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks.
- Engage in socially appropriate forms of communication.
- Demonstrate an understanding of the target cultures in their geographical and historical contexts, including perspectives, practices, and products.

	Sem. Hours
MAJOR REQUIREMENTS	42
SPAN 1601 Elementary Spanish I	3
SPAN 1602 Elementary Spanish II	3
SPAN 2601 Intermediate Spanish I	3
SPAN 2602 Intermediate Spanish II	3
SPAN 2603 Spanish Conversation I	3
SPAN 3603 Spanish Conversation II	3
SPAN 3623 Spanish Composition	3
SPAN 3661 Spanish Civilization & Literature	3
SPAN 3662 Spanish American Civilization & Literature	3
SPAN 4603 Advanced Readings & Oral Expression	3
SPAN 4623 Adv. Spanish Composition	3
Electives from the following	9
SPAN 4650 Introduction to Spanish for Business	3
SPAN 4665 Culture & Issues in the Contemporary Spanish-Speaking World	3
SPAN 4671 Cinema of the Spanish-Speaking World	3
SPAN 4680 Twentieth Century Literature of the Spanish-Speaking World	3

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) The major fulfills 3 s.h. of Div. II C 45

FREE ELECTIVES 12-19

MINIMUM TOTAL 124

SPANISH

Major, Bachelor of Science in Education Degree

Certification to teach Spanish in grades K-12

(41-337)

The graduate with a Bachelor of Science in Education in Spanish will use the knowledge and skills in the program to:

- Express himself or herself orally and in writing in a variety of informal and formal situations in Spanish.
- Comprehend a variety of authentic materials in Spanish for personal and/or professional use.
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks.
- Engage in socially appropriate forms of communication.
- Demonstrate an understanding of the target cultures in his/her geographical and historical contexts, including perspectives, practices, and products.
- Teach essential elements of Spanish at elementary and secondary school levels.

	Sem. Hours
MAJOR REQUIREMENTS	42
SPAN 1601 Elementary Spanish I	3
SPAN 1602 Elementary Spanish II	3
SPAN 2601 Intermediate Spanish I	3
SPAN 2602 Intermediate Spanish II	3
SPAN 2603 Spanish Conversation I	3
SPAN 3603 Spanish Conversation II	3

SPAN 3623	Spanish Composition	3
SPAN 3661	Spanish Civilization & Literature	3
SPAN 3662	Spanish American Civilization & Literature	3
SPAN 4603	Advanced Readings and Oral Expression	3
SPAN 4623	Adv. Spanish Composition	3
Electives from the following		9
SPAN 4650	Introduction to Spanish for Business	3
SPAN 4665	Culture & Issues in the Contemporary Spanish-Speaking World	3
SPAN 4671	Cinema of the Spanish-Speaking World	3
SPAN 4680	Twentieth Century Literature of the Spanish-Speaking World	3

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) (The major fulfills 3 s.h. of Div. II C; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B) **42**

Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
PSY 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) **28**

MINIMUM TOTAL 130

SPANISH

Minor for a Bachelor's Degree

Certification to teach Spanish in grades K-9 is available only on a Bachelor of Science in Education Degree with an elementary education major 1-6 or middle school-junior high major. (2015)

Sem. Hours

MINOR REQUIREMENTS 27

SPAN 1601	Elementary Spanish I	3
SPAN 1602	Elementary Spanish II	3
SPAN 2601	Intermediate Spanish I	3
SPAN 2602	Intermediate Spanish II	3
SPAN 2603	Spanish Conversation I	3
SPAN 3603	Spanish Conversation II	3
SPAN 3623	Spanish Composition	3
SPAN 3661	Spanish Civilization & Literature, 3 or	
SPAN 3662	Spanish American Civ. & Lit., 3	3
Elective from the following		3
SPAN 4603	Advanced Readings & Oral Expressions	3
SPAN 4623	Advanced Spanish Composition	3
SPAN 4650	Introduction to Spanish for Business	3
SPAN 4665	Culture & Issues in the Contemporary Spanish-Speaking World	3
SPAN 4671	Cinema of the Spanish-Speaking World	3
SPAN 4680	Twentieth Century Literature of the Spanish-Speaking World	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, 3 s.h. of Div. II C are fulfilled

WORLD LANGUAGE

Minor for a Bachelor's Degree

(252)

Sem. Hours

MINOR REQUIREMENTS 27

Students must take courses in 3 different languages.

Two courses in one language (CHIN, FREN, GER, SPAN, ML)	6
Two courses in a second language (CHIN, FREN, GER, SPAN, ML)	6
Five courses in a third language, at least one course at the upper-division level (FREN, GER, SPAN, ML)	15

Non-native speakers of English may count 3000 or 4000 level English courses as one of their three languages.

Native speakers of languages offered in the Department of Modern Languages must substitute 3000-level English courses in lieu of courses in their language.

General

ML 1040 Special Projects in Modern Languages (1-3) Small-group instruction at the introductory level. *May be repeated for a maximum of 12 semester hours.*

ML 2010 Foreign Studies in Language (1-6) Credit granted for study in a departmentally-approved program in a foreign country. *May be repeated for a maximum of 12 semester hours.*

ML 4010 Foreign Studies in Language (French) (German) (Spanish) (1-6) Credit granted for study in a UCM approved program in a foreign country. Freshmen and sophomores permitted to enroll with consent of the Chair of the Department of Modern Languages. Available for graduate credit upon approval of student's graduate program adviser. *May be repeated for a maximum of 12 semester hours.*

ML 4020 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with ML 4054 during the Professional Semester. *Not available for graduate credit.

ML 4040 Special Projects in Foreign Language (1-3) Individualized and group instruction in foreign and modern languages. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of department chair.

ML 4054 Methods of Teaching Foreign Languages* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with ML 4020 during the Professional Semester. *Not available for graduate credit.

French

FREN 1201 Elementary French I (3) Fundamental principles of French pronunciation, the building of basic vocabulary of words and expressions, studies in structure, oral work, and reading selections. Not open to native speakers or students who have had three years of high school French without the permission of the department chair.

FREN 1202 Elementary French II (3) A continuation of French I. Increased attention to grammar. Not open to native speakers or students who have had four years of high school French without the permission of the department chair. Prerequisite: FREN 1201 or equivalent.

FREN 2201 Intermediate French I (3) Reading, conversation, vocabulary, and idiom drill. Prerequisite FREN 1202 or equivalent.

FREN 2202 Intermediate French II (3) Continuing development of the ability to use the language on the intermediate level. Prerequisite: FREN 2201 or equivalent.

FREN 2290 Special Topics in French (1-3) Individual or group work by selected students in carefully chosen fields for intermediate level study. *May be repeated for a maximum of 6 semester hours.* Prerequisites: 6 semester hours of French and consent of the department chair.

FREN 3223 French Composition (3) Review of grammar. Intensive practice in composition with increased attention to stylistics. Prerequisite: FREN 2202 or equivalent.

FREN 3243 French Conversation (3) Provides intensive drill in conversational language using culture-based materials. Prerequisite: FREN 2201.

FREN 3261 French Civilization and Literature I (3) From the origins to the eighteenth century. Prerequisite: FREN 2202 or equivalent.

FREN 3262 French Civilization and Literature II (3) From the eighteenth century to 1945. Prerequisites: FREN 2202 or equivalent.

FREN 4223 Advanced French Composition* (3) Oral and written composition, review of more difficult grammatical construction and idioms. Prerequisite: FREN 3223 or equivalent. *Not available for graduate credit.

FREN 4243 Advanced French Grammar and Conversation* (3) Study and practice of oral advanced French conversational patterns. Review of more difficult grammatical construction and idioms. Prerequisite: FREN 3243 or equivalent. *Not available for graduate credit.

FREN 4263 French Phonetics* (3) The sound system of the French language: analysis of problems encountered by a native English speaker in learning spoken French. Prerequisite: FREN 3243 or equivalent. *Not available for graduate credit.

FREN 4264 Commercial French* (3) French commercial terminology, stressing the difference between French and American forms and practices. Prerequisite: FREN 3223 or equivalent. *Not available for graduate credit.

FREN 4265 The Contemporary French-Speaking World* (3) An overview of contemporary France and other French-speaking nations. Prerequisites: FREN 3261 or FREN 3262, or equivalent. *Not available for graduate credit.

FREN 4286 French Literature of the Nineteenth Century* (3) Romanticism, realism, and naturalism. Analysis of texts and literary theories. Prerequisite: 6 semester hours of 3000 level French courses. *Not available for graduate credit.

FREN 4287 French Literature of the Twentieth Century* (3) Symbolism, surrealism, and existentialism in prose, poetry and theatre. Prerequisite: 6 semester hours of 3000 level French courses. *Not available for graduate credit.

FREN 4288 French Translation* (3) Commercial and technical translation from French into English and English into French. Prerequisite: 6 semester hours of 3000 level French courses. *Not available for graduate credit.

FREN 4289 Cinema of the French-Speaking World* (3) A survey of films from the French-speaking world with emphasis on the cultural contexts in which the films are produced and viewed. Prerequisites: 6 semester hours of 3000 level French courses. *Not available for graduate credit.

FREN 4290 Special Topics in French* (1-3) Individual or group work by selected students in carefully chosen fields for advanced study. *May be repeated for a maximum of 6 semester hours.* Prerequisite: 18 semester hours of French and consent of department chair. *Not available for graduate credit.

German

GER 1301 Elementary German I (3) Fundamental principles of German pronunciation, building a basic vocabulary of German words and idiomatic expressions, oral work, and reading simple selections. Not open to native speakers or students who have had three years of high school German without the permission of the department chair.

GER 1302 Elementary German II (3) A continuation of German I. Increased attention to grammar. Not open to native speakers or students who have had four years of high school German without the permission of the department chair. Prerequisite: GER 1301 or equivalent.

GER 2301 Intermediate German (3) Vocabulary, conversation, intensive grammar practice. Prerequisite: Acceptable proficiency as demonstrated by adequate high school course work in German or by departmental approval.

GER 2302 German Composition and Grammar (3) Advanced grammar, including the passive voice, the subjunctive mood. Written composition will emphasize German word order, style, and idiomatic skills. Prerequisite: GER 2301 or departmental approval.

GER 2390 Special Topics in German (1-3) Individual or group work by selected students in carefully chosen fields for intermediate level study. *May be repeated for a maximum of 6 semester hours.* Prerequisites: 6 semester hours of German and consent of the department chair.

GER 3301 Advanced German Readings (3) Overview of contemporary literature in Germany, Austria, and Switzerland. Selected short stories, poems, plays, fairytales are read and discussed. Prerequisite: GER 2301 or departmental approval.

GER 3323 Contemporary German Society (3) Overview of modern German society, including the educational system, politics, and a focus on each of the German states. Prerequisite: GER 2302 or departmental approval.

GER 3362 German Civilization (3) A review of German history starting from 1871, including the Weimar Republic. Prerequisite: GER 2302 or departmental approval.

GER 4301 German Cinema (3) A survey of films from various German-speaking countries, with an emphasis on the cultural contexts in which the films are produced and viewed. Prerequisite: GER 3323 or GER 3362.

GER 4390 Special Topics in German* (1-3) Individual or group work by selected students in carefully chosen fields for advanced study. *May be repeated for a maximum of 6 semester hours.* Prerequisite: 18 semester hours of German and consent of department chair. *Not available for graduate credit.

Spanish

SPAN 1601 Elementary Spanish I (3) Fundamentals of Spanish pronunciation, the building of basic vocabulary and patterns, oral work, studies in structure, and reading selections. Not open to native speakers or students who have had three years of high school Spanish without the permission of the department chair.

SPAN 1602 Elementary Spanish II (3) A continuation of Spanish I, with increased attention to grammar. Not open to native speakers or students who have had four years of high school Spanish without the permission of the department chair. Prerequisite: SPAN 1601 or equivalent.

SPAN 2601 Intermediate Spanish I (3) Development of the ability to use the language by oral-aural laboratory drills and readings. Prerequisite: SPAN 1602 or equivalent.

SPAN 2602 Intermediate Spanish II (3) Continuing development of the ability to use the language on the intermediate level, with more advanced grammar, laboratory work and readings. Prerequisite: SPAN 2601 or equivalent.

SPAN 2603 Spanish Conversation I (3) Conversational Spanish using culture-based materials emphasizing the four skills: speaking, listening, reading, and writing. Prerequisites: SPAN 2602.

SPAN 2690 Special Topics in Spanish (1-3) Individual or group work by selected students in carefully chosen fields for intermediate level study. *May be repeated for a maximum of 6 semester hours.* Prerequisites: 6 semester hours of Spanish and consent of the department chair.

SPAN 3603 Spanish Conversation II (3) Oral practice in everyday Spanish, discussion, idiomatic usage, listening comprehension, speaking. Prerequisite: SPAN 2603.

SPAN 3623 Spanish Composition (3) Review of grammar, oral-aural training, and special study of the subjunctive mood. Prerequisite: SPAN 2602 or equivalent.

SPAN 3661 Spanish Civilization and Literature (3) The social, cultural, literary, and political history of Spain. Prerequisite: SPAN 2602 or equivalent.

SPAN 3662 Spanish American Civilization and Literature (3) The social, cultural, literary, and political history of Spanish America. Prerequisite: SPAN 2602 or equivalent.

SPAN 4603 Advanced Readings and Oral Expression* (3) Emphasis on advanced readings and oral-aural practice in Spanish. Prerequisite: SPAN 3603. *Not available for graduate credit.

SPAN 4623 Advanced Spanish Composition* (3) Oral and written composition; review of more difficult grammatical constructions and idioms. Prerequisite: SPAN 3623 or equivalent. *Not available for graduate credit.

SPAN 4650 Introduction to Spanish for Business* (3) Enhances linguistic and cultural knowledge of Spanish for business and will be conducted primarily in Spanish. Prerequisites: 6 semester hours of 3000 level Spanish courses. *Not available for graduate credit.

SPAN 4665 Culture and Issues in the Contemporary Spanish-Speaking World* (3) An exploration of contemporary political, economic and societal issues affecting Spanish-speaking cultures with emphasis on further developing language skills through discussions and written assignments. Prerequisite: SPAN 3661 or SPAN 3662. *Not available for graduate credit.

SPAN 4671 Cinema of the Spanish-Speaking World* (3) A survey of Latin American, Spanish and Latino films with emphasis on the cultural contexts in which the films are produced and viewed. Prerequisite: 6 semester hours of 3000 level Spanish courses. *Not available for graduate credit.

SPAN 4680 Twentieth Century Literature of the Spanish-Speaking World* (3) Literary texts of the 20th century from Spain and Spanish America with emphasis on developing language skills through discussions and written assignments. Prerequisite: 6 semester hours of 3000 level Spanish courses. *Not available for graduate credit.

SPAN 4690 Special Topics in Spanish* (1-3) Individual or group work by selected students in carefully chosen fields for advanced study. *May be repeated for a maximum of 6 semester hours.* Prerequisite: 18 semester hours of Spanish and consent of department chair. *Not available for graduate credit.

Chinese

CHIN 1701 Elementary Chinese I (3) Fundamental principles of pronunciation, vocabulary and idiomatic expressions of spoken Mandarin Chinese. Not open to native speakers or advanced students without permission of department chair.

CHIN 1702 Elementary Chinese II (3) Continuation of CHIN 1701. Not open to native speakers or advanced students without permission of department chair. Prerequisite: CHIN 1701 or equivalent.

CHIN 2790 Special Topics in Chinese (1-3) Individual or group work by selected students in carefully chosen fields for intermediate level study. *May be repeated for a maximum of 6 semester hours.* Prerequisites: 6 semester hours of Chinese and consent of the department chair.

Music

All programs in the Department of Music have been accredited since 1947 by the National Association of Schools of Music, 11250 Roger Bacon Dr., Suite 21, Reston, VA 20190-5248, phone 703-437-0700, email info@arts-accredit.org.

Department of Music Statement of Policy

Successful completion of an entrance audition and a passing score on the music theory placement examination are required for admission to all degree programs in the Department of Music. Contact the department for specific requirements.

All music majors, except for the Bachelor of Arts degree, must demonstrate keyboard competency as listed in the degree programs. All students must meet the keyboard competency requirement before being admitted to special methods classes.

Credit for private lessons is based on one lesson per week for each 1-1.5 hours of credit. Upper-level credit is given only after the sophomore examination is passed. Minimum practice requirement is one hour per day for each 1-1.5 hours of credit.

All students majoring or minoring in music are required to attend a designated number of recitals and concerts given on the campus. Music majors and minors are required to enroll for pass-fail in and to complete satisfactorily the following number of semesters of MUS 1000, Recital Attendance: music majors on the Bachelor of Arts degree, six semesters; on the B.M. degree, eight semesters; on the B.M.E. degree, seven semesters; and music minors, four semesters. Deficiencies in MUS 1000 must be removed before a student may graduate.

Students are encouraged to participate in ensembles to broaden their general musical background and further develop their performance abilities and listening skills. Each degree program includes specific ensemble requirements noted under the course listing for those programs.

MUSIC

Major, Bachelor of Arts Degree (42-436)

The graduate with a Bachelor of Arts degree in music will use the knowledge and skills obtained in the program to:

- Understand the basic elements and structures of music history, theory, and performance literature.
- Understand music's relationship to the other arts, and how the arts relate to mankind.
- Use technology in appropriate music applications.
- Communicate the intellectual (thinking), emotional, and aesthetic (valuing) qualities of music to a diverse society.
- Perform with appropriate tone, technique, and musicality in his/her primary performance medium.

Sem. Hours

MAJOR REQUIREMENTS 37

MUS 1000	Recital Attendance	0
MUS 1111	Theory I	3
MUS 1112	Theory II	3
MUS 1121	Aural Training I	1
MUS 1122	Aural Training II	1
MUS 2111	Theory III	3
MUS 2121	Aural Training III	1
MUS 2221	Intro. to Music Literature I.	2
MUS 2222	Intro. to Music Literature II	2
MUS 3211	Music History to 1800	3
MUS 3212	Music History 1800-Present	3
	Major instrument or voice, 1000 level	4
	Major instrument or voice, 3000 level	6
	Large vocal or instrumental ensemble	2
	Elective in Music	3

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MUS 3211 and MUS 3212 are allowed to fulfill 3 s.h. of Div. II C; the Modern Language Requirement fulfills 3 s.h. of Div. II C **42**

MUS 1225 Div. II D (required) 3

MODERN LANGUAGE REQUIREMENT 3-9

Refer to Bachelor's Degree Requirements section for fulfillment options.

FREE ELECTIVES	11-24
MINIMUM TOTAL	124

MUSIC

Major, B.M. Degree (44-472)

The graduate with a Bachelor of Music degree will use the knowledge and skills obtained in the program to:

- Understand the basic elements and structures of music history, theory, and performance literature.
- Understand music's relationship to the other arts, and how the arts relate to mankind.
- Use technology in appropriate music applications.
- Communicate the intellectual (thinking), emotional, and aesthetic (valuing) qualities of music to a diverse society.
- Perform at the highest possible level in his/her primary performance medium.
- Articulate essential elements of music and music performance.
- Demonstrate functional piano performance skills.

Sem. Hours

MAJOR REQUIREMENTS 79-84.5

MUS 1000	Recital Attendance	0
MUS 1111	Theory I	3
MUS 1112	Theory II	3
MUS 1121	Aural Training I	1
MUS 1122	Aural Training II	1
MUS 2111	Theory III	3
MUS 2112	Theory IV	3
MUS 2121	Aural Training III	1
MUS 2122	Aural Training IV	1
MUS 4125	Form & Analysis	3
MUS 3211	Music History to 1800	3
MUS 3212	Music History 1800-Present	3
MUS 2300	Fundamentals of Conducting	2
Major instrument or voice, 1000 level		8
Major instrument or voice, 3000 level		10.5
Major large instrumental or vocal ensemble		4
Departmentally approved electives to complete an emphasis in one of the following areas		27.5-33

Area 1 Jazz-Commercial Music

*Area 2 Music Technology

Area 3 Performance (Instrumental, Piano, Voice)

Area 4 Piano Pedagogy

A listing of specific courses required for each emphasis is available from the Department of Music office.

Selection of major large instrumental or vocal ensemble will be determined by the student's chosen emphasis.

Keyboard competency is demonstrated by passing MUS 2502 (Piano Class IV) with a grade of "B" or better, or passing the piano proficiency examination.**

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MUS 3211 and MUS 3212 are allowed to fulfill 3 s.h. of Div. II C 45

MUS 1225	Div. II D (required)	3
For piano pedagogy emphasis, PSY 1100 Div. II B is required.		
For voice emphasis, FREN 1201 or GER 1301 Div. II C is required.		
For music technology emphasis, ECON 1010 Div. II B is required.		

MINIMUM TOTAL 124

*In the music technology emphasis, MUS 2400, MUS 2410, MUS 3400, and MUS 4400 will substitute for 4 s.h. of major instrument or voice, 1000 level, and major instrument or voice, 3000 level.

**In the piano performance and piano pedagogy emphases, keyboard competency is demonstrated through successful completion of the sophomore examination.

MUSIC

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (483)

Sem. Hours

MINOR REQUIREMENTS 23

MUS 1000	Recital Attendance	0
MUS 1111	Theory I	3
MUS 1112	Theory II	3
MUS 1121	Aural Training I	1
MUS 1122	Aural Training II	1
MUS 3212	Music History 1800-Present	3
MUS 2221	Intro. to Music Literature I, 2 or	
MUS 2222	Intro. to Music Literature II, 2	2
Major instrument or voice		4
Major large ensemble		4
Departmentally approved electives		2

MUSIC EDUCATION

Major, B.M.E. Degree

The graduate with a Bachelor of Music Education degree will use the knowledge and skills obtained in the program to:

- Understand the basic elements and structures of music history, theory, and performance literature.
- Understand music's relationship to the other arts, and how the arts relate to mankind.
- Use technology in appropriate music applications.
- Communicate the intellectual (thinking), emotional, and aesthetic (valuing) qualities of music to a diverse society.
- Teach essential elements of music and music performance at elementary and secondary school levels.
- Perform with appropriate tone, technique, and musicality in his/her primary performance medium.
- Demonstrate functional piano performance skills.

INSTRUMENTAL

Major Option, B.M.E. Degree

(45-440)

Certification to teach instrumental music in grades K-12.

Sem. Hours

MAJOR REQUIREMENTS 59.5-63.5

MUS 1000	Recital Attendance	0
MUS 1111	Theory I	3
MUS 1112	Theory II	3
MUS 1121	Aural Training I	1
MUS 1122	Aural Training II	1
MUS 2111	Theory III	3
MUS 2112	Theory IV	3
MUS 2121	Aural Training III	1
MUS 2122	Aural Training IV	1
MUS 4115	Instrumentation	3
MUS 3211	Music History to 1800	3
MUS 3212	Music History 1800-Present	3
MUS 3306	Mth. of Tchg. Instrumental Music	3
MUS 3308	Marching Band Techniques	1
MUS 4381	Jazz Pedagogy	2
MUS 2300	Fundamentals of Conducting	2
MUS 3320	Instr. Conducting & Rehearsal Techniques	3
MUS 1601	Voice Class I	1
MUS 1701	String Class	2
MUS 2801	Woodwind Class I	1
MUS 2802	Woodwind Class II	1
MUS 2901	Brass Class I	1
MUS 2902	Brass Class II	1
MUS 2950	Percussion Class	1
Major instrument, 1000 level		4
Major instrument, 3000 level		4.5
Major large instrumental ensemble		7

Wind/Percussion students must complete seven (7) separate semesters of major large instrumental ensemble to include:

- 3 semester hours in MUS 1005,
 - 2 semester hours in MUS 3000 and/or MUS 1010, &
 - 2 semester hours in one of the following:
 MUS 1005 (an additional 1.5 hours maximum), MUS 1010, MUS 1081, MUS 3000, MUS 3025, or MUS 3081.
- String students must complete six (6) semesters of MUS 3025 and one (1) semester of MUS 1907 (String Ensemble).

Piano 0-4

Keyboard majors choose band or orchestra for major ensemble. Keyboard competency is demonstrated by passing MUS 2502 (Piano Class IV) with a "B" or better and an additional hour of piano, or passing the piano proficiency exam.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MUS 3211 and MUS 3212 are allowed to fulfill 3 s.h. of Div. II C; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B 42

Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
MUS 1225	Div. II D (required)	3
PSY 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. of Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) 28

MINIMUM TOTAL 129.5

For additional certification to teach vocal music with the INSTRUMENTAL Major Option, B.M.E. Degree, see the department chair.

VOCAL

Major Option, B.M.E. Degree

Certification to teach vocal music in grades K-12. (45-441)

Sem. Hours

MAJOR REQUIREMENTS 60.5-64.5

MUS 1000	Recital Attendance	0
MUS 1111	Theory I	3
MUS 1112	Theory II	3
MUS 1121	Aural Training I	1
MUS 1122	Aural Training II	1
MUS 2111	Theory III	3
MUS 2112	Theory IV	3
MUS 2121	Aural Training III	1
MUS 2122	Aural Training IV	1
MUS 4130	Choral Arranging	2
MUS 2221	Introduction to Music Literature I	2
MUS 2222	Introduction to Music Literature II	2
MUS 3211	Music History to 1800	3
MUS 3212	Music History 1800-Present	3
MUS 4230	Choral Literature	2
MUS 3305	Meth. Tchg. Elem. Schl. Music	3
MUS 4320	Meth. Tchg. Middle Schl. Music	2
MUS 2300	Fundamentals of Conducting	2
MUS 3310	Choral Conducting	2
MUS 3315	Choral Techniques	2
MUS 1610	Voice I	4
MUS 2632	Diction for Singers	3
MUS 3610	Voice II	4.5
MUS 1615	Opera Theatre I, or	
MUS 1620	Musical Theatre Practicum I,	1
Large vocal ensemble		7
Piano		0-4

A student who wishes this degree and elects a keyboard performing emphasis must have 4 hours of keyboard (1000 level), 4.5 hours of keyboard (3000 level), and 5 hours of voice or voice class in lieu of the required 8.5 hours of voice.

Keyboard competency is demonstrated by passing MUS 2502 (Piano Class IV) with a "B" or better and an additional hour of piano, or passing the piano proficiency exam.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MUS 3211 and MUS 3212 are allowed to fulfill 3 s.h. of Div. II C; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B 42

Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
MUS 1225	Div. II D (required)	3
PSY 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) 28

MINIMUM TOTAL 130.5

For additional certification to teach instrumental music with the VOCAL Major Option, B.M.E. Degree, see the department chair.

General

MUS 1000 Recital Attendance (0) Laboratory in music listening and musical performance. Attendance at a designated number of department sponsored or approved concerts. Enrollment for pass-fail only.

MUS 1005 Marching Band (1) Appears at all home games, one away game, and frequently at professional football games. Membership selected by audition. *May be repeated.*

MUS 1008 Campus Band (1) A concert band open to any university student who wishes to continue band performance which explores a wide range of original and transcribed works. Music majors may gain experience on a secondary instrument. Membership selected by audition. *May be repeated.*

MUS 1010 Symphonic Band (1) Open without audition to any University student interested in band. Instrumental music majors may gain experience on a secondary instrument in the Symphonic Band. *May be repeated.*

MUS 1055 Collegiate Choir (1) A large mixed chorus which sings music representative of the finest in sacred and secular choral literature. Membership selected by audition. *May be repeated.*

MUS 1081 Jazz Ensemble 2 (1) Study and performance of traditional and progressive jazz ensemble music. Membership selected by audition. *May be repeated.*

MUS 1085 Jazz-Rock Combo (1) Study and performance of traditional and progressive jazz-rock music in a small group format. Membership selected by audition. *May be repeated.*

Participation in small ensembles is strongly recommended. These are ensembles with flexible instrumentation designed to promote musical independence and discriminating listening through performance of a wide variety of chamber music. Open to any University student by music faculty permission. *May be repeated.*

MUS 1095 Keyboard Ensemble (1)

MUS 1097 String Ensemble (1)

MUS 1098 Chamber Winds and Percussion (1)

MUS 3000 Symphonic Wind Ensemble (1) A select band which performs original band literature and transcriptions of many famous works at frequent appearances. Membership selected by audition. *May be repeated.*

MUS 3025 University Symphony Orchestra (1) Performs concerts of standard and contemporary literature. Members selected by audition. *May be repeated.*

MUS 3050 University Concert Choir (1) A select choir which performs the best of choral literature in concert. Membership selected by audition. *May be repeated.*

MUS 3060 Junior Recital (1) One-half of a public recital. Prerequisite: consent of instructor.

MUS 3070 Chamber Singers (1) A select small chamber choir of mixed voices that performs vocal chamber music from all historical periods. Membership selected by audition. *May be repeated.*

MUS 3075 Madrigal Singers (1) A select performing group specializing in Renaissance and twentieth century madrigal singing. Membership selected by audition. *May be repeated.*

MUS 3077 Vocal Jazz Ensemble (1) A select ensemble specializing in vocal jazz arrangements of music from all styles. Membership is by audition. *May be repeated.*

MUS 3081 Jazz Ensemble 1 (1) A select ensemble which performs original jazz ensemble literature representing traditional as well as the most current forms of jazz. Membership selected by audition. *May be repeated.*

MUS 3088 Guitar Ensemble (1) An ensemble that studies and performs a wide range of music written for multiple guitars. Membership selected by audition. *May be repeated.*

MUS 3095 Piano Accompanying Practicum (1) Instruction and supervised practical experience in piano accompanying on an individual basis. *May be repeated.* Prerequisite: MUS 2515.

MUS 4000 Special Projects in Music (0-3) *May be repeated for a maximum of 6 semester hours.*

MUS 4040 Music Business Practices (3) Covers copyright, performance rights, client management and interaction. Prerequisite: ECON 1010.

MUS 4060 Senior Recital* (1-2) Full length public recital. Prerequisite: consent of instructor. *Not available for graduate credit.

Music Theory

MUS 1100 Fundamentals of Music (3) Basic theory: notation, scales, chords, terminology. Application to simple rhythm, chording, and melody instruments and piano.

MUS 1111 Theory I (3) Basic materials: notation, rhythm and meter, scales, intervals, triads, primary and secondary harmony, V7, phrase, period, cadence, the concept of tonality, and related analysis.

Prerequisite: Admission by examination or completion of MUS 1100 with grade of C or better. Corequisite: MUS 1121 for music majors and minors.

MUS 1112 Theory II (3) Melodic and harmonic structure and embellishment, nonharmonic tones, consonance and dissonance principles, simple two-part counterpoint, part writing, harmonic progression, secondary dominants, regions, and modulation. Prerequisite: MUS 1111. Corequisite: MUS 1122.

MUS 1121 Aural Training I (1) Basic listening and aural awareness skills: rhythm and pitch patterning, scales, intervals, triads, V7, primary triads, harmonic dictation, melodic memory, melodic dictation, and sight singing. Prerequisite: Admission by examination or completion of MUS 1100 with grade of C or better. Corequisite: MUS 1111

MUS 1122 Aural Training II (1) Continuation of development of aural skills introduced in MUS 1121 plus two-part dictation, nonharmonic tones, secondary triads, secondary dominants, and modulation. Prerequisite: MUS 1121. Corequisite: MUS 1112.

MUS 2111 Theory III (3) Continuation of the materials and organization of music: modality, modulation, seventh chords, chromatic harmony, contrapuntal procedures, and form. Prerequisite: MUS 1112. Corequisite: MUS 2121.

MUS 2112 Theory IV (3) Continuation of MUS 2111. Analytical and compositional methods of twentieth and twenty-first century music. Prerequisite: MUS 2111. Corequisite: MUS 2122.

MUS 2121 Aural Training III (1) Continuation of the development of aural skills in MUS 1122 applied to sight singing and aural perception of rhythm, melody, and chromatic harmony. Prerequisite: MUS 1122. Corequisite: MUS 2111.

MUS 2122 Aural Training IV (1) Continuation of the development of aural skills in MUS 2121 including rhythmic, melodic, and harmonic techniques from the twentieth century. Prerequisite: MUS 2121. Corequisite: MUS 2112.

MUS 2141 Composition I (3) Techniques of twentieth century composition through projects in smaller forms. Electronic music studio techniques. Aural and visual analysis of twentieth century music. *May be repeated for a maximum of 6 semester hours.* Prerequisites: MUS 1112 and MUS 1122.

MUS 2180 Jazz Improvisation I (2) The techniques and materials of jazz improvisation at the introductory level. Scales, chords, phrasing, articulation, and guided listening. Performance mandatory. Prerequisite: MUS 1112 and MUS 1122.

MUS 2181 Jazz Improvisation II (2) A continuation of MUS 2180. Advanced concepts in style and form. Transcription of recorded solos using altered scales and chords and the development of style. Performance mandatory. Prerequisite: MUS 2180.

MUS 3141 Composition II (3) Continuation of MUS 2141 through projects of small and medium dimensions adapted to needs and interests of the student. *May be repeated for a maximum of 12 semester hours.* Prerequisite: MUS 2141.

MUS 4101 Counterpoint I (3) Eighteenth century style in two parts: melodic structure, resolution of melodic and harmonic contrapuntal dissonances, canon, and the writing of original two-part inventions. Prerequisites: MUS 2112 and MUS 2122.

MUS 4115 Instrumentation (3) Characteristics of instruments normally found in band and orchestra. Short writing projects for instrumental choirs, full band and orchestra. Score study. Prerequisites: MUS 2112 and MUS 2122.

MUS 4125 Form and Analysis (3) Small song forms, rondos, variations and sonata forms, with emphasis on aural analysis and score readings. Prerequisites: MUS 2112 and MUS 2122 or concurrently.

MUS 4130 Choral Arranging (2) Practical arrangements for various choral ensembles for school organizations and church choirs. Prerequisites: MUS 2112 and MUS 2122 or concurrently.

MUS 4181 Advanced Jazz Improvisation (2) Advanced study of jazz improvisation techniques in applied, private lessons. *May be repeated.* Prerequisite: MUS 2181 or consent of instructor.

MUS 4185 Jazz-Commercial Arranging (3) Characteristics of instruments normally found in jazz ensemble and commercial performing groups. Emphasis on style and voicing problems in these idioms. Writing projects for combo and jazz ensemble. Score study. Prerequisites: MUS 2112 and MUS 2122.

MUS 4186 Advanced Jazz-Commercial Arranging (2) Private lessons in composition, arranging, score study, and analysis for various jazz or commercial ensembles based on individual student needs and interests. *May be repeated.* Prerequisite: MUS 4185.

MUS 4190 Electronic Music Composition (3) Composition of electronic music in popular and artistic styles. Technical principles, history of the genre, and aesthetic considerations of electronic music. Prerequisite: MUS 1112.

Music History and Literature

MUS 1210 Experiencing Music (3) An introduction to important musical masterpieces with emphasis on the knowledge and skills involved in perceptive listening. Prerequisite: no previous musical experience is necessary.

MUS 1225 Music of the World's Cultures (3) The fusion of western and non-western musical cultures through their folk, popular, and classical musics.

MUS 1281 History and Development of Jazz (3) A survey of the evolution in jazz music in the United States. Includes discussion of the styles and characteristics of each period of jazz history and the contributions of influential groups and individuals.

MUS 2221 Introduction to Music Literature I (2) An introduction to the principal genres of instrumental music with emphasis on representative works from the standard repertoire. A basic knowledge of instrumental music is assumed. Prerequisite: MUS 1112 or consent.

MUS 2222 Introduction to Music Literature II (2) An introduction to the principal genres of vocal music including oratorio, church music, opera, and art songs. A basic knowledge of vocal music is assumed. Prerequisite: MUS 1112 or consent.

MUS 3211 Music History to 1800 (3) Early history of music including the Medieval, Renaissance, Baroque, and Classic eras. For music majors and minors only. Prerequisite: nonmusic majors only with consent.

MUS 3212 Music History 1800-Present (3) Music of Beethoven, the Romantic era, and the twentieth century. For music majors and minors only. Prerequisite: nonmusic majors only with consent.

MUS 4201 Piano Literature Through Beethoven (2) Survey and analysis of music written for clavichord, harpsichord, and piano through the music of Beethoven. Prerequisite: four semesters of MUS 1510 or equivalent.

MUS 4202 Piano Literature From the Romantic Era to the Present (2) Survey and analysis of music written for piano from the Romantic era through the present. Prerequisite: four semesters of MUS 1510 or equivalent.

MUS 4230 Choral Literature (2) Music literature for all choral groups with emphasis on the performance style and interpretative problems of the choral conductor. Prerequisite: MUS 2221.

MUS 4235 Vocal Literature (3) A survey of solo literature for all voice classifications with emphasis on the development of art song in the Italian, British, German, French, and American repertoires. Prerequisite: MUS 2222 or consent of instructor.

MUS 4240 String Instrument Literature and Pedagogy (2) A survey of literature, instructional materials, and pedagogy of the various string instruments. Prerequisite: 12 semester hours credit on major instrument.

MUS 4245 Woodwind Instrument Literature and Pedagogy (2) A survey of literature, instructional materials, and pedagogy of woodwind instruments. Prerequisite: 12 semester hours credit on major instrument.

MUS 4250 Brass Instrument Literature and Pedagogy (2) A survey of literature, instructional materials, and pedagogy of brass instruments. Prerequisite: 12 semester hours credit on major instrument.

MUS 4255 Percussion Literature and Pedagogy (2) A survey of literature, instructional materials, and pedagogy of percussion instruments. Prerequisites: 12 semester hours credit on major instrument.

Music Education and Conducting

MUS 2300 Fundamentals of Conducting (2) An introductory course in conducting including baton technique and basic score preparation. Prerequisites: MUS 1112 and MUS 1122 or concurrently.

MUS 3301 Music for Elementary Schools (2) The study of music fundamentals, methods and materials appropriate for teaching music to children K-6. Developing skills in listening, singing, playing percussion and tonal instruments. Planning and evaluating learning experiences.

MUS 3305 Methods of Teaching Elementary School Music (3) Musical growth and materials designed for music majors who are preparing to teach vocal music in the elementary schools. Prerequisite: MUS 1112 and admission to the Teacher Education Program.

MUS 3306 Methods of Teaching Instrumental Music (2-3) Materials, techniques, and organization of the elementary and middle school instrumental program designed for music majors who are preparing to teach instrumental music. Includes an introduction to early childhood choral literature and musical instruments. Prerequisite: MUS 1112 and admission to the Teacher Education Program.

MUS 3308 Marching Band Techniques (1) The various techniques of pageantry, precision drill, arranging, charting and planning, as well as problems of organization, administration and public relations.

MUS 3310 Choral Conducting (2) Techniques of choral conducting, rehearsal procedures, and basic choral repertoire. Prerequisite: MUS 2300.

MUS 3315 Choral Techniques (2) Aspects of choral singing, including the human voice and choral tone, choral diction, organization, rehearsal procedures, and basic choral repertoire. Prerequisites: MUS 3310 or concurrently, successful demonstration of keyboard competency and admission to the Teacher Education Program.

MUS 3320 Instrumental Conducting and Rehearsal Techniques (3) Advanced techniques of conducting instrumental ensembles, development of visual/aural discrimination skills for diagnosing and correcting problems in performance; and selection of appropriate methods and literature. Prerequisites: MUS 2300, successful demonstration of keyboard competency and admission to the Teacher Education Program.

MUS 4310 Methods of Teaching Music* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with MUS 4350 during the Professional Semester. *Not available for graduate credit.

MUS 4320 Methods of Teaching Middle School Music (2) Objectives, materials, subject matter and problems in the teaching of vocal and general music in the junior high school. Prerequisite: MUS 3305 or MUS 3306 or consent of instructor.

MUS 4350 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with MUS 4310 during the Professional Semester. *Not available for graduate credit.

MUS 4370 Band Instrument Repair (2) A study and practice of band instrument maintenance and repair techniques. Prerequisite: one semester each of woodwind and brass study, or one year of teaching music in public schools.

MUS 4381 Jazz Pedagogy (2) Techniques, systems and materials for teaching of jazz ensembles and jazz improvisation. Supervised conducting experience with a University jazz ensemble. Prerequisite: MUS 2300 and successful completion of the piano proficiency requirement.

Music Technology

MUS 1400 Computer Music Notation (0.5) Introduction to notating music with computer software.

MUS 1410 Introduction to Sound Reinforcement (0.5) Basic sound reinforcement techniques, including simple system design, setup, and operation.

MUS 1420 Concert Recording (0.5) Basic concert recording techniques and equipment. Microphone placement and recorder operation.

MUS 1430 Introduction to Audio Production (0.5) Basic audio editing, mixing, and mastering techniques and equipment. Manipulation of audio to craft finished recordings.

MUS 1440 Introduction to MIDI (0.5) Overview of MIDI systems. Sequencing, system setup, and the MIDI specification.

MUS 2400 Music Technology I (4) An introduction to the theory and usage of audio recording/reproduction components as well as the application of informed musical judgment to the music production process. Laboratory included. Prerequisites: completion of MUS 1111, and MUS 1121 with a grade of C or better, as well as full admission into the Bachelor of Music degree program. An additional fee is associated with this course.

MUS 2410 Music Technology II (4) Intermediate audio production focusing on computer-based recording and editing, with continued refinement of student ability to bring informed musical judgment to the mixing process. Laboratory included. Prerequisites: completion of MUS 2400 and MUS 1122 with a grade of C or better. An additional fee is associated with this course.

MUS 2420 Technology Practicum (0) Practical experience in audio recording, live sound reinforcement, and audio engineering facility management. *May be repeated.* Prerequisite: MUS 2400 or concurrently.

MUS 3400 Music Technology III (5) Advanced audio production and theory. Includes advanced work in musical approaches to recording and editing, as well as study of recording studio design, studio maintenance and acoustics. Laboratory included. Prerequisites: completion of MUS 2410 and MUS 2121 with a grade of C or better, as well as successful completion of the applied area sophomore exam and the Music Technology III entrance exam. An additional fee is associated with this course.

MUS 4400 Music Technology IV* (5) Advanced digital audio theory, advanced computer-based audio recording and editing, audio-for-video, electroacoustic composition, and historic origins of computer and electroacoustic music. Laboratory included. Prerequisites: completion of MUS 3400 and MUS 2122 with a grade of C or better. *Not available for graduate credit. An additional fee is associated with this course.

MUS 4420 Advanced Music Technology Practicum (0) Advanced practical experience in audio recording and production, live sound reinforcement, and audio engineering facility management and maintenance. *May be repeated.* Prerequisite: MUS 3400 or concurrently or permission of instructor. *Not available for graduate credit.

MUS 4450 Internship in Music Technology (1-6) Field application of music industry theories and practices in professional music production or recording arts fields. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of the music technology coordinator.

Piano and Organ

MUS 1501 Piano Class I (1) Study of the piano, especially for adult students who have had no previous training.

MUS 1502 Piano Class II (1) A continuation of MUS 1501. Prerequisite: MUS 1501.

MUS 1507 Secondary Keyboard Lessons (1) Private lesson study in any keyboard instrument listed in this catalog. Does not count for any music major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. *May be repeated.*

MUS 1510 Piano I (1) Technical study and easier compositions selected from the various eras of keyboard literature. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.*
Prerequisite: Successful completion of entrance examination required for initial enrollment.

MUS 1520 Organ I (1) Manual and pedal study, elementary registration and specification; Bach short preludes and fugues, chorale preludes, etc. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: Successful completion of entrance examination required for initial enrollment.

MUS 2501 Piano Class III (1) A continuation of MUS 1502 with additional emphasis on functional keyboard skills. *May be repeated.*
Prerequisite: MUS 1502.

MUS 2502 Piano Class IV (1) Emphasis on specific piano proficiency skills for vocal and instrumental students preparing for a teaching career. *May be repeated.* Prerequisite: MUS 2501 or MUS 1510 or permission of instructor.

MUS 2515 Piano Accompanying (2) A study of and practical experience in piano accompanying in various musical mediums, using music from several styles and historical eras. Prerequisite: one year of college level private piano or consent of instructor.

MUS 3510 Piano II (1.5) Technical study and moderately difficult compositions selected from the various eras of keyboard literature. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: successful completion of lower level credit as determined by departmental examination.

MUS 3520 Organ II (1.5) Continued manual and pedal study; Bach preludes and fugues; selections from advanced classic and modern organ works; church playing and accompaniments. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.*
Prerequisite: successful completion of lower level credit as determined by departmental examination.

MUS 4511 Piano Pedagogy I – The Beginner (3) Goals, methods, and materials for individual and class instruction of beginning piano students. Includes practice teaching and observation. Prerequisite: Two semesters of MUS 1510 or equivalent.

MUS 4512 Piano Pedagogy II – The Intermediate Student (3) Goals, methods, and materials for teaching intermediate piano students. Includes practice teaching and observation. Prerequisite: Two semesters of MUS 1510 or equivalent.

MUS 4513 Piano Pedagogy III – The Advanced Student (3) Goals, methods, and materials of advanced piano teaching. Includes practice teaching and observation. Prerequisite: Two semesters of MUS 1510 or equivalent.

MUS 4514 Piano Pedagogy IV – Seminar (3) Intensive individual study in piano pedagogy designed to improve the student's understanding of a selected area of interest. Prerequisite: MUS 4511 or MUS 4512 or MUS 4513 or the equivalent.

MUS 4515 Practice Teaching in Piano (1.5) Supervised teaching of piano students. Course must be repeated. Prerequisites: MUS 4511 and MUS 4512 or the equivalent.

Voice

MUS 1601 Voice Class I (1) Breathing exercises, diction, stage deportment, acquaintance with familiar vocal literature, and experience in solo and duet singing. Designed for beginning voice students. Prerequisite: demonstrated ability to read music.

MUS 1602 Voice Class II (2) Instruction in breathing, resonance, diction, musicality, performance skills, and the nature of the vocal instrument, using solo song and duet literature in English and Italian. Prerequisite: one semester of MUS 1610, or MUS 1601.

MUS 1607 Secondary Voice Lessons (1) Private lesson study in voice. Does not count as credit for any music major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. *May be repeated.*

MUS 1610 Voice I (1) Breath control; technical exercises represented by Sieber, Vaccai, and other specified methods. Early Italian songs. English songs of medium difficulty, and other repertoire suggested by the instructor. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: Successful completion of entrance examination required for initial enrollment.

MUS 1615 Opera Theatre (1-2) Production of scenes from operatic repertoire. *May be repeated for a maximum of 4 semester hours.*

MUS 1620 Musical Theatre Practicum (1-2) Rehearsal and performance of Musical Theatre repertoire. *May be repeated for a maximum of 4 semester hours.* Prerequisite: entrance by audition.

MUS 2632 Diction for Singers (3) Systematic instruction in singing English, French, German, and Italian art songs emphasizing clear, correct, and expressive diction. Prerequisite: MUS 1610 or consent of instructor.

MUS 3610 Voice II (1.5) Advanced technical exercises, modern art songs; the great Lieder composers; French art songs; and representative repertoire from opera and oratorio. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: successful completion of lower level credit as determined by departmental examination.

MUS 4600 Vocal Pedagogy (2) For prospective singing teachers. Includes study of the physiology of the vocal instrument, the techniques of singing production, goals and materials, teaching techniques, and analysis of vocal problems. Observation of master teachers, and supervised teaching will be required. Prerequisite: three years of vocal training.

String Instruments

MUS 1701 String Class (1) A laboratory course in the fundamentals of playing and teaching string instruments. *May be repeated for a maximum of 2 semester hours.* Two different string instruments will be studied in each semester.

MUS 1703 Folk Guitar Techniques (2) Beginning instruction in folk guitar performance intended to equip the student with the skills required to harmonize folk melodies.

MUS 1707 Secondary String Lessons (1) Private lesson study in any string instrument listed in this catalog. Does not count for any music major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. *May be repeated.*

The course description is applicable for all applied string instruments courses: easy technical studies, easy standard sonatas, concertos, and short solos. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: Successful completion of entrance examination required for initial enrollment.

MUS 1710 Violin I (1)

MUS 1715 Viola I (1)

MUS 1720 Cello I (1)

MUS 1725 String Bass I (1)

MUS 1760 Guitar I (1) Technical studies, standard solo literature from all style periods. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: Successful completion of entrance examination required for initial enrollment.

The course description is applicable for the following string instruments courses: advanced technical studies, advanced standard sonatas, concertos, and short solos. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: successful completion of lower level credit as determined by departmental examination.

MUS 3710 Violin II (1.5)

MUS 3715 Viola II (1.5)

MUS 3720 Cello II (1.5)

MUS 3725 String Bass II (1.5)

MUS 3760 Guitar II (1.5) Advanced technical studies, advanced standard sonatas, concertos, and short solos. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: successful completion of lower level credit as determined by departmental examination.

Woodwind Instruments

MUS 1807 Secondary Woodwind Lessons (1) Private lesson study in any woodwind instrument listed in this catalog. Does not count for any music major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. *May be repeated.*

The course description is applicable for the following woodwind instruments courses: breath control; fundamentals of mechanism, embouchure; proper tonal color; technical exercises; easy solos; supervised chamber ensemble rehearsals. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: Successful completion of entrance examination required for initial enrollment.

MUS 1810 Flute I (1)

MUS 1815 Clarinet I (1)

MUS 1820 Oboe I (1)

MUS 1825 Saxophone I (1)

MUS 1830 Bassoon I (1)

MUS 2801 Woodwind Class I (1) A laboratory course in the fundamentals of playing and teaching the clarinet and the saxophone.

MUS 2802 Woodwind Class II (1) A laboratory course in the fundamentals of playing and teaching the oboe, the bassoon, and the flute.

The course description is applicable for all applied woodwind instruments courses: advanced technical studies; standard solos; chamber ensemble playing. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.*

Prerequisite: successful completion of lower level credit as determined by departmental examination.

MUS 3810 Flute II (1.5)

MUS 3815 Clarinet II (1.5)

MUS 3820 Oboe II (1.5)

MUS 3825 Saxophone II (1.5)

MUS 3830 Bassoon II (1.5)

Brass and Percussion Instruments

MUS 1907 Secondary Brass and Percussion Lessons (1) Private lesson study in any brass instrument listed in this catalog or in percussion. Does not count for any major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. *May be repeated.*

The course description is applicable for the following brass instruments courses: breath control; fundamentals of mechanism, embouchure; proper tonal color; technical exercises; easy solos; supervised chamber ensemble rehearsals. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: Successful completion of entrance examination required for initial enrollment.

MUS 1910 Trumpet I (1)

MUS 1915 French Horn I (1)

MUS 1920 Trombone I (1)

MUS 1925 Baritone Horn I (1)

MUS 1930 Tuba I (1)

MUS 1960 Percussion I (1) Fundamental skills in rudimental and concert snare drum techniques. Study of the keyboard percussion instruments and an introduction to the timpani. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: Successful completion of entrance examination required for initial enrollment.

MUS 2901 Brass Class I (1) A laboratory course in the fundamentals of playing and teaching the trumpet and French horn.

MUS 2902 Brass Class II (1) A laboratory class in the fundamentals of playing and teaching the baritone horn, the trombone, and the tuba.

MUS 2950 Percussion Class (1) A laboratory course in the basic techniques of playing and teaching the instruments of percussion.

The course description is applicable for the following applied brass instruments courses: advanced technical studies; standard solos; chamber ensemble playing. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: successful completion of lower level credit as determined by departmental examination.

MUS 3910 Trumpet II (1.5)

MUS 3915 French Horn II (1.5)

MUS 3920 Trombone II (1.5)

MUS 3925 Baritone Horn II (1.5)

MUS 3930 Tuba II (1.5)

MUS 3960 Percussion II (1.5) Advanced study of snare drum, keyboard, percussion, and timpani, as well as an emphasis in performance literature. In addition to weekly lessons, attendance at biweekly studio classes is required. *May be repeated.* Prerequisite: successful completion of lower level credit as determined by departmental examination.

Political Science and Geography

Political Science

POLITICAL SCIENCE

Major, Bachelor of Arts Degree
(42-425)

The graduate with a Bachelor of Arts degree in Political Science will use the knowledge and skills obtained in the program to:

- Understand individual rights and responsibilities in a democratic system.
- Understand and explain the complexities of politics in an international community.
- Comprehend alternative perspectives on political values and behavior, political cultures, institutions, policy making, theory, jurisprudence, and civil liberties and rights.
- Think critically and to construct logical arguments concerning institutions and processes of government and contemporary public policy issues.
- Communicate effectively about politics in both written and oral forms.
- Prepare for successful careers in public, private and non-profit service sector.
- Qualify for post-graduate education.

Sem. Hours

MAJOR REQUIREMENTS 33

POLS 1500	Introduction to Politics	3
POLS 1510	American Government	3
POLS 2540	Survey of Political Theory	3
POLS 3560	Research Methods in Pol. Sci.	3

Electives in political science 12

Students must take one class from each of the three (3) areas not chosen for their area of emphasis.

POLS 4590, 4591, 4592 and 1244 do not fulfill this requirement.

Students must earn twelve (12) hours of upper level (3000/4000) credit in their major and thirty (30) hours overall. Choose major electives accordingly.

Select from one of the following areas of emphasis. 9

Area 1 American Politics

POLS 2511	State Government	3
POLS 2550	Political Parties & Interest Groups	3
POLS 2580	Public Law & Judicial Process	3
POLS 3550	Public Opinion & Mass Media	3
POLS 4511	Public Policy	3
POLS 4552	Legislative Politics	3
POLS 4555	The American Presidency	3
POLS 4570	Public Administration	3
POLS 4571	Municipal Administration	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6
POLS 4592	Problems in National, State or Local Government	1-3

Area 2 Public Law and Theory

POLS 2580	Public Law & Judicial Process	3
POLS 3541	Contemporary Political Theory	3
POLS 3551	Race & Ethnic Politics in U.S.	3
POLS 4530	International Law	3
POLS 4580	American Constitutional Law	3
POLS 4581	Civil Rights & Liberties	3
POLS 4582	Trial Advocacy	3
POLS 4583	First Amendment	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6

Area 3 Comparative Politics

POLS 2520	Comparative Gov. & Politics	3
POLS 3520	Asian Gov. & Politics	3
POLS 3521	Latin American Gov. & Politics	3
POLS 3522	Modern East Asia	3
POLS 3523	Modern Sub-Saharan Africa	3
POLS 3553	Women & Politics	3

POLS 4511	Public Policy	3
POLS 4520	Prin. of International Development	3
POLS 4521	Culture & Politics of the Middle East	3
POLS 4550	The European Union	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6

Area 4 International Relations

POLS 1244	Workshop in Political Science	1-3
POLS 2530	International Relations	3
POLS 3530	International Organizations	3
POLS 3541	Contemporary Political Theory	3
POLS 4520	Prin. of International Development	3
POLS 4530	International Law	3
POLS 4531	American Foreign Policy	3
POLS 4532	International Relations of East Asia	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6

GENERAL EDUCATION REQUIREMENTS (page 41) POLS 1500 or POLS 1510 fulfills 3 s.h. in Div. II B 42

MODERN LANGUAGE REQUIREMENT Refer to Bachelor's Degree Requirements section for fulfillment options. 3-9

FREE ELECTIVES 36-42

MINIMUM TOTAL 120

POLITICAL SCIENCE

Major, Bachelor of Science Degree
(43-426)

The graduate with a Bachelor of Science degree in Political Science will use the knowledge and skills obtained in the program to:

- Understand individual rights and responsibilities in a democratic system.
- Understand and explain the complexities of politics in an international community.
- Comprehend alternative perspectives on political values and behavior, political cultures, institutions, policy making, theory, jurisprudence, and civil liberties and rights.
- Think critically and to construct logical arguments concerning institutions and processes of government and contemporary public policy issues.
- Communicate effectively about politics in both written and oral forms.
- Prepare for successful careers in public, private and non-profit service sector.
- Qualify for post-graduate education.

Sem. Hours

MAJOR REQUIREMENTS 33

POLS 1500	Introduction to Politics	3
POLS 1510	American Government	3
POLS 2540	Survey of Political Theory	3
POLS 3560	Research Methods in Pol. Sci.	3

Electives in political science 12

Students must take one class from each of the three (3) areas not chosen for their area of concentration.

POLS 4590, 4591, 4592 and 1244 do not fulfill this requirement.

Students must earn twelve (12) hours of upper level (3000/4000) credit in their major and thirty (30) hours overall. Choose major electives accordingly.

Electives from one of the following areas 9

Area 1 American Politics

POLS 2511	State Government	3
POLS 2550	Political Parties & Interest Groups	3
POLS 2580	Public Law & Judicial Process	3
POLS 3550	Public Opinion & Mass Media	3
POLS 4511	Public Policy	3
POLS 4552	Legislative Politics	3
POLS 4555	The American Presidency	3
POLS 4570	Public Administration	3
POLS 4571	Municipal Administration	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6

POLS 4592	Problems in National, State or Local Government	1-3
Area 2 Public Law and Theory		
POLS 2580	Public Law & Judicial Process	3
POLS 3541	Contemporary Political Theory	3
POLS 3551	Race & Ethnic Politics in U.S.	3
POLS 4530	International Law	3
POLS 4580	American Constitutional Law	3
POLS 4581	Civil Rights & Liberties	3
POLS 4582	Trial Advocacy	3
POLS 4583	First Amendment	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6
Area 3 Comparative Politics		
POLS 2520	Comparative Gov. & Politics	3
POLS 3520	Asian Gov. & Politics	3
POLS 3521	Latin American Gov. & Politics	3
POLS 3522	Modern East Asia	3
POLS 3523	Modern Sub-Saharan Africa	3
POLS 3553	Women & Politics	3
POLS 4511	Public Policy	3
POLS 4520	Prin. of International Development	3
POLS 4521	Culture & Politics of the Middle East	3
POLS 4550	The European Union	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6
Area 4 International Relations		
POLS 1244	Workshop in Political Science	1-3
POLS 2530	International Relations	3
POLS 3530	International Organizations	3
POLS 3541	Contemporary Political Theory	3
POLS 4520	Prin. of International Development	3
POLS 4530	International Law	3
POLS 4531	American Foreign Policy	3
POLS 4532	International Relations of East Asia	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6
GENERAL EDUCATION REQUIREMENTS (page 41) POLS 1500 or POLS 1510 fulfills 3 s.h. in Div. II B		
FREE ELECTIVES		42
MINIMUM TOTAL		120

POLITICAL SCIENCE

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (427)

MINOR REQUIREMENTS		21	Sem. Hours
POLS 1500	Introduction to Politics	3	
POLS 1510	American Government	3	
POLS 2540	Survey of Political Theory	3	
One course from each of the following areas		12	
Area 1 American Politics			
POLS 2511	State Government	3	
POLS 2550	Political Parties & Interest Groups	3	
POLS 2580	Public Law & Judicial Process	3	
POLS 3550	Public Opinion & Mass Media	3	
POLS 4511	Public Policy	3	
POLS 4552	Legislative Politics	3	
POLS 4555	The American Presidency	3	
POLS 4570	Public Administration	3	
POLS 4571	Municipal Administration	3	
POLS 4590	Special Projects in Political Science	1-6	
POLS 4591	Internship in Political Science	1-6	
POLS 4592	Problems in National, State or Local Government	1-3	
Area 2 Public Law and Theory			
POLS 2580	Public Law & Judicial Process	3	
POLS 3541	Contemporary Political Theory	3	

POLS 3551	Race & Ethnic Politics in U.S.	3
POLS 4530	International Law	3
POLS 4580	American Constitutional Law	3
POLS 4581	Civil Rights & Liberties	3
POLS 4582	Trial Advocacy	3
POLS 4583	First Amendment	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6
Area 3 Comparative Politics		
POLS 2520	Comparative Gov. & Politics	3
POLS 3520	Asian Gov. & Politics	3
POLS 3521	Latin American Gov. & Politics	3
POLS 3522	Modern East Asia	3
POLS 3523	Modern Sub-Saharan Africa	3
POLS 3553	Women & Politics	3
POLS 4511	Public Policy	3
POLS 4520	Prin. of International Development	3
POLS 4521	Culture & Politics of the Middle East	3
POLS 4550	The European Union	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6
Area 4 International Relations		
POLS 1244	Workshop in Political Science	1-3
POLS 2530	International Relations	3
POLS 3530	International Organizations	3
POLS 3541	Contemporary Political Theory	3
POLS 4520	Prin. of International Development	3
POLS 4530	International Law	3
POLS 4531	American Foreign Policy	3
POLS 4532	International Relations of East Asia	3
POLS 4590	Special Projects in Political Science	1-6
POLS 4591	Internship in Political Science	1-6

GENERAL EDUCATION REQUIREMENTS (page 41) POLS 1500 or POLS 1510 fulfills 3 s.h. in Div. II B

INTERNATIONAL STUDIES

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (489)

	Sem. Hours
MINOR REQUIREMENTS	24
One modern (foreign) language	6
Electives from the following	6
ANTH 4870 Comparative Cultures	3
GEOG 2212 World Geography	3
POLS 2520 Comparative Politics	3
REL 3210 Comparative World Religions	3
COMM 3340 Intercultural Communication, 3 or	
ENGL 4120 Language & Culture, 3	3
Departmentally approved electives from one of the following areas listed below. A listing of courses is available from the Chair of the Department or Director of the International Center	
Additional information about these areas is available at www.ucmo.edu/international	
Area 1 Social Sciences	
Area 2 Generalist: Humanities	
Area 3 East Asia	
Area 4 Latin America	
Area 5 Europe	
Area 6 International Economic or Agri-Business Development	
Area 7 International Tourism	
Area 8 African Studies	
Area 9 International Studies	
Students are required to seek advisement concerning courses taken toward a minor in International Studies from the Director of the International Center.	
GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, if elected GEOG 2212 fulfills 3 s.h. of Div. II B; Modern (foreign) language fulfills 3 s.h. of Div. II C	

IS 1000 Introduction to International Studies (3) An interdisciplinary course highlighting the interconnectedness between the individual, communities, and the global system. Theories of international relations, economics, and law are applied to topics.

IS 3900 Special Projects in International Studies (3) Study, interpretation, and discussion of special topics and problems in international studies.

IS 4900 Directed Readings in International Studies* (3) Readings focused on a specific area of international studies or a current issue that is of particular interest to the student. *Not available for Graduate credit.

IS 4950 Senior Seminar* (3) Examination of current issues in international studies integrated with students' research interests, foreign language proficiencies, and international experiences. *Not available for Graduate credit.

POLS 1244 Workshop in Political Science (3) Provides students with experiential learning opportunities using simulations.

POLS 1500 Introduction to Politics (3) A survey of the determinants defining the relationship of the individual to the political environment and the political system. The primary focus is on the three fundamental levels of politics: the individual, the state, and the international community.

POLS 1510 American Government (3) The nature, philosophical bases, development, functions, structure, and processes of the government and politics of the United States and of Missouri. Emphasis on and analysis of the nature and development of the provisions and principles of the Constitution of the United States and of Missouri.

POLS 2511 State Government (3) Administrative, legislative, and judicial activities of state governments and their relationships to national and local governments with special emphasis on state and local governments in Missouri.

POLS 2520 Comparative Government and Politics (3) Introduction to major forms of government throughout the world.

POLS 2530 International Relations (3) Introduction to international relations with specific focus on the nature and causes of war, conflict resolution, political, social, economic, and military issues in international politics.

POLS 2540 Survey of Political Theory (3) Examines concepts such as justice, civil disobedience, equality, liberty, etc., and how they are defined by major political theorists from Plato to the present.

POLS 2550 Political Parties and Interest Groups (3) The theory, principles, structures, and functions of interest groups and political parties in the American political system.

POLS 2580 Public Law and the Judicial Process (3) Examination of the nature of law, the organization and staffing of courts, judicial policymaking, the Supreme Court's decision-making process, statutory and constitutional interpretation, and the impact of judicial decisions.

POLS 3520 Asian Government and Politics (3) A comparative study of the major political systems of Asia, focusing on political institutions, policy-making, domestic and foreign policy as well as persistent policy issues, challenges and political dynamics.

POLS 3521 Latin American Government and Politics (3) A comparative study of the political system of the Latin American countries.

POLS 3522 Modern East Asia (3) A survey of the cultures, histories, societies, economies, and political systems of the major countries of Asia. Specific focus is on the events and resulting changes within the region during the past century.

POLS 3523 Modern Sub-Saharan Africa (3) A comparative study of development issues in Sub-Saharan Africa. Topics include democratization, political culture, ethnicity and the role of the international community in Africa.

POLS 3530 International Organizations (3) The role of international organizations in international relations and collective security with specific emphasis on the United Nations, the European Union and other regional organizations.

POLS 3541 Contemporary Political Theory (3) Examines recent debates about the meaning of democracy, citizenship, civil society, and community in the contemporary era of increasingly diverse and interconnected nation-states.

POLS 3550 Public Opinion and Mass Media (3) Examines the forces that shape, and techniques used to measure, public opinion, also focusing on the media as a link between public opinion and government.

POLS 3551 Race and Ethnic Politics in the United States (3) Survey of the political mobilization, participation, and issues facing Latinos, African Americans, Asian Americans, Native Americans, and European ethnic groups in U.S. politics.

POLS 3553 Women and Politics (3) The course examines a variety of social, political, and economic issues that affect women in the United States and around the world.

POLS 3560 Research Methods in Political Science (3) This course will acquaint students with a wide variety of research methods used to analyze political phenomena, concentrating on those approaches that are both quantitative and nonquantitative, including case studies, interviewing, field research, and a lab component utilizing packaged computer programs for statistical analysis.

POLS 4511 Public Policy (3) The course examines the public policymaking process as well as the forces that shape US policy in the context of globalization. Permission from instructor must be obtained to take this course for graduate credit.

POLS 4520 Principles of International Development (3) Problems of development in the developing nations of the world and the concepts and theories for their comparative analysis.

POLS 4521 Culture and Politics of the Middle East (3) The influence of culture on the politics, political systems and issues of the Middle East.

POLS 4530 International Law (3) An examination of its nature, history, philosophies, and basic rules as found in treaties, court decisions, customs, and other sources.

POLS 4531 American Foreign Policy (3) The foreign policy of the United States with specific focus on the policy authority of the American President, the Congress, the Courts, United States foreign policies toward Russia, Europe and the Middle East are considered.

POLS 4532 International Relations of East Asia (3) Study of contemporary regional politics of East Asia focusing on political culture, nationalism and the foreign policies of the United States, Russia, China and Japan as they relate to security challenges in East Asia.

POLS 4550 The European Union (3) An examination of the theory, history, politics and institutions of the European Union with special emphasis on the socioeconomic factors that influenced the formation and subsequent expansions of the EU, particularly the regional differences and concerns over sovereignty.

POLS 4552 Legislative Politics (3) The major functions, roles, powers, processes and development of the national and state legislatures. Special attention is given to legislative elections, leadership and decision-making.

POLS 4555 The American Presidency (3) The constitutional origins of the presidency, its powers, selection process, and the presidents' relations with the public, the media, political parties, and the other major institutions of government. Particular emphasis is on the presidency as an institution of leadership.

POLS 4570 Public Administration (3) A broad and basic study of public administration in the United States.

POLS 4571 Municipal Administration (3) Principles of municipal administration as they operate in the United States under the various forms of municipal governments.

POLS 4580 American Constitutional Law (3) An interpretation of our constitutional heritage, including the growth of federal judicial power and the role of the Supreme Court.

POLS 4581 Civil Rights and Liberties (3) Except for the First Amendment, this course examines individual rights and liberties found within and outside of the Constitution.

POLS 4582 Trial Advocacy* (3) Provides training in trial advocacy techniques and instruction on the practical workings of the court system. *Not available for graduate credit.

POLS 4583 First Amendment (3) This course examines First Amendment controversies, including flag burning, obscenity, libel, hate speech, free press vs. fair trial, and freedom of and from religion.

POLS 4590 Special Projects in Political Science (1-6) Study, interpretation, and discussion of special topics and problems in political science. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of the instructor.

POLS 4591 Internship in Political Science (1-6) Practical experience with a governmental or political unit. Supervision by professional of unit and by member of University faculty. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of department.

POLS 4592 Problems in National, State or Local Government (1-3)
 Special problems in government, selected by student and instructor. May be repeated for a maximum of 6 semester hours. Prerequisite: consent of the instructor.

Geography

GEOGRAPHY
Major, Bachelor of Arts Degree
 (42-429)

The graduate with a Bachelor of Arts degree in Geography will use the knowledge and skills obtained in the program to:

- Appreciate the depth, breadth, and value of geography as both a theoretical and applied science through the study of the basic traditions: earth science, culture-environment, location, and area/regional analysis.
- Identify, describe, and analyze patterns of human distribution, movement, interaction, and environmental impact.
- Identify, describe, and analyze physical and climatological patterns and processes in both classroom and field settings.
- Read, interpret, update and produce maps using traditional and electronic methods.
- Communicate in written and spatial form the geographic concepts, theories, and information/data that underlay the cultural and physical diversity of world realms and regions.
- Understand and appreciate patterns and landscapes of diversity in a dynamic world.
- Use library resources and electronic media to explore/collect geographic information from texts, databases, maps and remotely-sensed images.
- Be familiar with the major themes and approaches in current geographic research and be able to employ basic geographic tools for research and analysis.
- To think creatively and critically about geographic factors in case studies, field settings, and real world scenarios.

Sem. Hours

MAJOR REQUIREMENTS	33
GEOG 2100 Physical Geography	3
GEOG 2212 World Geography	3
GEOG 2246 Economic Geography	3
GEOG 3270 Research Methods in Geography	3
GEOG 4201 Cartography	3
Electives from the following, including two courses in regional geography	18
EASC 1004 Intro. to the Sci.: Geology	4
EASC 3111 Geomorphology	3
Electives in geography	11-18
MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, GEOG 2212 fulfills 3 s.h. of Div. II B; The Modern Language Requirement fulfills 3 s.h. of Div. II C	42
EASC 1004, if elected, fulfills 4 s.h. of Div. II A.	
MODERN LANGUAGE REQUIREMENT Refer to Bachelor's Degree Requirements section for fulfillment options.	3-9
FREE ELECTIVES	11-24
MINIMUM TOTAL	120

GEOGRAPHY
Major, Bachelor of Science Degree
 (43-430)

The graduate with a Bachelor of Science degree in Geography will use the knowledge and skills obtained in the program to:

- Appreciate the depth, breadth, and value of geography as both a theoretical and applied science through the study of the basic traditions: earth science, culture-environment, location, and area/regional analysis.
- Identify, describe, and analyze patterns of human distribution, movement, interaction, and environmental impact.
- Identify, describe, and analyze physical and climatological patterns and processes in both classroom and field settings.
- Read, interpret, update and produce maps using traditional and electronic methods.
- Communicate in written and spatial form the geographic concepts, theories, and information/data that underlay the cultural and physical diversity of world realms and regions.
- Understand and appreciate patterns and landscapes of diversity in a dynamic world.
- Use library resources and electronic media to explore/collect geographic information from texts, databases, maps and remotely-sensed images.
- Be familiar with the major themes and approaches in current geographic research and be able to employ basic geographic tools for research and analysis.
- To think creatively and critically about geographic factors in case studies, field settings, and real world scenarios.

Sem. Hours

MAJOR REQUIREMENTS	33
GEOG 2100 Physical Geography	3
GEOG 2212 World Geography	3
GEOG 2246 Economic Geography	3
GEOG 3270 Research Methods in Geography	3
GEOG 4201 Cartography	3
Electives from the following, including two courses in regional geography	18
EASC 1004 Intro. to the Sci.: Geology	4
EASC 3111 Geomorphology	3
Electives in geography	11-18
MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, GEOG 2212 fulfills 3 s.h. of Div. II B)	45
EASC 1004, if elected, fulfills 4 s.h. of Div. II A	
FREE ELECTIVES	17-24
MINIMUM TOTAL	120

GEOGRAPHY
Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (431)

Sem. Hours

MINOR REQUIREMENTS	21
GEOG 2100 Physical Geography	3
GEOG 2212 World Geography	3
GEOG 2246 Economic Geography	3
GEOG 3270 Research Methods in Geography	3
Electives from the following, including one course in regional geography	9
EASC 1004 Intro. to the Sci.: Geology	4
EASC 3111 Geomorphology	3
Electives in geography	2-9
GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, GEOG 2212 fulfills 3 s.h. of Div. II B. EASC 1004, if elected, fulfills 4 s.h. of Div. II A	

GEOGRAPHIC INFORMATION SYSTEMS**Minor for a Bachelor's Degree**

UCM does not confer teacher certification for this minor.
(857)

Sem. Hours

MINOR REQUIREMENTS 23

CIS 1605	Microcomputer Application Software	2
GEOG 2212	World Geography	3
GEOG 2281	Map Interpretation	3
GEOG 3270	Research Methods in Geography	3
GEOG 4201	Cartography	3
GEOG 4220	Geographic Information Systems I	3
GEOG 4221	Geographic Information Systems II	3
GEOG 4210	Remote Sensing and Image Interpretation . . .	3

GEOG 2100 Physical Geography (3) The areal distribution of the major elements of the physical environment relevant to man's occupation of the earth's surface.

GEOG 2211 Geography of North America (3) Physical and cultural features of the United States and Canada, based on regional concepts.

GEOG 2212 World Geography (3) A survey of the world's major regions, examining their unique peoples, cultures, economies, and physical environments.

GEOG 2246 Economic Geography (3) Influence of geographic factors upon economic life, including such topics as natural resources and the relations of geographic factors to industrial and commercial development.

GEOG 2281 Map Interpretation (3) A survey of the problems encountered in reading maps. Emphasis is on the kinds of information that can be presented on maps, the kinds of symbols used, and limitations of maps.

GEOG 3200 Geography of Europe (3) A systematic and regional approach to Europe involving the description and analysis of its major regions, political units, cultural diversity, and contemporary issues and problems.

GEOG 3201 The Cultural Landscape (3) A survey of fundamental human needs, beliefs, and activities that have molded the varied human landscapes of the world. Emphasis on the identification, description, and correlation of spatial variations of population, land use, and social and economic activities.

GEOG 3225 Geography of Latin America (3) South and Central America, including Mexico and the Caribbean, with analysis of the various physical environments, cultures, economies, and contemporary issues.

GEOG 3270 Research Methods in Geography (3) An overview of and training in methods of geographic data selection, collection, and analysis. Prerequisite: GEOG 2212 or GEOG 3201 or permission of instructor.

GEOG 3275 Climatology (3) Considers on a fundamental basis the physics of the atmosphere, hydrosphere, and lithosphere requisite to an understanding of the cultural implications of climate.

GEOG 3310 Geography of Africa (3) Historic and modern significance of Africa; description and delimitation of the major natural regions; and the dominant native cultures.

GEOG 3314 Geography of North Africa/Southwest Asia (3) Regional study of North Africa/Southwest Asia (Middle East) examining the spatial aspects of the realm's physical, cultural, and political geography. Covers countries from Morocco to Iran.

GEOG 4201 Cartography (3) Techniques and tools of map construction including gathering, manipulation, and representation of geographic data. Emphasis on thematic mapping and maps as communication. Traditional and electronic technologies stressed. Prerequisite: GEOG 2212 or EASC 1004 or consent of instructor.

GEOG 4205 Advanced Cartography (3) Implementation of mapping software, map design, problems and opportunities associated with computer mapping. Content includes obtaining data in a computer context (e.g., Cyberspace). Prerequisite: GEOG 4201 or equivalent or consent of instructor.

GEOG 4210 Remote Sensing and Image Interpretation (3) Use of electromagnetic spectrum to obtain information on our environment. Emphasis includes visible spectrum (air photography), thermography, radar, and satellite imagery. Prerequisite: GEOG 2212 or EASC 1004 or consent of instructor.

GEOG 4220 Geographic Information Systems I (3) Automated procedures for storage, analysis, and display of spatial information. Data bases, procurement of spatial information, data manipulation and display techniques, software systems and management issues.

GEOG 4221 Geographic Information Systems II (3) Advanced aspects of spatial analysis and modeling and programming. Emphasis on research and planning applications. Prerequisite: GEOG 4220 or consent of instructor.

GEOG 4230 Geography of Asia (3) A systematic and regional approach to the several Asian landscapes. Emphasis is on physical geography and cultural regions.

GEOG 4235 Geography of the Former Soviet Union (3) A regional geography of the F.S.U. The relationship of rigorous physical environment to national problems.

GEOG 4240 Geography of Missouri (3) A description and analysis of the topical and regional geography of Missouri.

GEOG 4251 Special Projects in Geography (1-6) Study, interpretation, and discussion of special topics and problems in geography. *May be repeated for a maximum of 6 semester hours.*

GEOG 4252 Internship (1-6) Practical professional experience in an employing agency coupled with related assignments intended to integrate theory and practice and build college-level knowledge and skills. Prerequisite: Instructor consent.

GEOG 4260 Historical Geography of the United States (3) Relationship of changing geography to physical environment and developing technology in the United States.

GEOG 4265 Urban Geography (3) Location of cities as related to other geographic phenomena. Urban units are analyzed with respect to general location theory.

GEOG 4270 World Political Geography (3) The historical development of the political organization of area. Theoretical aspects of political geography are emphasized.

GEOG 4275 Special Topics in Geography (1-3) Directed individual or group research of predetermined problems in geography for more intensive study. *May be repeated for a maximum of 3 semester hours.*

GEOG 4291 Conservation of Natural Resources (3) Problems of availability, production, exploitation, appraisal, distribution, and renewability of natural resources.

Women's and Gender Studies

WOMEN'S STUDIES

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (471)

By earning a minor in Women's Studies at the University of Central Missouri, the student can expect to achieve these program outcomes:

- Recognize, evaluate and challenge gender, inequality and other stereotypes in media and culture.
- Explicate how gender stereotypes and other forms of inequality are infused in social institutions (i.e. economic, legal, educational).
- Appreciate diversity among and between cultures, communities and nations.
- Describe how diversity and privilege influence perception, gender identity, and personal behavior among and between communities.
- Demonstrate an ability to analyze the ways gender is socially constructed and reinforced through a variety of mediated discourses and texts.
- Recognize one's own privilege/s and the inextricable connections between gender, race, social class, abilities and other disadvantaged groups.

Sem. Hours

MINOR REQUIREMENTS21-22

WS	1050	Introduction to Women's Studies	3
WS	2000	Race, Class & Gender	3
WS	4910	Spec. Proj. in Women's Studies	3
Electives from the following		12-13	
AE	1450	Valuing Differences: Discovering Common Ground	1
ANTH	4820	Sexual Dynamics & Culture	3
CFD	1010	Individual & Family Relationships	3
CJ	4403	Sexual Assault & the Criminal Justice System	3
*COMM	4285	Women & Minorities In Media	3
*COMM	4335	Gender Communications	3
ENGL	2270	Fict. by Women Around the World	3
ENGL	4560	British Women Writers	3
ENGL	4660	Women Writers of the United States	3
HIST	4310	Women in America	3
HIST	4327	African American Women, Gender & Girlhood	3
NUR	2020	Health: Women's Perspective	2
NUR	4030	Human Sexuality	2
PSY	4320	Psychology of Women	2
REL	2510	Gender & Religions	3
SOC	4855	Sociology of Gender	3
SOC	4865	Family Diversity	3

Electives from the above list or as approved by the Women's Studies Director; can include Special Projects courses in other programs. 6

*Course has prerequisite(s) not listed in the program.

WS 1050 Introduction to Women's Studies (3) Provides an overview of the interdisciplinary nature of the women's studies program. Focuses upon social, psychological, economic, political, cultural, religious, and historical aspects of women's roles in the United States.

WS 2000 Race, Class, and Gender (3) An exploration of the interrelations between gender, class, and race historically and cross-culturally. These interrelations will be explored using a multidisciplinary approach and a variety of kinds of materials, including ethnography, literature, life histories, and law.

WS 4910 Special Projects in Women's Studies (1-9) Extensive reading and discussion of selected topics to integrate the various courses in the women's studies program at the undergraduate and graduate levels.

Psychology

PSYCHOLOGY

Major, B.A. Degree

(42-746)

The graduate with a Bachelor of Arts degree in Psychology will use the knowledge and skills obtained in the program to:

- Demonstrate and integrate knowledge of the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
- Understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.
- Value and use critical and creative thinking, including the scientific method, to address problems related to behavior and mental processes.
- Appropriately apply knowledge and skills acquired in the psychology curriculum to personal, social, and organizational issues.
- Value and apply empirical evidence, cope with ambiguity, and behave legally and ethically in research and applied settings.
- Understand and apply the language of the science of psychology, through effective speaking, reading and writing.
- Demonstrate the ability to acquire and disseminate information and use computers and other technology for a variety of purposes.
- Recognize, understand, and respect individual differences and the complexity of sociocultural and international diversity. Demonstrate knowledge about how these factors affect applied and scholarly work.
- Demonstrate knowledge about realistic occupational, career, and advanced educational opportunities appropriate to the discipline and develop a feasible plan to pursue those opportunities.

Sem. Hours

MAJOR REQUIREMENTS 34

PSY	1000	Orientation to Psychology	1
PSY	1100	General Psychology	3
PSY	2110	Research Design & Analysis I	4
PSY	2120	Research Design & Analysis II	4
PSY	2130	Learning	3
PSY	3130	Physiological Psychology	4
PSY	3220	Lifespan Development	3
PSY	3340	Social Psychology	3
PSY	4110	Systems of Psychology	3
PSY	4310	Theories of Personality	3
PSY	4440	Abnormal Psychology	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, PSY 1100 fulfills 3 s.h. of Div. II B; the Modern Language

Requirement fulfills 3 s.h. of Div. II C 42

MODERN LANGUAGE REQUIREMENT3-9

Refer to Bachelor's Degree Requirements section for fulfillment options.

FREE ELECTIVES35-41

MINIMUM TOTAL 120

PSYCHOLOGY

Major, Bachelor of Science Degree

(43-747)

The graduate with a Bachelor of Science degree in Psychology will use the knowledge and skills obtained in the program to:

- Demonstrate and integrate knowledge of the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
- Understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.
- Value and use critical and creative thinking, including the scientific method, to address problems related to behavior and mental processes.
- Appropriately apply knowledge and skills acquired in the psychology curriculum to personal, social, and organizational issues.
- Value and apply empirical evidence, cope with ambiguity, and behave legally and ethically in research and applied settings.
- Understand and apply the language of the science of psychology, through effective speaking, reading and writing.
- Demonstrate the ability to acquire and disseminate information and use computers and other technology for a variety of purposes.

- Recognize, understand, and respect individual differences and the complexity of sociocultural and international diversity. Demonstrate knowledge about how these factors affect applied and scholarly work.
- Demonstrate knowledge about realistic occupational, career, and advanced educational opportunities appropriate to the discipline and develop a feasible plan to pursue those opportunities.

Sem. Hours

MAJOR REQUIREMENTS	43
PSY 1000 Orientation to Psychology	1
PSY 1100 General Psychology	3
PSY 2110 Research Design & Analysis I	4
PSY 2120 Research Design & Analysis II	4
PSY 2130 Learning	3
PSY 3130 Physiological Psychology	4
PSY 3220 Lifespan Development	3
PSY 3340 Social Psychology	3
PSY 4110 Systems of Psychology	3
PSY 4310 Theories of Personality	3
PSY 4440 Abnormal Psychology	3
Electives from the following	9
PSY 4130 Sensation & Perception	3
PSY 4150 Cognitive Psychology	3
PSY 4230 Psychology of Adolescence	3
PSY 4240 Psychology of Aging	3
PSY 4320 Psychology of Women	2
PSY 4500 Intro. to Psy. Measurement	3
PSY 4600 Industrial Psychology	3
PSY 4730 Cognitive-Behavioral Intervention	3
PSY 4740 Assessment and Intervention with Law Offenders	3
PSY 4000 Special Projects in Psy.	1-3
PSY 4180 Seminar in Psychology	1-3
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, PSY 1100 fulfills 3 s.h. of Div. II B	45
FREE ELECTIVES	32
MINIMUM TOTAL	120

PSYCHOLOGY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(748)

Sem. Hours

MINOR REQUIREMENTS	21
PSY 1100 General Psychology	3
Electives in Psychology	18
GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, PSY 1100 fulfills 3 s.h. of Div. II B.	

PSY 1000 Orientation to Psychology (1) Introduction to the discipline of Psychology, focusing on strategies to promote success in the major. Students learn about expectations for the major and career options. Prerequisite: Psychology major.

PSY 1100 General Psychology (3) A general introduction to the science of behavior, surveying the broad field of psychology and the methods of investigation.

PSY 1320 Psychology of Personal Adjustment (3) A general overview of major theories, concepts, and principles in psychology that can be applied to issues of personal and social adjustment.

PSY 2110 Research Design and Analysis I (4) Rationale and methods for designing, conducting, and analyzing research. PSY 2120 must be taken the following semester. Includes scheduled lab. Prerequisite: PSY 1100.

PSY 2120 Research Design and Analysis II (4) Rationale and methods for designing, conducting, and analyzing research. Continuation of PSY 2110. Includes scheduled lab. Prerequisite: PSY 2110.

PSY 2130 Learning (3) A basic course for students planning to major in psychology. Emphasis on fundamental concepts and theoretical approaches to learning. Prerequisite: PSY 1100.

PSY 2220 Child Psychology (3) Interaction of biological and environmental factors in the growth of the child from conception to maturity. Prerequisite: PSY 1100 or EDFL 2240.

PSY 3110 Motivation (3) Consideration of the causal factors of human and animal behavior that impel organisms to persist in goal-seeking behavior. Attention is given to the physiological and psychological motives, and the various theoretical positions. Prerequisite: PSY 2130.

PSY 3130 Physiological Psychology (4) A survey of the relationship between physiological mechanisms and behavior. Course includes scheduled laboratory. Prerequisite: PSY 1100 and junior standing. An additional fee is associated with this course.

PSY 3220 Life-Span Development (3) Theories of development, universal features of human development and its individual variations throughout the life-span of the individual. Prerequisite: PSY 1100 or EDFL 2240.

PSY 3340 Social Psychology (3) Analysis of individual and group behavior in sociocultural settings. Written and hands-on observation assignments facilitate connections between theories of social behavior. Professional development activities. Prerequisite: PSY 1100 and junior standing.

PSY 4000 Special Projects in Psychology* (1-3) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 5 semester hours.* Prerequisites: PSY 1100 and junior standing. *Not available for graduate credit.

PSY 4110 Systems of Psychology* (3) Capstone course for the major where multiple assessments are completed including an exit exam. Includes historical analysis of the field and connections with students' professional development. Prerequisites: PSY 2120, PSY 2130, PSY 3130, PSY 3220, PSY 3340, and PSY 4440; PSY 4310 or concurrently. *Not available for graduate credit.

PSY 4130 Sensation and Perception (3) Relationship between sensory occurrences and the experiences of the person. Prerequisite: PSY 1100 and junior standing.

PSY 4150 Cognitive Psychology (3) An overview of current theories of processes involved in human thinking with emphasis on models of memory, information processing, language and mental representations. Prerequisites: PSY 1100 and junior standing.

PSY 4180 Seminar in Psychology (1-3) Selected issues not covered in theory-practicum courses. *May be repeated for a maximum of 6 semester hours.* Prerequisites: PSY 1100 and junior standing.

PSY 4200 Psychology of Exceptional Children (2) The identification, care, treatment, and guidance of exceptional children. Prerequisite: EDFL 2240.

PSY 4230 Psychology of Adolescence (3) Developmental factors and problems common to the period from puberty to adulthood with emphasis upon conditions leading to optimal development. Prerequisites: PSY 1100 or EDFL 2240; and junior standing.

PSY 4240 Psychology of Aging (3) Introduces psychological problems of aged population including: physical functioning, age changes in perception, memory, learning, problem solving, personality, environmental influences, death and dying. Prerequisites: PSY 1100 and junior standing.

PSY 4310 Theories of Personality (3) Major theories of personality, past and present. Prerequisite: PSY 1100 and senior standing.

PSY 4320 Psychology of Women (2) An overview of the theories of personality as applied to women, biological determinants of feminine behavior, the dynamics of sex-role development, and the psychological implications of traditional versus modern roles for women. Prerequisites: PSY 1100 and junior standing.

PSY 4330 Multicultural Psychology (3) This knowledge-based course is an introduction to cultural and minority status issues in psychology and the role of multicultural issues in mainstream research.

PSY 4440 Abnormal Psychology (3) A descriptive course dealing with the etiology, diagnosis, and treatment of mental disorders of functional and organic origin. Prerequisite: PSY 1100 and junior standing.

PSY 4500 Introduction to Psychological Measurement (3) An introduction to the basic psychometric theory, concepts, and procedures; familiarization with the major instruments in the field. Course includes scheduled laboratory. Prerequisites: PSY 2110 and junior standing.

PSY 4520 Statistics for the Behavioral Sciences (3) Basic statistical methods. The techniques used to analyze frequency distributions, correlations, and tests of significance. Course includes scheduled laboratory.

PSY 4600 Industrial Psychology (3) Psychological principles and methods applied to industrial and organizational settings, with emphasis on research design, workplace procedures, and statistical techniques. Professional development activities. Prerequisites: PSY 1100 and junior standing.

PSY 4720 Rehabilitation of the Mentally Retarded and Emotionally Disturbed (3) Basic principles and practical approaches to the rehabilitation of mentally retarded or handicapped and emotionally disturbed clients. Prerequisites: PSY 1100 and 6 semesters hours of psychology.

PSY 4730 Cognitive-Behavioral Intervention (3) Psychological, social, and vocational characteristics of the human services client with special attention to counseling theory and effective communication techniques. Prerequisite: PSY 1100 and junior standing.

PSY 4740 Assessment and Intervention with Law Offenders (3) History and philosophy of penology, theories of criminal personality, and rehabilitation procedures; course will include theory and practical work experience. Prerequisites: PSY 1100 or CJ 1000 or SOC 3890; and junior standing.

Theatre

SPEECH COMMUNICATION AND THEATRE

Major, Bachelor of Science in Education Degree

Certification to teach speech and theatre in grades 9-12. (41-362)

Sem. Hours

CORE REQUIREMENTS	21
THEA 1500 Acting	3
THEA 1600 Stagecraft	3
THEA 3700 Directing	3
COMM2100 Introduction to Comm. Theory	3
COMM2330 Small Group Communication	3
COMM2340 Argumentation & Debate	3
COMM3325 Nonverbal Communication	2
COMM3390 Forensics	1

Theatre Major Option

Bachelor of Science in Education Degree

The graduate with a Speech Communication and Theatre Bachelor of Science in Education degree (with a Theatre Major Option) will use the knowledge and skills obtained in the program to:

- Teach essential elements of speech communication and theatre at secondary school levels.
- Communicate and collaborate effectively in the interactive and creative process of theatre.
- Demonstrate a working knowledge of the historical, cultural, and stylistic dimensions of drama and theatre.
- Utilize critical thinking skills in order to analyze and interpret a script for the purpose of developing a concept and systematic plan for the production of a play.
- Form, communicate, and defend value judgments about quality and aesthetics in works of theatre.
- Demonstrate technical proficiency in the areas of acting and directing in order to create and present theatrical performances.
- Demonstrate a basic proficiency in the areas of theatre design and technology in order to create and present theatrical productions.
- Technical direct and direct one-act plays for public performance and successfully fulfill significant production assignments in the department's mainstage and/or children's theatre series.

Sem. Hours

MAJOR REQUIREMENTS	36
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Core Requirements listed above.	21
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THEA 4400 Lit. & History of the Theatre I	3
THEA 4420 Lit. & History of the Theatre II	3
THEA 2610 Design Fundamentals	3
THEA 3630 Studio Theatre I	1
THEA 4730 Studio Theatre II	1
Electives in THEA or COMM	4

MINOR REQUIREMENTS	18-25
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GENERAL EDUCATION REQUIREMENTS (page 41) In the major, THEA 1100 fulfills 3 s.h. of Div. I B; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B	42
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Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

THEA 1100 Div. I B (required)	3
HIST 1350 Div. II B or	
HIST 1351 Div. II B (required)	3
POLS 1510 Div. II B (required)	3
THEA 2400 Div. II C (required)	3
PSY 4230 Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110)	28
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MINIMUM TOTAL	124
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SPEECH COMMUNICATION

Major Option, Bachelor of Science in Education Degree
See requirements as outlined in the Department of Communication.

SPEECH COMMUNICATION AND THEATRE

Minor, Bachelor of Science in Education Degree
Certification to teach speech and theatre in grades 5-9 with a middle school-junior high major.
Elementary education majors 1-6 may use this as an area of concentration.
(363)

	Sem. Hours
MINOR REQUIREMENTS	21
THEA 1500 Acting	3
THEA 1600 Stagecraft	3
THEA 3700 Directing	3
COMM2100 Foundations of Comm. Theory	3
COMM2330 Small Group Communication	3
COMM2340 Argumentation & Debate	3
Elective in THEA or COMM	3

THEATRE

Major, Bachelor of Arts Degree
(42-364)

The graduate with a Bachelor of Arts in Theatre degree will use the knowledge and skills obtained in the program to:

- Communicate and collaborate effectively in the interactive and creative process of theatre.
- Demonstrate a working knowledge of the historical, cultural, and stylistic dimensions of drama and theatre.
- Utilize critical thinking skills in order to analyze and interpret a script for the purpose of developing a concept and systematic plan for the production of a play.
- Form, communicate, and defend value judgments about quality and aesthetics in works of theatre.
- Demonstrate technical proficiency in the areas of acting and directing in order to create and present theatrical performances.
- Demonstrate a basic proficiency in the areas of theatre design and technology in order to create and present theatrical productions.
- Technical direct and direct one-act plays for public performance and successfully fulfill significant production assignments in the department's mainstage and/or children's theatre series.

	Sem. Hours
MAJOR REQUIREMENTS	35

THEA 1400 Script Analysis	3
THEA 1500 Acting	3
THEA 1510 Stage Movement	3
THEA 1520 Stage Voice	3
THEA 1600 Stagecraft	3
THEA 2610 Design Fundamentals	3
THEA 3630 Studio Theatre I	1
THEA 3700 Directing	3
THEA 4730 Studio Theatre II	1
THEA 4400 Lit. & History of the Theatre I	3
THEA 4420 Lit. & History of the Theatre II	3
THEA 3600 Scene Design, 3 or	
THEA 3610 Costume Design, 3 or	
THEA 3620 Lighting Design, 3	3
Electives in theatre	3

MINOR REQUIREMENTS18-25
GENERAL EDUCATION REQUIREMENTS (page 41) 48

THEA 1100 Div. IB (required) 3
IGEN 3116, 3224, 3232, 4234, or 4244 Div. IVA (required)3

MODERN LANGUAGE REQUIREMENT3-9
Refer to Bachelor's Degree Requirements section for fulfillment options.

FREE ELECTIVES13-20
MINIMUM TOTAL 124

THEATRE

Major, Bachelor of Fine Arts Degree
(47-366)

The graduate with a Bachelor of Fine Arts degree in Theatre will use the knowledge and skills obtained in the program to:

- Communicate and collaborate effectively in the interactive and creative process of theatre.
- Demonstrate a working knowledge of the historical, cultural, and stylistic dimensions of drama and theatre.
- Utilize critical thinking skills in order to analyze and interpret a script for the purpose of developing a concept and systematic plan for the production of a play.
- Form, communicate, and defend value judgments about quality and aesthetics in works of theatre.
- Demonstrate technical proficiency in the areas of acting and directing in order to create and present theatrical performances.
- Demonstrate a basic proficiency in the areas of theatre design and technology in order to create and present theatrical productions.
- Technical direct and direct one-act plays for public performance and successfully fulfill significant production assignments in the department's mainstage and/or children's theatre series.

	Sem. Hours
MAJOR REQUIREMENTS	66

THEA 4300 Professional Practices	3
THEA 4310 Principles of Theatre Management	3
THEA 1400 Script Analysis	3
THEA 4400 Lit. & History of the Theatre I	3
THEA 4420 Lit. & History of the Theatre II	3
THEA 1500 Acting	3
THEA 1600 Stagecraft	3
THEA 2610 Design Fundamentals	3
THEA 3630 Studio Theatre I	1
THEA 3700 Directing	3
THEA 4730 Studio Theatre II	1
THEA 4910 Senior Showcase	1
Elect one of the following concentrations	27

Performance

THEA 1510 Stage Movement	3
THEA 1520 Stage Voice	3
THEA 1610 Stage Make-Up	3
THEA 4710 Advanced Directing	3
Elect 6 hours from the following	6
THEA 3500 Advanced Scene Study	3
THEA 4500 Advanced Acting	3
THEA 4510 Period Acting Styles	3

Electives from the Design/Technology concentration listing 9

Design / Technology

THEA 2620 Costume Technology	3
THEA 3600 Scene Design	3
THEA 3610 Costume Design	3
THEA 3620 Lighting Design	3
THEA 4600 Advanced Technical Theatre	3
THEA 4610 Adv. Stage Lighting & Sound	3
Electives from the Performance concentration listing	9

Departmentally approved supporting courses 9

GENERAL EDUCATION REQUIREMENTS (page 41) 48

THEA 1100 Div. IB (required) 3
IGEN 3116, 3224, 3232, 4234, or 4244 Div. IVA (required)3

FREE ELECTIVES 10

MINIMUM TOTAL 124

THEATRE

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(365)

	Sem. Hours
MINOR REQUIREMENTS	23

THEA 1100 Oral Interpretation	3
THEA 1400 Script Analysis	3

THEA 1500	Acting	3
THEA 1600	Stagecraft	3
THEA 3700	Directing	3
THEA 4400	Lit. & History of the Theatre I, 3 or	
THEA 4420	Lit. & History of the Theatre II, 3	3
	Electives in theatre	5

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, THEA 1100 fulfills 3 s.h. of Div. I B.

Interpretation

THEA 1100 Oral Interpretation (3) Skills used to convey the intellectual, emotional, and aesthetic values of literature to an audience.

Children's Theatre

THEA 3220 Children's Theatre (3) The study and practice of producing plays for a children's audience. Only offered Spring semester.

Production

THEA 4300 Professional Practices (1-6) Extended, supervised experiences in any phase of theatre production. Credit allowed will depend upon the nature and scope of the assignment. *May be repeated for a maximum of 10 semester hours.* Prerequisite: consent.

THEA 4310 Principles of Theatre Management (3) An in-depth examination of the business theories and practices in modern educational, community, and professional theatre. Box office and publicity work are required.

History and Literature

THEA 1400 Script Analysis (3) Structural and performance dimensions of the playscript. It will focus on the role of the various theatrical artists in developing an effective methodology and application for translating the playwright's script into a public performance.

THEA 2400 Discovering Theatre (3) An introductory examination of the various contemporary theatre arts with a survey of the drama and the developments of major theatrical periods in western civilization.

THEA 4400 Literature and History of the Theatre I (3) Works and writers for the stage from the beginning to 1700. The development of theatrical modes and presentation and their influences upon the drama of each period. Only offered Fall semester.

THEA 4420 Literature and History of the Theatre II (3) Works and writers for the stage from 1700 to the present. The development of theatrical modes and presentation and their influences upon the drama of each period. Only offered Spring semester.

Acting

THEA 1500 Acting (3) An extensive study in the theories and techniques of acting.

THEA 1510 Stage Movement (3) An extensive study of the body's use in theatrical performance; this class will work with expanding the imagination of bodily expression.

THEA 1520 Stage Voice (3) Course is designed to improve and enhance the skills necessary for excellent stage vocal production. Exercises will focus on breath, resonance, articulation and speech dynamics.

THEA 3500 Advanced Scene Study (3) The course is designed to enhance the actor's proficiency with character development within the genre of realism. Prerequisite: THEA 1500.

THEA 4500 Advanced Acting (3) An intensified study of characterization centering around the study of difficult roles, and the adaptation of acting techniques to various styles of acting. *May be repeated for a maximum of 6 credit hours.* Prerequisite: THEA 1500.

THEA 4510 Period Acting Styles (3) Examines the craft, methodology, resources and practice of acting in non-realistic (classical and contemporary) dramatic literature. Emphasis on analysis of stylistic determinants in dramatic literature. *May be repeated for a maximum of 6 hours.*

Crafts

THEA 1600 Stagecraft (3) Lectures and laboratory experiences in the construction, painting, rigging and shifting of stage scenery. Scene shop work arranged as a portion of the course.

THEA 1610 Stage Make-up (3) Materials and methods of application of make-up artistry for cosmetic and character effects on stage.

THEA 2610 Design Fundamentals (3) Survey of the concepts, applications, and techniques of theatrical design through study of the design areas in lighting, costume, scenic, make-up, hair, sound and properties.

THEA 2620 Costume Technology (3) Lectures and laboratory experience in sewing, fabric modification, and the craftwork of costume construction. An additional fee is associated with this course.

THEA 3600 Scene Design (3) Theory and practice of design as applied to scenery for modern theatrical production. Prerequisites: theatre majors, THEA 1600; art majors, ART 3910 or ART 3310.

THEA 3610 Costume Design (3) Theory and practice of costume design as applied to theatrical, musical and operatic productions of live theatre.

THEA 3620 Lighting Design (3) Theory and practice of lighting design as it applies to the modern theatrical performance.

THEA 3630 Studio Theatre I (1) Technical direction of a play in the Studio Theatre series at approximately the junior class level. Prerequisites: THEA 1500, THEA 1600, THEA 3700 and departmental consent.

THEA 4600 Advanced Technical Theatre (3) Advanced techniques in scenery construction and painting, plastics, and selection of stage equipment. Laboratory exercises will be required. Prerequisite: THEA 1600.

THEA 4610 Advanced Stage Lighting and Sound (3) Extensive investigation of stage lighting history and practices in the modern theatre and the study and use of live and recorded sound as a theatrical art. Only offered Fall semester. Prerequisite: THEA 1600.

Directing

THEA 3700 Directing (3) Problems, principles, and employment of various directing styles, and the adaptation of directing techniques to various physical facilities. Prerequisites: THEA 1500 and THEA 1600.

THEA 4710 Advanced Directing (3) Extensive examination of special directing problems with comedy, tragedy, period drama, and the musical show in arena and proscenium theatres. *May be repeated for a maximum of 6 credit hours.* Prerequisite: THEA 3700.

THEA 4730 Studio Theatre II* (1) Direction of a play in the Studio Theatre series at approximately the senior class level. Prerequisite: THEA 3630 and departmental consent. *Not available for graduate credit.

Playwriting

THEA 4800 Playwriting (1-3) Dramatic writing, dramatic theory, style dialogue exercises, characterization, with opportunity for the production of student plays. *May be repeated for a maximum of 3 semester hours.*

General

THEA 1900 Theatre Practicum (1) Supervised work on selected problems in play direction, acting, scene design, scene construction, stage lighting, and business management. *May be repeated for a maximum of 3 semester hours.* Prerequisite: consent.

THEA 3900 Special Topics in Theatre (1-3) Individual study and research on topics that are of special interest to the student. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent.

THEA 4900 Repertory Theatre (3) Practical experience in theatre through participation in a summer repertory season of plays as an actor, a technician, or management personnel. *May be repeated for a maximum of 6 semester hours.* Prerequisite: enrollment by department approval only.

THEA 4910 Senior Showcase (1) Senior Theatre Majors will present a public showcase performance or portfolio presentation. Course is part of the formative assessment process within Theatre Department.

THEA 4920 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with THEA 4984 during the Professional Semester. *Not available for graduate credit.

THEA 4984 Methods of Teaching Speech and Theatre* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with THEA 4920 during the Professional Semester. *Not available for graduate credit.

Harmon College of Business Administration

Accreditation

The Harmon College of Business Administration and the Accounting program are accredited by AACSB International located at 777 South Harbour Island Boulevard, Suite 750, Tampa, FL 33602; phone 813-769-6500; web page www.aacsb.edu.

Bachelor of Science in Business Administration Degree Program Statement of Policy

College Mission

The mission of the Harmon College of Business Administration is to provide quality teaching and learning for students from the University's historical 21 county service area preparing to enter careers in business. To accomplish this task the College:

- Primarily provides undergraduate degree programs in business.
- Provides instruction for undergraduate students in other disciplines who desire to learn about business.
- Provides selected graduate degree programs and instruction to prepare students for professional certifications.
- Maintains a curriculum that reflects the current business environment.
- Seeks students from outside of the service area, including international student enrollment, to enhance diversity.
- Supports the state-wide university mission in technology through selected business-related programs.
- Offers domestic and international internship opportunities.
- Provides opportunities for entrepreneurial education and experience.
- Employs hands-on, technologically enhanced, and outcomes-driven pedagogy.
- Expects faculty to engage in applied and instructional research while recognizing the contribution of basic research.

A supporting mission is to provide meaningful service to the University, area community, and citizens of Missouri. To accomplish this task the college:

- Values and recognizes faculty and student contributions to the University and society.
- Encourages active faculty participation in their respective professions
- Sponsors the Institute for Entrepreneurial Development to train and advise small businesses in the state.

Admission to B.S.B.A. Programs. Acceptance and registration in business administration courses or the declaration of intent to complete a business major do not guarantee admission to the B.S.B.A. programs. A student is not officially admitted to the HCBA until he/she is notified in writing by a representative of the HCBA. Only those students who have applied for admission to a program in the HCBA may file an application for graduation for the B.S.B.A. degree.

The desire of the faculty in the HCBA is for all UCM students to succeed. To facilitate and support (1) overall academic program quality, (2) student progress through his/her academic program at the desired rate and (3) to better ensure receiving the maximum benefit from the curriculum design, students who desire to earn a B.S.B.A. degree are to enroll and take courses that are specifically designed for their academic classification. This means that freshmen (those who have completed 0-29.5 semester hours of college credit) who take courses within the HCBA will enroll in 1000 level courses only, sophomores (completed 30-59.5 semester hours) will enroll in 2000 or 1000 level courses, juniors (completed 60-89.5 semester hours) will enroll in 3000, 2000, or 1000 level courses and seniors (all students who have completed 90 semester hours) will enroll in 4000 level courses or below.

All UCM students enrolled in business and economics courses are required to comply with prerequisites for those courses.

Students who have not been admitted to a B.S.B.A. degree program may not enroll in more than a total of 30 semester hours in courses with the following prefixes: ACCT, CIS, FIN, HRM, MKT, MGT. **

**Deviations from this limit must be approved in writing by the dean of the Harmon College of Business Administration.

Bachelor of Science in Business Administration Admission Requirements.

UCM students who desire to graduate with a B.S.B.A. degree should declare themselves to be pre-business majors upon enrollment at the University. Admission to all B.S.B.A. degree programs is conditional upon the completion of the departmental requirements and the following prerequisites:

1. A minimum of 41 semester hours of credit including the following pre-admission courses:

ACCT 2101	Principles of Financial Accounting	...	3
ACCT 2102	Principles of Managerial Accounting	...	3
BTE 1210	Essentials of Managing Information	...	2
ECON 1010	Principles of Macroeconomics	...	3
ECON 1011	Principles of Microeconomics	...	3
FIN 2801	Business Statistics I	...	3
BLAW 2720	Legal Environment of Business	...	3
MATH 1111	College Algebra	...	3
2. Attainment of a 2.25 or above (2.65 or above for admission to the School of Accountancy, 2.40 for Finance) grade-point average on a scale of 4.00 for credit hours completed at UCM or elsewhere and attainment of 2.25 or above (2.65 or above for admission to the School of Accountancy, 2.40 for Finance) grade-point on the 23 semester hours of pre-admission courses.
3. Transfer students from other colleges and universities must meet all degree program admission requirements. Transfer students may take appropriate additional course work to fulfill admission requirements.
4. A student applies for admission online at www.ucmo.edu/hcba/programs/prepro/require.cfm. The admission process should be initiated prior to fulfillment of all admission requirements.
5. All students pursuing a B.S.B.A. degree must take and pass the College-BASE or MAPP test for General Education before they may be officially admitted to the degree program.

Additional Bachelor of Science in Business Administration Graduation Requirements.

In addition to specified major and other requirements, all students graduating with a B.S.B.A. degree must satisfy the following requirements:

1. Students are required to earn at least 50 percent of their required business credit hours for a B.S.B.A. degree at UCM.
2. Students must achieve a minimum cumulative grade-point average of 2.25 (2.40 for Finance).

Transfer of Credit

Students planning to transfer to UCM should expect to complete most major business courses during their junior and senior years. A student from a two-year or four-year institution may transfer pre-admission courses equivalent to those required for the B.S.B.A. degree at UCM. Transfer students from four-year institutions should obtain transfer information from the academic department offering the major.

Upper division courses (courses at the 3000 and 4000 level) cannot generally be transferred from a two-year institution and applied to a B.S.B.A. degree. However, the department chair responsible for the UCM course may elect to allow such a transfer for equivalent credit. Before the department chair may accept the transfer course for equivalent credit, the course must be "validated" through a departmentally administered examination or successful completion of a more advanced course in the discipline.

The specific validation requirement to be applied will be designated by the department chair. The validation policy for the HCBA is consistent with policies and guidelines at comparable business schools and is in effect for all students desiring to transfer courses completed at a community or junior college. Upper division course work transferred from a four-year institution must be reviewed by the department chair before such work can be applied to a B.S.B.A. degree. The department chair may choose to apply the validation requirement to such transfers.

Bachelor of Science in Business Administration Core Courses.

All B.S.B.A. degree program students are required to successfully complete carefully selected and designed 3000 and 4000 level business core courses. Students may enroll in 3000 level core courses after successfully completing 59.5 semester hours and may enroll in 4000 level core courses after successfully completing 89.5 semester hours. Prerequisite course requirements are to be complied with at all levels of the core and in other UCM business and economics courses. Exception to these rules concerning core courses may be granted by the chair of the department in the HCBA in which the course is offered. HCBA 3000 and 4000 level core courses are listed as an integral part of departmental academic programs. Please refer to the following pages of this section of the UCM catalog for a complete listing of core and major courses required by the faculty in each department in the HCBA.

The Harmon College of Business Administration intends to provide equal opportunities for all through careful blending of human and financial resources. By accentuating growth in the capabilities of people, the College seeks to improve the quality of life for each individual in the region served.

The HCBA Integrative Business Experience (IBE)

Harmon College of Business students at the University of Central Missouri have the option to participate in a program that links their learning to a real-world experience. (This program is required for Management and CIS majors.) This program, called the Integrative Business Experience (IBE), was inspired by the MG101 program at Bucknell (Miller, 1991) and the Integrated Business Core (Michaelsen, 1999) program at the University of Oklahoma. IBE students will be required to create and manage two significant enterprises: an actual start-up company and a hands-on community service project. Thus, IBE students will have the opportunity to: 1) develop interpersonal and group-interaction skills in a work-like setting, and 2) learn from their experience of trying to apply key business concepts and analytical tools to solve a wide range of unstructured, but very real problems.

Participation in the IBE option, which will typically occur during the first semester of the junior year, will require students to enroll in a four-course block that includes three required junior-level core business courses and an Entrepreneurship and Community Service Practicum course*. The link between learning and experience occurs because the content coverage and many of the assignments in the core courses will be specifically sequenced to support students in organizing and managing their business and service ventures. As a result, IBE students will develop a clear "big-picture" understanding of business operations because, on an ongoing basis, they will be using concepts and tools from all three core courses to guide their decisions in the business and service organizations.

IBE Program Elements

1. Students must simultaneously enroll in three required junior-level core business courses; Management, Marketing, and Information Systems (Marketing - MKT 3405, Management - MGT 3315, and Information Systems - CIS 3630) plus a three-hour Entrepreneurship and Community Service Practicum (MGT 3385, MKT 3485 or CIS 3685). Students will be responsible for mastering the concepts and terminology of each of the core courses.
2. Students will learn in classes in which the instruction is delivered using Team-Based Learning®. Thus, instead of listening to lectures, most of their in-class time is spent working in a 7-member learning team that remains stable across the core courses for the entire semester.
3. Students will work as an "employee" of a 35-member company that becomes a "laboratory" in which they apply concepts from the core business disciplines as they engage in two ventures - a start-up business and a service project on behalf of a non-profit community organization.
4. Students will spend the first 7 weeks developing a business plan for a start-up company whose profits will finance a hands-on community service project. The plan will then be presented to a loan review committee (First Community Bank officers and local entrepreneurs) to obtain the capital (real money up to \$5,000) needed to implement their plan.

5. Students will implement their business plan (i.e., they have 6-7 weeks to do enough business to pay off their loan and expenses and generate enough profit to finance their service work).
6. Students will create a program portfolio that contains reflections on their experience and includes a set of "artifacts" that will enable them to communicate their learnings to potential employers.

References

- Michaelsen, L. K. (1999). Integrating the Core Business Curriculum: An Experience-based Solution. *Selections*, 15 (2), 9-17.
- Miller, J. A. (1991) Experiencing Management: A Comprehensive, "Hands-on" Model for the Introductory Management Course. *Journal of Management Education*, 15 (2), 151-173.
- Shinn, Sharon (2003). Junior Executives. *BizEd* 2(4) May/June, 48-51.
- Turk, Randall (2002). Risky Business. *Sooner Magazine*, 22(2), 22-26.

For Additional Information on Team-Based Learning IBE, and IBC

Contact Dr. Larry K. Michaelsen, Professor of Management at lmichaelsen@ucmo.edu (660) 543-4124 or visit www.teambasedlearning.org, www.ucmoibe.org and/or www.ou.edu/org/ibcore.

*Enrollment in IBE is limited and will be on a first-come first-enrolled basis.

Computer Information Systems

COMPUTER INFORMATION SYSTEMS

Major, Bachelor of Science in Business Administration Degree
(46-266)

The graduate with a Bachelor of Science degree in Business Administration with a major in Computer Information Systems will use the knowledge and skills obtained in the program to:

- Demonstrate knowledge of professional and ethical expectations in the work place.
- Use productivity software (word processing, spreadsheet, and database) effectively and manage hardware and software resources by applying knowledge of operating systems and environments.
- Develop application software using skills in appropriate business programming languages (e.g. Java, Visual Basic, COBOL).
- Develop and maintain databases using theoretical and applied knowledge of relational database management systems (e.g. Oracle, SQL Server).
- Develop and maintain telecommunications networks using theoretical and applied knowledge of telecommunications (e.g. Novell, Windows/NT).
- Analyze business problems and develop solutions by applying critical thinking skills within the systems development process (e.g. The Systems Development Life Cycle [SDLC], Prototyping).
- Be a team player by applying group process skills; participate fully in group discussion and activities, lead/follow when appropriate; provide support and collaboration when needed.
- Access information resources and communicate effectively using a variety of methods: oral, written, and electronic.
- Design and construct client/server applications by using appropriate tools and architectures and develop effective graphical user interfaces (GUIs).
- Apply project management skills when creating a business solution within an information architecture.

MAJOR REQUIREMENTS 76

	Sem. Hours
CIS 1605 Business Application Software	2
CIS 2605 Programming With Visual Basic.net	3
CIS 2615 Introduction to JAVA	3
CIS 2665 Prin. of Data Comm. & LAN	3
**CIS 3630 Management Information Systems	3
CIS 3650 Database Management Systems	3
CIS 3660 Anlys. & Des. of Comp. Infor. Sys.	3
**CIS 3685 Integrative Bus. Exp. Pract., 3 or	
MKT 3485 Integrative Bus. Exp. Pract., 3 or	
MGT 3385 Integrative Bus. Exp. Pract., 3,	3
CIS 4690 Systems Architecture & Development	3
*ACCT 2101 Principles of Financial Acct.	3
*ACCT 2102 Principles of Managerial Acct.	3
*ECON 1011 Principles of Microeconomics	3
*FIN 2801 Business Statistics I	3
FIN 3801 Business Statistics II	3
FIN 3850 Principles of Finance	3
**MGT 3315 Management of Organizations	3
MGT 3325 Business Communications	3
MGT 3360 Production/Operations Mgt.	3
**MKT 3405 Marketing Policy	3
*BLAW 2720 Legal Environment of Business.	3
Three courses from one of the two following tracks	9
Software Development	
CIS 3670 User Interface Design	3
CIS 4680 Data Resource Mgt.	3
CIS 4660 Appl. Dev. Using JAVA, 3 or	
CIS 4670 Appl. Dev. Using VB.net, 3	3
Networking	
CIS 3665 Data Comm. Technologies	3
CIS 4665 Data Comm. & Dist. Data Proc.	3
CIS 4685 Network Planning, Design & Security	3
Electives	8
CIS 3655 COBOL Programming	3
CIS 3695 Intern. in Comp. Infor. Sys.	3
CIS 4610 Special Projects	3
CIS 4635 Seminar in Bus. Comp. Appl.	3
CIS 4655 Software Engineering	3
CIS 4667 Cont. Voice & Data Sys.,	3
CIS 4695 Adv. Prog. in C/C++	3
Any CIS course in the tracks (prerequisites apply).	
Any ET courses approved by the department.	

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000 Div. I B (required)	3
*MATH 1111 Div. I C (required)	3
*BTE 1210 Div. II A (required)	2
*ECON 1010 Div. II B (required)	3
PSY 1100 Div. II B or	
SOC 1800 Div. II B (required)	3
ICAP 4357 Div. IV B (required)	3

MINIMUM TOTAL 124

* Students expecting to receive the B.S.B.A. Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including ACCT 2101, ACCT 2102, BLAW 2720, BTE 1210, ECON 1010, ECON 1011, FIN 2801, and MATH 1111. See page 96 for the Statement of Policy on Admission to a B.S.B.A. Degree program.

** Students must enroll in IBE Practicum (MGT 3385 or MKT 3485 or CIS 3685) concurrently with the IBE sections of MGT 3315, MKT 3405 and CIS 3630.

COMPUTER INFORMATION SYSTEMS

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (535)

Sem. Hours

MINOR REQUIREMENTS 22

CIS 1605 Business Application Software	2
CIS 2605 Programming With Visual Basic.net	3
CIS 2615 Introduction to JAVA	3
CIS 2665 Principles of Data Communication & Local Area Networking	3
CIS 3650 Database Mgt. Systems, 3 or	
CIS 3660 Analysis & Design of Computer Information Systems, 3	3
ACCT 2101 Principles of Financial Acct.	3
ACCT 2102 Principles of Managerial Acct.	3
BTE 1210 Essentials of Managing Info.	2

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, BTE 1210 fulfills 2 s.h. of Div. II A.

COMPUTER INFORMATION SYSTEMS

Associate in Science Degree

Inquiries about the status of this program should be directed to the chair of the Department of Computer Information Systems.

CIS 1600 Principles of Computer Information Systems (3) Provides a working knowledge of computer information systems. Hands-on experience is gained in major microcomputer software packages including operating systems, word processing, spreadsheets, and databases.

CIS 1601 Business Information Technology (2) Provides information about information technology related careers, development of group/team building skills, communication skills, and hands-on experience in solving business problems using information technology.

CIS 1605 Business Application Software (2) Solving business problems with a Windows-based operating system/environment as well as word processing, presentation software, spreadsheet software, and database applications. Prerequisite: BTE 1210. An additional fee is associated with this course.

CIS 2605 Programming With Visual Basic.net (3) Introduces fundamental concepts and implementations of Programming Using Visual Basic.net. It focuses on Windows form applications covering aspects such as development of Graphic User Interface, control structures In VB.net, and data processing. The course also covers the object-oriented aspects of programming such as writing classes, using objects, inheritance and polymorphism. Hands-on learning is emphasized with a focus on the development of applications for business problems. An additional fee is associated with this course.

CIS 2615 Introduction to JAVA (3) Fundamental principles for the design and implementation of programs using JAVA programming language to develop systems and applications programs. Flexibility portability/platform independence, support for object-orientation and the availability of classes to handle complex programming tasks make JAVA an ideal choice for software development. The course adopts a hands-on approach and entails extensive programming. Prerequisite: CIS 2605. An additional fee is associated with this course.

CIS 2665 Principles of Data Communications and Local Area Networking (3) Overview of the fundamental concepts needed to develop and work with a data communications system. Hardware, software, network topology, network design and implementation is covered with a particular emphasis on the application of theory to solving business data communication needs. Prerequisite: CIS 1605.

CIS 3630 Management Information Systems (3) This course will focus on topics that help general managers make better Information System and/or Information Technology decisions. Often general managers must participate in the process of integrating IS/IT into the organization, and need knowledge of IS methods to interact with other IS/IT managers and employees effectively. Cases and actual hands-on applications are used to illustrate the importance of aligning end users and information resources with corporate resources and strategy. Ethical issues such as information privacy, access, and accuracy will be included. IBE section will evaluate and present a solution to a real life IT/IS problem, as determined by the IBE company plan. Prerequisites: ACCT 2101, CIS 1605 or ACCT 2110.

CIS 3650 Database Management Systems (3) Principles and fundamental concepts of relational database, including relational database design, implementation and management. Special emphasis is placed on data modeling, data normalization, database design and implementation with structured query language (SQL). Prerequisite: CIS 1605. An additional fee is associated with this course.

CIS 3655 COBOL Programming (3) Major emphasis on the developing of logical solutions to business problems. The development of programs on on-line terminals with job control and an overview of architecture of the latest IBM systems. Processing business data using COBOL (Common Business Oriented Language) on mainframe IBM systems. Prerequisites: CIS 3650.

CIS 3660 Analysis and Design of Computer Information Systems (3) Fundamentals of object-oriented system analysis and design. Using Computer Aided Software Engineering (CASE) tools such as MS Project, IBM Rational RequisitePro and Software Modeler to model the business, capture the requirements, and designing, (and prototyping) a business application. Prerequisite: CIS 2615 and CIS 3630. An additional fee is associated with this course.

CIS 3665 Data Communication Technologies (3) Current topics in data communications technology. Topics in wireless and wired technologies supporting personal area, local area and/or wide area networks will be considered. Prerequisite: CIS 2665.

CIS 3670 User Interface Design (3) Principles and guidelines for developing interface designs. Foundational theory, the design / development process and testing for web and application software interfaces will be addressed. Prerequisites: CIS 2615 and CIS 3660.

CIS 3680 Systems Project (1-3) An independent individual project to be completed by the student. *May be repeated for a maximum of 5 semester hours.* Prerequisite: CIS 3660.

CIS 3685 Integrative Business Experience Practicum (3) Students will apply concepts from the concurrent courses to their own start-up business venture and to community service. Corequisites: special sections of MGT 3315, MKT 3405 and CIS 3630. Prerequisites: ACCT 2101 or ACCT 2100, CIS 1605 or ACCT 2110, ECON 1010, ECON 1011.

CIS 3695 Internship in Computer Information Systems (3-9) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. May not be taken last semester of senior year. Enrollment normally in 6 or 9 semester hours. *May be repeated for a maximum of 18 semester hours.* Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission of intern program Director.

CIS 4610 Special Projects (1-3) Special projects offerings in computer information systems. *May be repeated for a maximum of 6 semester hours.* Prerequisites: Consent of Instructor and Graduate status and Admission to the B.S.B.A. program. An additional fee is associated with this course.

CIS 4620 Microcomputer Applications (3) Emphasis will be on current microcomputer hardware, operating system, and database management software. Applications will be developed using the operating system and the database software. Prerequisites: CIS 1605; and MATH 1111 or a high school program including one unit of advanced algebra and one unit of geometry.

CIS 4635 Seminar in Business Computer Applications (2-3) Business applications and programming techniques will be studied and prepared for presentation and discussion. Prerequisite: At least one programming course.

CIS 4640 Contemporary Computer Programming and Business Systems (3) Comparison and application of two or three popular programming languages; systems analysis and procedure writing, flowcharting, designing, and maintaining business applications.

Not open to computer information systems majors or minors.

CIS 4655 Software Engineering (3) An advanced course in the systematic approach to the specification, development, operation, maintenance, and retirement of software. Topics include formal specification tools, developmental strategies, software metrics, verification and validation techniques. Prerequisite: CIS 3660 and Admission to the B.S.B.A. program or Graduate status. An additional fee is associated with this course.

CIS 4660 Applications Development Using JAVA (3) Develop object-oriented web-based Graphical User Interface (GUI) applications for business using JAVA as the programming language. Prerequisites: CIS 2615 with a C grade or better and CIS 2665 and CIS 3650 and Admission to the B.S.B.A. program or Graduate status. An additional fee is associated with this course.

CIS 4665 Data Communication and Distributed Data Processing (3) A comprehensive introduction to the field of digital data communications. It provides an understanding of terminology, topology, protocol, and available systems network architecture. Prerequisites: CIS 2665 and Admission to the B.S.B.A. program or Graduate status.

CIS 4667 Contemporary Voice and Data Systems* (3) An in-depth study of the theory of telephony. Provides the student with tools to understand and manage a large voice and data communications network. Topics include Central Office Switches, ISDN, Dial-Up and ISO-OSI. Prerequisite: CIS 4665. *Not available for graduate credit.

CIS 4670 Applications Development Using VB.net (3) The course covers advanced concepts and techniques of programming in Visual Basic.net. It focuses on desktop and web-based application development implementing more advanced techniques in Windows based applications, advanced notions of object-oriented programming and development of applications that access databases. The course adopts a hands-on approach. Prerequisites: CIS 2615, CIS 2665, and CIS 3650 and Admission to the B.S.B.A. program or Graduate status.

CIS 4680 Data Resource Management (3) Designing and administering data resources with consideration of transaction management, distributed systems, security, object-oriented databases, data mining, data warehousing and alternative data structures (XML). Prerequisites: CIS 2665 and CIS 3650 or admission to the MSIT or Information Systems concentration in the MBA and Admission to the B.S.B.A. program or Graduate status. An additional fee is associated with this course.

CIS 4685 Network Planning, Design and Security (3) Essential theoretical concepts behind network planning, design and security. Use of network planning tools to design networks, configure firewalls and other security measures. Prerequisite: CIS 3665 and Admission to the B.S.B.A. program.

CIS 4690 Systems Architecture and Development (3) Information architecture options for systems development with consideration of security. Project management. Major project incorporating software, hardware and networking components. To be taken last semester. Prerequisites: (CIS 2615, CIS 3650, and CIS 4685 or concurrently) or (CIS 3670, CIS 4680, and (CIS 4660 or CIS 4670)) and Admission to the B.S.B.A. program or Graduate status.

CIS 4695 Advanced Programming in C/C++* (3) Advanced study of the ANSI C Programming Language and C++ programming constructs that improve upon C. Introduces object-oriented world with Objects, Classes, Operators and Friends. *Not available for graduate credit.

Economics and Finance

ECONOMICS

Major, B.A. Degree
(42-536)

The graduate with a Bachelor of Arts degree in Economics will use the knowledge and skills obtained in the program to:

- Use appropriate concepts and methods of analysis to identify and examine economic conditions and policies.
- Communicate effectively with consumers and producers of economic information and analysis.
- Select, collect, and manipulate data and interpret results.
- Consider the economic issues in the context of individual values, social values, and historical and global circumstances.
- Demonstrate elementary proficiency in a modern foreign language.

Sem. Hours

MAJOR REQUIREMENTS 33-36

ECON 1010	Principles of Macroeconomics	3
ECON 1011	Principles of Microeconomics	3
ECON 2010	Orientation to the Economics Major	2
ECON 3010	Intermediate Macroeconomics	3
ECON 3030	Intermediate Microeconomics	3
ECON 4000	Portfolio Assessment	1
Electives in economics or related fields		18-21

Students using ECON 1010 to fulfill 3 s.h. of Div. II B of General Education will take 21 elective hours in economics or related fields for a total of 36 s.h. in the major.

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) The Modern Language Requirement fulfills 3 s.h. of Div. II C 42-45
If ECON 1010 is used to fulfill 3 s.h. of Div. II B, 42 s.h. of General Education are required.

MATH 1111	Div. I C (required)	3
POLS 1510	Div. II B (required)	3

MODERN LANGUAGE REQUIREMENT (Refer to Bachelor's Degree Requirements section for fulfillment options.) 3-9

FREE ELECTIVES 9-28

MINIMUM TOTAL 124

ECONOMICS

Major, Bachelor of Science Degree
(43-537)

The graduate with a Bachelor of Science degree in Economics will use the knowledge and skills obtained in the program to:

- Use appropriate concepts and methods of analysis to identify and examine economic conditions and policies.
- Communicate effectively with consumers and producers of economic information and analysis.
- Select, collect, and manipulate data and interpret results.
- Consider the economic issues in the context of individual values, social values, and historical and global circumstances.
- Demonstrate quantitative and statistical knowledge and skills.

Sem. Hours

MAJOR REQUIREMENTS 41-44

CIS 1605	Business Application Software	2
ECON 1010	Principles of Macroeconomics	3
ECON 1011	Principles of Microeconomics	3
ECON 2010	Orientation to the Economics Major	2
ECON 3010	Intermediate Macroeconomics	3
ECON 3030	Intermediate Microeconomics	3
ECON 3065	Labor Economics	3
ECON 4000	Portfolio Assessment	1
ECON 4060	Game Theory Applications	3
ECON 4065	Managerial Economics	3
ECON 4075	Time Series Analysis	3
ECON 4080	Econometrics	3
FIN 2801	Business Statistics I	3

FIN 3801	Business Statistics II	3
MGT 3360	Production/Operations Management	3
Electives in economics		0-3

Students using ECON 1010 to fulfill 3 s.h. of Div. II B of General Education will take 3 elective hours in economics for a total of 44 s.h. in the major.

MINOR REQUIREMENTS 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) 45-48

If ECON 1010 is used to fulfill 3 s.h. of Div. II B, 45 s.h. of General Education are required.

COMM 1000	Div. I B (required)	3
MATH 1111	Div. I C (required)	3
BTE 1210	Div. II A (required)	2
POLS 1510	Div. II B (required)	3

FREE ELECTIVES 10-17

MINIMUM TOTAL 124

ECONOMICS

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(538)

Sem. Hours

MINOR REQUIREMENTS 20

ECON 1010	Principles of Macroeconomics	3
ECON 1011	Principles of Microeconomics	3
Electives in economics		14

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, ECON 1010 fulfills 3 s.h. of Div. II B.

FINANCE

Major, Bachelor of Science in Business Administration Degree

(46-267)

The graduate with a Bachelor of Science degree in Finance will use the knowledge and skills obtained in the program to:

- Take the initiative in identifying and pursuing opportunities for financial growth or improvement.
- Accurately use theoretical frameworks to analyze, solve, evaluate, and implement financial decisions in a systematic manner.
- Recognize international issues when evaluating/implementing financial decisions.
- Effectively communicate analyses/decisions to a wide variety of audiences, in a variety of professional contexts.
- Recognize and apply maximization principle: Maximize value of the firm/shareholders' wealth.
- Examine risk and return impacts of the firm's investment and financing decisions.
- Make sound financial decisions, using fundamental financial economic models, in a systematic manner.
- Recognize function of international financial markets.
- Comprehend role of financial intermediation.
- Appreciate legal and ethical considerations.

For admission to the finance major, a student must have a cumulative GPA of 2.40 or above (on a 4.0 scale) on all completed undergraduate college credit and a GPA of 2.40 (or above) on the 23 semester hours of HCBA preadmission courses. To graduate with a B.S.B.A., major in finance, a student must have a cumulative GPA of 2.40 or higher.

Sem. Hours

MAJOR REQUIREMENTS 71

*FIN 2801	Business Statistics I	3
FIN 3801	Business Statistics II	3
+FIN 3850	Principles of Finance	3
+FIN 3861	Financial Management I	3
+FIN 3881	Financial Institutions and Markets	3
+FIN 3891	Security Analysis	3
*ECON 1011	Principles of Microeconomics	3
ECON 3020	Money & Banking	3

ECON 3030	Intermediate Microeconomics	3
*ACCT 2101	Principles of Financial Acct.	3
*ACCT 2102	Principles of Managerial Acct.	3
CIS 1605	Business Application Software	2
CIS 3630	Management Information Systems	3
MGT 3315	Management of Organizations	3
MGT 3325	Business Communications	3
MGT 3360	Production/Operations Management	3
MKT 3405	Marketing Policy	3
*BLAW 2720	Legal Environment of Business	3
ACCT 4115	Financial Statement Analysis	3
Electives from the following		15
FIN 3835	Internship in Finance	3
FIN 4862	Financial Management II	3
FIN 4880	Bank Management	3
FIN 4803	Principles of Insurance	3
FIN 4804	Emp. Benefits & Ret. Plan	3
FIN 4815	Investment Portfolio Admin.	3
FIN 4817	Managing Financial Derivatives	3
FIN 4820	International Finance	3
Business Elective		3

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000	Div. I B (required)	3
*MATH 1111	Div. I C (required)	3
*BTE 1210	Div. II A (required)	2
*ECON 1010	Div. II B (required)	3
PSY 1100	Div. II B or	
SOC 1800	Div. II B (required)	3
ICAP 4357	Div. IV B (required)	3

FREE ELECTIVES 5

MINIMUM TOTAL 124

+FIN 3850, FIN 3861, FIN 3881 and FIN 3891 must be completed with a grade of C or better to receive the B.S.B.A.-Finance degree.
 *Students expecting to receive the B.S.B.A. Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including ACCT 2101, ACCT 2102, BLAW 2720, BTE 1210, ECON 1010, ECON 1011, FIN 2801, and MATH 1111.
 See page 99 for the Statement of Policy on Admission to a B.S.B.A. Degree program.

FINANCE

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
 (541)

Sem. Hours

MINOR REQUIREMENTS 24

ACCT 2100	Survey of Accounting	3
FIN 2801	Business Statistics I	3
FIN 3801	Business Statistics II	3
FIN 3850	Principles of Finance	3
FIN 3861	Financial Management I	3
FIN 3881	Financial Institutions & Markets	3
FIN 3891	Security Analysis	3
Finance Elective from the following		3
FIN 4803	Principles of Insurance	3
FIN 4804	Empl. Benefits & Retirement Planning	3
FIN 4815	Investment Portfolio Admin.	3
FIN 4817	Managing Financial Derivatives	3
FIN 4820	International Finance	3
FIN 4862	Financial Management II	3
FIN 4880	Bank Management	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, MATH 1111 fulfills 3 s.h. of Div. I C.

PERSONAL FINANCIAL PLANNING

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. Successful completion of minor requirements satisfies the education requirements of the CERTIFIED FINANCIAL PLANNER™ certification.
 (546)

Sem. Hours

MINOR REQUIREMENTS 18

FIN 3811	Investments	3
FIN 4803	Principles of Insurance	3
FIN 4804	Employee Benefits & Retirement Planning	3
FIN 4805	Adv. Personal Financial Planning	3
ACCT 3130	Introduction to Income Tax	3
ACCT 4136	Estate Planning	3

Economics

ECON 1010 Principles of Macroeconomics (3) An introduction to principles underlying the operation of modern industrial countries. Special attention is given to the determinants of income and employment.

ECON 1011 Principles of Microeconomics (3) An introduction to the functioning of a market economy. Emphasis is on behavior of consumers and business firms and the resulting allocation of resources and distribution of income. Prerequisite: ECON 1010.

ECON 2010 Orientation to the Economics Major (2) Familiarize economics majors with the CPI program, general outcomes, assessment activities (portfolio assessment), and future opportunities for economics majors. Prerequisite: ECON 1010 or ECON 1011.

ECON 3010 Intermediate Macroeconomics (3) Develop various theoretical frameworks for studying the forces affecting income, employment, and output in the economic system of the United States. Attention is given to the impact that government and other countries may have on these variables. Prerequisite: ECON 1010.

ECON 3013 Public Finance (3) The role of government in the modern mixed economy with emphasis on the impact of tax and expenditure policies on resource allocation and income distribution. Prerequisite: ECON 1011.

ECON 3020 Money and Banking (3) Money and banking structures including the Federal Reserve System and how it affects the economy. Monetary and National Income Theory are used to analyze economic policy. Prerequisite: ECON 1010.

ECON 3030 Intermediate Microeconomics (3) Conventional theory of consumption, production, pricing, and resource allocation. Prerequisite: ECON 1011.

ECON 3035 Internship in Economics (3-9) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. *May be repeated with consent of department and internship director.* Available for Pass/Fail credit only. Prerequisite: 60 semester hours and overall GPA of 2.50 or above and consent of internship director.

ECON 3065 Labor Economics (3) Survey of the labor force, wage and employment theories, economic insecurity including unemployment, trade unionism and collective bargaining from the standpoint of public policy. Prerequisites: ECON 1010 and ECON 1011.

ECON 4000 Portfolio Assessment* (1) Review and assess the major's overall portfolio that he/she has accumulated and engage in discussion of economic issues. Prerequisites: ECON 2010, ECON 3010 and ECON 3030. *Not available for graduate credit.

ECON 4010 International Economics (3) Principles underlying international trade and finance and analysis of current problems and related policies. Prerequisites: ECON 1010 and ECON 1011.

ECON 4015 Mathematical Economics I (3) A survey of mathematics including theory of sets, calculus, differential and difference equations, linear programming, matrices, and their application in economics. Prerequisites: ECON 1011 and FIN 2801 or MATH 1131 or MATH 1151.

ECON 4016 Mathematical Economics II (2) A continuation and more advanced study in the application of mathematical tools in economics. Prerequisite: ECON 4015.

ECON 4020 Natural Resource Economics (3) Nature of natural resources; economic efficiency as basis for natural resource use; externalities in natural resource use; factors influencing environmental quality; alternate public policy tools for influencing natural resource use. Prerequisites: ECON 1010 and ECON 1011.

ECON 4030 Directed Studies in Economics (1-3) Intensive study of significant economic topics. *May be repeated for a maximum of 9 semester hours.*

ECON 4040 History of Economic Thought (3) Classical economists and the development of economic thought from the mercantilist period through the development of present thought. The course aims at establishing a synthesis of evolving doctrines which have become the basis of currently accepted economic theory. Prerequisite: ECON 1011.

ECON 4050 Comparative Economic Systems (3) Analysis of alternate patterns of economic control, planning, and market structures. The experience of British socialism, American capitalism, and Soviet-type central planning is emphasized.

ECON 4052 Regional and Urban Economics (3) Geographic regions and urban areas as economic systems with emphasis on location theory and economic policy in the regional/urban environments. Prerequisite: ECON 1011.

ECON 4060 Game Theory Applications (3) Provides game theoretical tools used widely in economics to study situations in which various decision-makers interact. Applications include political science and biology. Prerequisites: ECON 1011 and MATH 1111.

ECON 4065 Managerial Economics* (3) This course is designed to apply economic theory and statistical methods to managerial decision making. Allocation and pricing problems of business are key focuses. Prerequisites: ECON 3010, ECON 3030 and FIN 3801. *Not available for graduate credit.

ECON 4070 Industrial Organization (3) An analysis of selected economic problems of current interest dealing primarily with the structure of American industry, with emphasis on the conduct and performance of large firms. Prerequisite: ECON 1011.

ECON 4075 Time Series Analysis* (3) The course will introduce, develop and apply forecasting models to decision making problems. The interpretation and accuracy of forecasting models will also be explored. Prerequisites: ECON 1010, ECON 3030 and FIN 3801. *Not available for graduate credit.

ECON 4080 Econometrics I (3) Mathematical techniques and problems used in the quantitative approach to economic theory. Prerequisites: ECON 3030, ECON 3010 and statistics.

Finance

FIN 1820 Personal Finance (3) For the student who desires information on managing his/her own personal income.

FIN 2801 Business Statistics I (3) Emphasizes the statistical analysis of business and economic data used in business and how this analysis aids in controlling operations and in making sound business decisions. Prerequisite: MATH 1111 or equivalent.

FIN 3801 Business Statistics II (3) Emphasizes the statistical analysis of business and economic data and how this analysis aids in controlling operations and in making sound business decisions. Prerequisite: FIN 2801.

FIN 3811 Investments (3) An analysis of investment planning, decision-making and problem solving including investment policy statements, portfolio strategies, asset allocation, security selection, and performance monitoring. Not open to students with a major or minor in finance.

FIN 3835 Internship in Finance (3-9) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. *May be repeated with consent of department and internship director.* Available for Pass/Fail credit only. Prerequisites: 60 semester hours and overall GPA of 2.50 or above and consent of internship director.

FIN 3850 Principles of Finance (3) An introduction to corporate financial decision-making, including financial analysis, working capital management, capital budgeting, long-term financing, and international finance. Prerequisites: ACCT 2102 or ACCT 2100; FIN 2801.

FIN 3861 Financial Management I (3) Organization goals and tools of financial management. Analysis of case materials illustrating problems encountered by firms of various sizes and operating characteristics. Examination of adjustment of financial policy of business to changing conditions. Prerequisite: FIN 3850, or a declared major in Actuarial Science and Mathematics with completion of MATH 4510.

FIN 3881 Financial Institutions and Markets (3) An analytic study of financial institutions, financial markets, and monetary policy. Prerequisite: FIN 3850 and [ECON 3020 or declared minor in Finance].

FIN 3891 Security Analysis (3) Classification and analysis of securities, markets, and industries. Formulation of investment policy for institutions and aggressive personal investors. Not available for credit to students who received credit in FIN 3811. Prerequisites: FIN 3801 or concurrently and FIN 3850.

FIN 4800 Special Projects in Finance* (1-3) Individualized or group study under the supervision of departmental faculty. *May be repeated for a maximum of 12 semester hours.* Prerequisite: consent of the instructor. *Not available for graduate credit.

FIN 4803 Principles of Insurance (3) Study of importance of risk in personal matters and various methods of treating risk. Includes property/liability insurance, life/health insurance, and insurance regulation. Prerequisite: FIN 3850 and Admission to the B.S.B.A. program or graduate standing or a declared major in Actuarial Science and Mathematics with completion of MATH 4510.

FIN 4804 Employee Benefits and Retirement Planning (3) A planning perspective is developed for major employee benefit arrangements, retirement plan provisions, pension design, tax implications and suitability for different businesses.

FIN 4805 Advanced Personal Financial Planning (3) Develops ability to synthesize financial planning knowledge in order to analyze complex client case scenarios. Emphasis on characteristics of the financial planning profession. Prerequisites: ACCT 4136, FIN 3811, FIN 4804; or concurrently.

FIN 4815 Investment Portfolio Administration (3) Application of security analysis and investment decision concepts to case problems and computer simulated investment situations. Additional readings in selected portfolio management theories. Prerequisite: FIN 3891 and Admission to the B.S.B.A. program or graduate standing.

FIN 4817 Managing Financial Derivatives (3) Applied analysis of pricing and hedging techniques for managing investments in derivative contracts (forward, futures, options, and swap contracts) involving the application of concepts and strategies to case problems and computer simulations. Prerequisite: FIN 3850 and Admission to the B.S.B.A. program or graduate standing or a declared major in Actuarial Science and Mathematics with completion of MATH 4510.

FIN 4820 International Finance (3) An intensified study of international banking and finance as it relates to international trade and the multinational corporation and the financing of imports and exports. Prerequisite: FIN 3850 and Admission to the B.S.B.A. program or graduate standing.

FIN 4830 Directed Readings in Finance (3) Intensive study of significant financial topics.

FIN 4862 Financial Management II* (3) Application of the theories and tools of financial decision making and control to case problems and business problem simulations. Prerequisite: FIN 3861 and Admission to the B.S.B.A. program. *Not available for graduate credit.

FIN 4880 Bank Management (3) Study and analysis of the problems of management of commercial banks with an emphasis on investment and loan portfolios. Prerequisite: FIN 3881 or concurrently and Admission to the B.S.B.A. program or graduate standing.

Management and Business Communication

MANAGEMENT

Major, Bachelor of Science in Business Administration Degree (46-268)

In the B.S.B.A. in Management major, our students will be give the opportunity to:

- Become more effective decision makers.
- Organize activities to implement decisions.
- Deliver effective oral presentations and written communications.
- Lead others effectively.
- Develop skills and attitudes required for life-long learning and serving others.

	Sem. Hours
MAJOR REQUIREMENTS	60
MGT 3315** Management of Organizations	3
MGT 3320 Systems, Teams & Org. Behavior	3
MGT 3325 Business Communications	3
MGT 3345 International Management	1
MGT 3360 Production/Operations Mgt.	3
MGT 4310 Quality Systems	3
MGT 4320 Leading & Managing Teams & Org.	3
MGT 4325 Management Communication	3
MGT 4370 Supply Chain Management	3
MGT 3385** Integrative Bus. Experience Pract., 3 or	
MKT 3485** Integrative Bus. Experience Pract., 3 or	
CIS 3685** Integrative Bus. Experience Pract., 3	3
HRM 3920 Human Resource Management	3
*ACCT 2101 Principles of Financial Acct.	3
*ACCT 2102 Principles of Managerial Acct.	3
CIS 1605 Business Application Software	2
CIS 3630** Management Information Systems	3
*ECON 1011 Principles of Microeconomics	3
*FIN 2801 Business Statistics I	3
FIN 3801 Business Statistics II	3
FIN 3850 Principles of Finance	3
MKT 3405** Marketing Policy	3
*BLAW 2720 Legal Environment of Business	3

GENERAL EDUCATION REQUIREMENTS (page 41)	48
COMM 1000 Div. I B (required)	3
*MATH 1111 Div. I C (required)	3
*BTE 1210 Div. II A (required)	2
*ECON 1010 Div. II B (required)	3
PSY 1100 Div. II B or	
SOC 1800 Div. II B (required)	3
ICAP 4357 Div. IV B (required)	3

FREE ELECTIVES - Internship recommended

MINIMUM TOTAL

*Students expecting to receive the B.S.B.A. Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including ACCT 2101, ACCT 2102, BLAW 2720, BTE 1210, ECON 1010, ECON 1011, FIN 2801, and MATH 1111. See page 99 for the Statement of Policy on Admission to a B.S.B.A. Degree program.
 **Students must enroll in IBE Practicum (MGT 3385 or MKT 3485 or CIS 3685) concurrently with the IBE sections of MGT 3315, MKT 3405 and CIS 3630.

MANAGEMENT

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (510)

Sem. Hours

MINOR REQUIREMENTS	23-24
IBE Block	12
MGT 3315 Management of Organizations	3
MKT 3405** Marketing Policy	3
CIS 3630*** Management Information Systems.	3
MGT 3385 IBE Practicum , 3 ,or	
MKT 3485 IBE Practicum, 3 or	
CIS 3685 IBE Practicum, 3	3
ACCT 2101 Principles of Financial Acct.	3
MGT 4315 Entrepreneurship	3
MGT 3325 Business Communications	3
Choose one of the following	2-3
HRM 3920 Human Resource Management	3
MGT 4325 Managerial Communication	3
BLAW 2720 Legal Environment of Business.	3
CIS 1605 Business Application Software.	2
ACCT 2102 Principles of Managerial Acct.	3
MKT class higher than MKT 3405.	3

**ECON 1010 and ECON 1011 are prerequisites for MKT 3405. The chair of the department of Marketing is willing to waive these for management minors.

***CIS 1605 is a prerequisite for CIS 3630. There are several choices for students to meet this requirement. The CIS department is willing to substitute for CIS 1605 if the student took a similar course in his/her major. Students may, alternatively take the CIS 1605 equivalency exam. If students pass this exam, the CIS 1605 prerequisite for CIS 3630 will be waived. See the CIS department chair (3rd floor Dockery) for further assistance. Lastly students may choose CIS 1605 as one of the choices above.

HUMAN RESOURCE MANAGEMENT

Major, Bachelor of Science in Business Administration Degree (46-544)

This program has been placed in abeyance. See the Department Chair for more information.

AGRICULTURE-BUSINESS

Major, Bachelor of Science Degree

See requirements as outlined in the Department of Agriculture.

Entrepreneurial

ENT 1300 Introduction to Entrepreneurship and Business (3) Introduces several types of entrepreneurship (start-up, corporate intrapreneurship, family business) as well as external and internal forces that effect the decisions in any business venture. May not be taken for credit by students who have completed in excess of 12 semester hours of B.S.B.A. courses.

ENT 1501 Entrepreneurship and Innovation Institute (2) Provides knowledge to start and maintain a business, helps students understand how to be an entrepreneurial employee, informs students on business related careers, and provides information on product/technology innovation and commercialization. The curriculum is designed to give realworld experience and knowledge to potential entrepreneurs and technology innovators. Along with specific business skills students will be encouraged to pursue higher education. Prerequisite: Enrollment in the Entrepreneurial Institute or Technology Innovation Institute.

ENT 4315 Entrepreneurship (3) This course develops the ability to identify new product opportunities and/or ideas for new businesses. Students will learn to evaluate feasibility of product/business concept. Students will interact with entrepreneurs and the course requires a class project. Cannot be used toward any graduate degree offered in the HCBA.

Management

- MGT 3315 Management of Organizations (3)** An examination of the theory and practices of managing organizations, including planning, organizational theory, human behavior, and control. Prerequisite: 60 hours.
- MGT 3320 Systems, Teams and Organizational Behavior (3)** Emphasis on systems, teams, interpersonal relationships between participants and the dominant influence of systems on human behavior in groups and organizations. Prerequisite: MGT 3325 or concurrently and MGT 3315 or concurrently.
- MGT 3325 Business Communications (3)** Improves the student's ability to plan and strategically write letters, memos, proposals, and reports and improve oral and interpersonal communication skills. Both listening and speaking skills will be developed through formal presentations, class discussions, and group work.
- MGT 3335 Internship in Management (1-9)** Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. Take only for pass/fail credit. Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission from internship director.
- MGT 3345 International Management (1)** This course will investigate the impact of 'free economies', cultural differences, negotiation styles, HR practices political systems and ethical dilemmas on international business and management.
- MGT 3360 Production/Operations Management (3)** Experiential analysis of operations problems commonly faced by managers in many disciplines. Emphasis on strategic operations decision making, planning operations systems, forecasting, quality and project management. Prerequisites: FIN 3801 or concurrently and MGT 3315 or concurrently; or FIN 3801 or concurrently and a declared BS in Economics.
- MGT 3385 Integrative Business Experience Practicum (3)** Students will apply concepts from the concurrent courses to their own start-up business venture and to community service. Corequisites: special sections of MGT 3315, MKT 3405 and CIS 3630. Prerequisites: ACCT 2101 or ACCT 2100, CIS 1605 or ACCT 2110, ECON 1010, ECON 1011.
- MGT 4300 Health Care Administration (3)** Management concepts, tools, and techniques for effective administration of all types of health care facilities. Prerequisite: MGT 3315.
- MGT 4310 Quality Systems (3)** Students learn systems thinking, criteria for the design of quality systems, the change process for transformation of organizational systems, process management, and the cycle of continuous improvement. Prerequisite: MGT 3360 and Admission to the B.S.B.A. program or admission to the graduate school.
- MGT 4320 Leading and Managing Teams and Organizations* (3)** This course focuses on the behaviors of exemplary leaders. Student teams develop and deliver workshops allowing fellow students to become more effective leaders by practicing the behaviors of exemplary leadership. Prerequisites: MGT 3320, MGT 4310 or concurrently, Admission to the B.S.B.A. program. *Not available for graduate credit.
- MGT 4325 Management Communication* (3)** Provide advanced communication theories and methods which are essential for effective managers in oral and written communication situations. Emphasizes individual, team, and group communication through a series of business cases. *Not available for graduate credit. Prerequisite: MGT 3325 and Admission to the B.S.B.A. program.
- MGT 4350 Special Projects in Management (1-3)** Advanced course in management theory, practice, methods, and strategies taught on an individual or group basis to advanced management students and graduate students. *May be repeated for a maximum of 6 semester hours.* Prerequisites: all preadmission courses or MBA background requirements, MGT 3315, and Department Chair's approval with adequate preparation in area to be studied.
- MGT 4370 Supply Chain Management (3)** Explains the role of supply chain managers and the impact of their decisions on the competitive success and profitability of modern organizations. Through integrative experiential team-based activities and projects, students are given an opportunity to experience the increasingly strategic nature of supply chain management. Prerequisite: MGT 3360 and Admission to the B.S.B.A. program or admission to the graduate school.

Human Resource Management

- HRM 3920 Human Resource Management (3)** Issues related to the effective management of people within organizations; pertinent to all disciplines. Emphasis placed on practical applications using experiential activities to develop student's managerial skills. Prerequisite: MGT 3315 or concurrently.
- HRM 4930 Compensation and Benefits (3)** Concepts, models, theories, and application of processes and systems of employee compensation and benefits within organizations. Only offered Fall semester. Prerequisite: HRM 3920.
- HRM 4960 Employment and Development (3)** Concepts, models, theories, and application of human resource planning, employment, and training and development. Prerequisite: HRM 3920.
- HRM 4990 Problems in Human Resource Management (3)** An integrated approach to the administration of the human resource function in various types of organization settings through the use of the case and incident methods. Prerequisite: HRM 3920

Integrative Studies Capstone

- ICAP 4357 Organizational Policy and Strategy* (3)** Capstone course requiring integration of business knowledge using conceptual, communication, interpersonal, and technical skills applied to strategic management. Case study and competitive simulation methods are used in an experiential team learning environment. Prerequisites: Admission to the B.S.B.A. program, MGT 3315, MGT 3325, MKT 3405, FIN 3850, and senior standing. *Not available for graduate credit.

Marketing and Legal Studies

MARKETING

Major, Bachelor of Science in Business Administration Degree (46-269)

The graduate with a B.S.B.A. degree with a major in Marketing will use the knowledge and skills obtained in the program to:

- Understand the marketing concepts in consumer behavior, personal selling, marketing research, marketing analysis, strategy development and global decision-making.
- Communicate effectively in both individual and team situations using both oral and written communication.
- Interact effectively with others to analyze situations and solve marketing problems.
- Understand the valuing process as it relates to making optimal decisions in the global business environment.
- Apply analysis and problem solving skills to assess marketing situations and develop strategies for implementation.

Sem. Hours

MAJOR REQUIREMENTS 68

MKT 3405	Marketing Policy	3
MKT 3430	Professional Sales	3
MKT 3480	Consumer Behavior	3
MKT 4460	International Marketing	3
MKT 4470	Marketing Research	3
MKT 4490	Marketing Management	3
*BLAW 2720	Legal Environment of Business	3
*ACCT 2101	Principles of Financial Acct.	3
*ACCT 2102	Principles of Managerial Acct.	3
CIS 1605	Business Application Software	2
CIS 3630	Management Information Systems	3
*ECON1011	Principles of Microeconomics	3
*FIN 2801	Business Statistics I	3
FIN 3801	Business Statistics II	3
FIN 3850	Principles of Finance	3
MGT 3315	Management of Organizations	3
MGT 3325	Business Communications	3
MGT 3360	Production/Operations Mgt.	3
Marketing electives from the following		15
MKT 1400	Orientation to Marketing	1
MKT 3410	Retail Management	3
MKT 3420	Principles of Advertising	3
MKT 3435	Internship in Marketing	1-6
MKT 3460	Advanced Professional Sales	3
MKT 4420	Sales Management	3
MKT 4430	Marketing Distribution	3
MKT 4440	Seminar in Marketing	3
MKT 4450	Integrated Marketing Comm.	3

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000	Div. I B (required)	3
*MATH 1111	Div. I C (required)	3
*BTE 1210	Div. II A (required)	2
*ECON1010	Div. II B (required)	3
PSY 1100	Div. II B or	
SOC 1800	Div. II B (required)	3
ICAP 4357	Div. IV B (required)	3

FREE ELECTIVES 8

MINIMUM TOTAL 124

*Students expecting to receive the B.S.B.A. Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including ACCT 2101, ACCT 2102, BLAW 2720, BTE 1210, ECON 1010, ECON 1011, FIN 2801, and MATH 1111. See page 99 for the Statement of Policy on Admission to a B.S.B.A. Degree program.

MARKETING

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (512)

Sem. Hours

MINOR REQUIREMENTS 18

MKT 3405	Marketing Policy	3
MKT 3430	Professional Sales	3
MKT 3480	Consumer Behavior	3
BLAW 2720	Legal Environment in Business	3
ECON 1010	Principles of Macroeconomics	3
Marketing elective from the following		3
MKT 3410	Retail Management	3
MKT 3420	Principles of Advertising	3
MKT 3460	Advanced Professional Sales	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, ECON 1010 fulfills 3 s.h. of Div. II B.

BUSINESS ADMINISTRATION

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. Not available to students pursuing a B.S.B.A. degree. (545)

Sem. Hours

MINOR REQUIREMENTS 19

ACCT 2101	Principles of Financial Accounting	3
ECON 1010	Principles of Macroeconomics	3
BLAW 2720	Legal Environment in Business	3
MGT 3315	Mgt. of Organizations	3
MKT 3405	Marketing Policy	3
CIS 1605	Business Application Software	2
BTE 1210	Essentials of Managing Info.	2

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, if elected, BTE 1210 fulfills 2 s.h. of Div. II A; ECON 1010 fulfills 3 s.h. of Div. II B.

Marketing

MKT 1400 Orientation to Marketing (1) Orientation to the field of marketing. Available for those with less than 75 hours and no prior credit in MKT 3405 or equivalent. Counts as a free elective.

MKT 3400 Principles of Marketing (3) Methods used in determining the needs and desires of consumers and translating these findings into products of a suitable nature. Methods used in getting these products into the hands of the consumer. Basic marketing class for nonbusiness majors. Not available to students with prior credit in MKT 3405 and may not be used as a marketing elective.

MKT 3405 Marketing Policy (3) A comprehensive study of marketing theory and concepts and the application of these ideas in modern organizations by professionally trained managers. First course in marketing sequence for marketing majors and minors, and marketing foundation course for the business core requirement of B.S.B.A. degree students. May not be used as a marketing elective. Prerequisite: 60 semester hours of college credit.

MKT 3410 Retail Management (3) The initial considerations and decisions for establishing and managing a retail store. Prerequisite: MKT 3400 or MKT 3405.

MKT 3420 Principles of Advertising (3) Advertising purposes and procedures covering primarily the point of view of the advertising manager. Study of proper appeals, copy preparation, layout, and media. Prerequisite: MKT 3400 or MKT 3405 or AGRI 3120.

MKT 3430 Professional Sales (3) Techniques involved in personal selling. Prerequisite: MKT 3400 or MKT 3405 or AGRI 3120.

MKT 3435 Internship in Marketing (1-6) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. May not be taken last semester of senior year. Available for Pass/Fail Credit only. Prerequisites: Admission to the B.S.B.A. program, MKT 3405, overall GPA 2.50 or above and consent of internship director.

MKT 3460 Advanced Professional Sales (3) This course will apply advanced communication skills to the sales process for those interested in business to business selling as a career. Prerequisites: MKT 3405 and MKT 3430.

MKT 3480 Consumer Behavior (3) The application of knowledge from the behavioral sciences to the study, analysis, and interpretation of consumer buying habits and motives. Individual, group, and cultural influences on consumer preferences and purchasing patterns are emphasized. Prerequisite: MKT 3400 or MKT 3405.

MKT 3485 Integrative Business Experience Practicum (3) Students will apply concepts from the concurrent courses to their own start-up business venture and to community service. Corequisites: special sections of MGT 3315, MKT 3405 and CIS 3630. Prerequisites: ACCT 2101 or ACCT 2100, CIS 1605 or ACCT 2110, ECON 1010, ECON 1011.

MKT 4420 Sales Management (3) Management aspects of selling with emphasis on the role of the supervisor in the sales field. Prerequisites: MKT 3405; Admission to the B.S.B.A. program for undergraduate students or graduate status.

MKT 4430 Marketing Distribution (3) Methods and strategies used in distributing products including the design of channels and the activity performed by channel members to facilitate efficient movement of goods. Prerequisites: MKT 3405; Admission to the B.S.B.A. program for undergraduate students or graduate status.

MKT 4440 Seminar in Marketing (3) Analysis of current issues and problems in marketing with emphasis on new theoretical and methodological developments. Prerequisites: MKT 3405; Admission to the B.S.B.A. program for undergraduate students or graduate status.

MKT 4450 Integrated Marketing Communication (3) The determination of the correct blend of advertising, personal selling, sales promotion, reseller support, and publicity. Prerequisites: MKT 3405; Admission to the B.S.B.A. program for undergraduate students or graduate status.

MKT 4460 International Marketing (3) Marketing policies and practices in foreign trade. Prerequisites: MKT 3405; Admission to the B.S.B.A. program for undergraduate students or graduate status.

MKT 4470 Marketing Research (3) Applications of research methods to the problems of marketing. Prerequisites: MKT 3405; Admission to the B.S.B.A. program for undergraduate students or graduate status.

MKT 4480 Special Projects in Marketing (1-3) Individualized or group study under supervision of department faculty. Prerequisite: department chair approval.

MKT 4490 Marketing Management* (3) An overview of major areas of marketing from the viewpoint of the marketing executive; a capstone course integrating previous marketing study and background into a managerial context. Prerequisites: MKT 3405, Admission to the B.S.B.A. program, and last semester in program. *Not available for graduate credit.

Business Administration

BADM 1400 Business Orientation (1) Business Orientation is designed to facilitate students' orientation to the Harmon College of Business Administration (HCBA) and the University of Central Missouri. This course is available for Business Administration students and will count for free elective credit. Topics will include university resources, academic skills, time management, setting and achieving goals, as well as future careers choices within the six HCBA emphasis areas including Accounting, Economics, Finance, Marketing, Management, and Computer Information Systems.

Legal Studies

BLAW 2720 Legal Environment of Business (3) Survey of a number of areas of law that are important to persons as citizens and as participants in economic activity. Included are the legal process, business ethics, contracts, torts, constitutional law, agency, business organization, and employment law.

BLAW 2750 Legal and Ethical Decision Making in the Workplace (3) This course is designed to help students identify, analyze and resolve both ethical and legal issues they will encounter both early in their careers and in the years to come.

BLAW 3721 Law of Business Transactions (3) Comprehensive discussion of laws concerning the formation and performance of contracts, sale of goods transactions, creation and transfer of negotiable instruments and selected other areas of commercial law. Prerequisite: BLAW 2720.

BLAW 4740 Employment Law (3) Current analysis of legal issues in the workplace relating to the employment process. Focus covers a broad spectrum, including Title VII/Equal Employment Opportunity, Fair Labor Standards Act, OSHA, ERISA and labor law. Policy issues involving discrimination, affirmative action and sexual harassment will be covered, as well as applied topics such as the legality of the hiring process. Prerequisite: BLAW 2720.

BLAW 4750 Collective Bargaining (3) Roles and strategies of labor, management, and the Government as the active participants in the negotiation and performance of the labor contract. Prerequisite: BLAW 4740.

School of Accountancy

Sem. Hours

School of Accountancy Statement of Policy

All students must refer to page 96 for the Statement of Policy on Admission to a B.S.B.A. Degree program.

The School of Accountancy offers the following degree options:

- B.S.B.A.- Accountancy
 - M.A.- Accountancy (for details about this degree see the graduate catalog)
 - A combined 150-hour B.S.B.A./M.A. in Accountancy
 - A concentration in Accountancy in the HCBA's M.B.A. degree (for details about this degree see the graduate catalog).
- A minor in accountancy is also offered.

If a student chooses the combined 150-hour B.S.B.A./M.A. in Accountancy program, there are specific requirements that must be met for admission. There are also specific requirements to be met in order to remain in the program. Contact the School of Accountancy for details.

For admission to the accountancy major, a student must have a cumulative GPA (4.00 scale) of 2.65 or higher on all completed undergraduate college credit and a GPA of 2.65 (or above) on the 23 semester hours of HCBA preadmission courses. Any exceptions to this policy must be approved by the School of Accountancy Chair.

A minimum grade of C must be earned in the following courses if they are to be applied toward the fulfillment of an accountancy major or minor: ACCT 2101, ACCT 2102, ACCT 2110, ACCT 3111, ACCT 3112, ACCT 3120, ACCT 3130, and ACCT 3160.

A student with an accountancy major or minor may enroll in a course offered by the School of Accountancy only if a grade of at least C is earned in each of the course's accounting prerequisites.

ACCOUNTANCY

Major, Bachelor of Science in Business Administration Degree (46-259)

The design of the undergraduate degree for accounting students is to provide students with sufficient technical and professional accounting knowledge as well as the skills that form the foundation for a career in accounting and to engage in a life-long learning process. The School of Accountancy has identified three professional knowledge and skill areas, which are 1) professional accounting knowledge; 2) professional accounting skills; and 3) professional orientation. Within each of these three key areas, key program outcomes are identified.

Professional Accounting Knowledge - each student can demonstrate the ability to apply professional accounting knowledge in the following areas:

- Measurement, recording, analysis, validation, interpretation, and communication of financial managerial and other business information.
- Ethical and regulatory environments in which accountants work.
- Business processes and internal control.
- Risk assessment and assurance for financial and non-financial reporting.
- Tax policy and compliance for individuals and business entities.

Professional Accounting Skills - each student can demonstrate basic professional skills in the following areas:

- Written communication.
- Use of information technology to support business processes and decision-making.
- Problem solving / critical thinking skills.
- Researching appropriate resources to resolve accounting related issues.

Professional Orientation - students can demonstrate an awareness of the following professional areas associated with success in the accounting profession:

- Complexities of the global business environment.
- Expectations of professional and ethical conduct and the need for continuing education.
- Roles and responsibilities of accountants to insure the integrity of financial and other business information.

MAJOR REQUIREMENTS 66

*ACCT 2101	Principles of Financial Acct.	3
*ACCT 2102	Principles of Managerial Acct.	3
ACCT 2110	Microcomputer Appl. in Acct.	3
ACCT 3111	Inter. Financial Accounting I	3
ACCT 3112	Inter. Financial Accounting II	3
ACCT 3120	Cost & Managerial Accounting	3
ACCT 3130	Introduction to Income Tax	3
ACCT 3160	Acct. Information Systems	3
ACCT 4100	Advanced Accounting I	3
ACCT 4105	Auditing	3
*ECON1011	Principles of Microeconomics	3
*FIN 2801	Business Statistics I	3
FIN 3801	Business Statistics II	3
FIN 3850	Principles of Finance	3
MGT 3315	Management of Organizations	3
MGT 3325	Business Communications	3
MGT 3360	Production/Operations Mgt.	3
MKT 3405	Marketing Policy	3
*BLAW 2720	Legal Environment of Business	3
BLAW 3721	Law of Business Transactions	3
**Accounting and Business Electives		6

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000	Div. I B (required)	3
*MATH 1111	Div. I C (required)	3
*BTE 1210	Div. II A (required)	2
*ECON1010	Div. II B (required)	3
PSY 1100	Div. II B or	
SOC 1800	Div. II B (required)	3
ICAP 4357	Div. IV B (required)	3

FREE ELECTIVES 9

This program requires at least 90 hours of courses without the ACCT prefix.

MINIMUM TOTAL 123

*Students expecting to receive the B.S.B.A. Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including ACCT 2101, ACCT 2102, BLAW 2720, BTE 1210, ECON 1010, ECON 1011, FIN 2801, and MATH 1111. See page 99 for the Statement of Policy on Admission to a B.S.B.A. Degree program.

**Electives must be at the 3000 or 4000 level. At least one course must be outside accounting.

ACCOUNTANCY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (326)

Sem. Hours

MINOR REQUIREMENTS 21

ACCT 2101	Principles of Financial Acct.	3
ACCT 2102	Principles of Managerial Acct.	3
ACCT 2110	Microcomputer Applications in Accounting	3
ACCT 3111	Inter. Financial Accounting I	3
ACCT 3112	Inter. Financial Accounting II	3
ACCT 3130	Introduction to Income Tax	3
ACCT 4100	Advanced Accounting	3

ACCT 2100 Survey of Accounting (3) Study of elementary financial and managerial accounting to include the preparation and use of accounting statements and use of accounting information for managerial decisions. Course may not be substituted for ACCT 2101 and/or ACCT 2102. Not available to students with credit in ACCT 2102.

ACCT 2101 Principles of Financial Accounting (3) Fundamental principles of financial accounting. The preparation and use of financial accounting records and statements for business organizations.

ACCT 2102 Principles of Managerial Accounting (3) Development and use of cost and managerial accounting information for management control and decision making. Prerequisite: ACCT 2101 and MATH 1111 or equivalent.

ACCT 2110 Microcomputer Applications in Accounting (3) Use of microcomputer to solve accounting related business problems. Prerequisites: BTE 1210, ACCT 2101, ACCT 2102 or concurrently and a minimum GPA of 2.65. Grade of C or better for all prerequisites.

ACCT 3111 Intermediate Financial Accounting I (3) Financial accounting theory and practice applied to selected topics with emphasis on assets and application of generally accepted accounting principles. Prerequisite: ACCT 2101 and ACCT 2110 or permission of department chair. Grade of C or better for all prerequisites.

ACCT 3112 Intermediate Financial Accounting II (3) Continuation of financial accounting theory and practice applied to selected topics with emphasis on equities and application of generally accepted accounting principles. Prerequisite: ACCT 3111 with a grade of C or better.

ACCT 3120 Cost and Managerial Accounting (3) Application of accounting for managerial decision making, financial reporting and control for business enterprises. Prerequisites: ACCT 2102 and FIN 2801. Grade of C or better for all prerequisites.

ACCT 3130 Introduction to Income Tax (3) Federal Income Tax principles and procedures. Determination of gross income, exclusions from gross income, business and nonbusiness deductions. Application of the principles is by the use of actual tax forms. Prerequisites: ACCT 2101 and ACCT 2102. Grade of C or better for all prerequisites.

ACCT 3135 Internship in Accounting (3-6) Opportunity for students to gain theoretical knowledge and practical experience within a particular field of specialization. May be taken for pass/fail credit only. Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission of internship supervisor.

ACCT 3160 Accounting Information Systems (3) The integration of information flows of various segments of a business into an information system of the total organization. Emphasis areas include accounting aspects of data processing, system security controls, and documentation. Prerequisites: ACCT 2110 and ACCT 3111. Grade of C or better for all prerequisites.

ACCT 4100 Advanced Accounting I* (3) Selected topics including business combinations, consolidations, financial accounting and reporting practices; and accounting and reporting for non-profit entities. Prerequisites: ACCT 3112 with a grade of C or better and Admission to the B.S.B.A. program or admission to the graduate school. *Not available for graduate credit.

ACCT 4105 Auditing (3) Study of theory and practice relating to attestation engagements, professional liability and ethics. Prerequisites: ACCT 3112, ACCT 3120, and ACCT 3160 or concurrently; Admission to the B.S.B.A. program or admission to the graduate school. Grade of C or better for all prerequisites.

ACCT 4115 Financial Statement Analysis (3) Allows students to gain financial statement analytical perspectives required of credit and equity analysts and others impacted by financial statements. Prerequisite: FIN 3850 with a grade of C or better.

ACCT 4130 Advanced Income Tax (3) Continuation of the study of Federal Income Tax. Consideration of the special treatment received by the various business entities, including a study of partnerships, corporations, estates, and trusts. Prerequisite: ACCT 3130 with a grade of C or better.

ACCT 4136 Estate Planning (3) Provides students with the knowledge base and analytical skills needed for effective planning and administration. Prerequisites: ACCT 3130 with a grade of C or better.

ACCT 4165 Special Projects in Accounting (1-3) Individualized or group study under the supervision of departmental faculty. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of instructor.

College of Education

Teacher Education

Teacher Education students may also be enrolled in programs through the College of Arts, Humanities, and Social Sciences; the College of Health and Human Services; and the College of Science and Technology.

The University of Central Missouri's Teacher Education Programs are accredited by the National Council for the Accreditation of Teacher Education, located at 2010 Massachusetts Ave. NW, Suite 500, Washington, DC 20036; phone 202-466-7496; email ncate@ncate.org. They have also been approved by the Missouri Department of Elementary and Secondary Education, PO Box 480, Jefferson City, MO 65102; phone 573-751-4212. Many of our individual programs are also nationally recognized by their specialized professional associations.

Federal Financial Aid

Students completing **initial teacher certification** as part of completion of the first bachelors or graduate degree may receive federal and state grant, loan and employment assistance in accordance with their calculated eligibility. Students pursuing **teacher certification after completion of the first bachelors degree** may receive only federal loan and work assistance. In both circumstances, the Free Application for Federal Student Aid (FAFSA) must be submitted to determine the student's eligibility for aid. See "Financial Assistance" in this catalog.

Conceptual Framework Information

The philosophical underpinnings of the UCM reflective practice model is described in the Conceptual Framework of the teacher education program.

Belief Statement

The Central educator is a competent, caring, reflective practitioner committed to the premise that all can learn.

Mission Statement

As a cornerstone of the institution for over 130 years, the University of Central Missouri's Teacher Education Program develops teachers and other school professionals who are well grounded in theory, display competence in content knowledge and instructional strategies, and possess the dispositions to ensure success for all learners. The Teacher Education Program prepares individuals as professional educators for an ever-changing, culturally diverse population. Faculty and candidates provide support and service to schools in meeting their present and future challenges by developing communities that learn through research and scholarly activities. Educator preparation is a campus-wide responsibility, a commitment that reflects the honor and worth of serving a vital profession.

Program Outcomes

All teacher education students seeking initial certification will be able to demonstrate the knowledge and skills obtained in the program to meet the outcomes of Missouri Standards for Teacher Education Programs (MoSTEP). The graduate of a teacher education program will use the knowledge and skills obtained in the program to:

- Understand the central concepts, tools of inquiry and structures of the discipline(s) within the context of a global society and create learning experiences that make these aspects of subject matter meaningful for students.
- Understand how students learn and develop, and provide learning opportunities that support the intellectual, social, and personal development of all students.
- Understand how students differ in their approaches to learning and create instructional opportunities that are adapted to diverse learners.
- Recognize the importance of long-range planning and curriculum development and develop, implement, and evaluate curriculum based upon student, district, and state performance standards.
- Use a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

- Use an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
- Model effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
- Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
- Be a reflective practitioner who continually assesses the effects of choices and actions on others. This reflective practitioner actively seeks out opportunities to grow professionally and utilizes the assessment and professional growth to generate more learning for more students.
- Foster relationships with school colleagues, parents, and educational partners in the larger community to support student learning and well-being.
- Understand theories and applications of technology in educational settings and has adequate technological skills to create meaningful learning opportunities for all students.

Policies and Procedures

Certification

The teacher certification program offered by UCM is accredited nationally by the National Council for Accreditation of Teacher Education. Programs in education also meet certification requirements set by the Missouri Department of Elementary and Secondary Education.

Missouri state regulations and UCM stipulate these basic requirements for students seeking initial teacher certification (or extended certification in some instances): (1) for admission to teacher education programs, passing all sections of the College Basic Academic Subjects Examination for Teachers (C-BASE) and receiving a grade of "C" or better in an oral communications class, Foundations of Education/Field Experience class, Educational Psychology class, Composition I class, College Algebra or Pre-Calculus Mathematics or Contemporary Mathematics class; complete a minimum of 48 semester hours of college credit with a minimum 2.5 cumulative grade-point average, currently enrolled at UCM with a minimum of 2.5 grade-point average at Central Missouri, have cleared a state and national criminal background check; (2) a minimum cumulative grade-point average of 2.50 on a 4-point scale on all college work attempted prior to initial certification; (3) a minimum grade-point average of 2.50 on a 4-point scale in each initial certificate subject area, and any additional area of endorsement for extended certification; (4) a minimum grade-point average in professional education courses of 2.50, with no grade lower than "C", "professional education courses" are defined as those listed in the state certificate requirements as (a) Foundations of Teaching, (b) Teaching Methods, and (c) Clinical Experiences; (5) completion of the PRAXIS II subject assessment with a score no lower than a minimum determined by the state of Missouri for each test ("exit test"); (6) meet Missouri standards for teacher certification.

Initial teacher certification may be earned at UCM via completion of the Bachelor of Science in Education degree, the Bachelor of Music Education degree and in certain instances the Bachelor of Science degree. Students may apply for certification upon completion of degrees with major and minor programs that are designated as meeting certification guidelines of the state of Missouri. The degree earned, however, does not automatically lead to certification; failing to complete satisfactorily the "exit test" requirement (see above) does not prevent the awarding of the degree but will be cause for non-issuance of the certificate. Initial teacher certification may also be obtained through a post-baccalaureate program. In addition, UCM has instituted an alternative program for certification for people with degrees not in education who are otherwise eligible for immediate employment in a school position. See the Director of Clinical Services and Certification for further information about both of these special programs.

UCM offers undergraduate majors in the following fields which lead to initial teacher certification:

- Agricultural Education
- Art
- Business Teacher Education
- Early Childhood Education
- Elementary Education
- English
- Family and Consumer Science
- Mathematics
- Middle School Education
- Modern Languages (French or Spanish)
- Music, Instrumental and/or Vocal
- Physical Education
- Sciences (Biology, Chemistry, Earth Science, Physics)
- Social Studies
- Special Education (Cross-Categorical, Severely Developmentally Disabled, Early Childhood Special Education)
- Speech Communication and Theatre
- Technology Education

NOTE: Other certification programs are available that require initial certification or graduate degrees. See the Graduate Catalog for further information.

UCM offers minor programs in many of the above areas that may provide teacher certification for grades 5-9 or K-9. In addition, the following minors, all requiring completion of a major teaching program, are available:

- Driver Education
- Health Education
- Journalism
- Science Education 5-9

Admission To The Teacher Education Program

Students seeking an initial teaching certificate (as candidates for the Bachelor of Science in Education, the Bachelor of Science, or the Bachelor of Music Education degrees, or as post-baccalaureate students) must gain admission to the University of Central Missouri Teacher Education Program.

Admission to Teacher Education is required before enrolling in courses identified as PROFESSIONAL EDUCATION REQUIREMENTS (with the exception of the courses listed below) as well as those courses identified by departments representing the major area of study in the preparation for teaching. Please go to www.ucmo.edu/cert to apply.

1. Application for admission.
2. Evidence of having completed a minimum of 48 semester hours of college credit, have a cumulative GPA of at least 2.50, and be currently enrolled at UCM.
3. Completion of the following courses with a grade of C or higher:
 - A. EDFL 2100, Foundations of Education and FLDX 2150 Introductory Field Experience
 - B. EDFL 2240, Educational Psychology (or equivalent course)
 - C. ENGL 1020, Composition I (or approved equivalent course emphasizing writing skills)
 - D. College-level mathematics course (at the level of MATH 1111, 1150, or 1620)
 - E. An oral communication course (COMM 1000 or equivalent course).
4. Recommendation for admission from the department representing the major area of study in the preparation for teaching (interviews or other means of assessment as determined by individual departments).
5. Evidence of having passed all sections of the C-BASE for Teachers (undergraduates only - Post-Baccalaureate students are exempt.)
6. Satisfactory criminal history background check. No student will be admitted to teacher education if he/she has been convicted of a felony. (Post-Baccalaureate students may contact the Office of Clinical Services and Certification to clarify admission requirements.)

NOTE: Any appeal regarding denial of Admission to the Teacher Education Program should be addressed in writing to the chair of the Teacher Education Council. Further appeal should be directed to the Dean of the College of Education.

Admission To The Professional Education Semester And Student Teaching

The professional education semester is generally the final semester of the program, and student teaching is the primary component.

Approval for admission to the professional education semester, including student teaching, involves meeting or completing the following minimum requirements:

1. Admission to the Teacher Education Program.
2. Submission of a completed request by December 1 for the Fall Semester, or May 1 for the Spring Semester. The application may be found at www.ucmo.edu/teach.
3. Completion of a minimum of 90 semester hours of university credit prior to the beginning of student teaching; meeting all prerequisites for professional semester courses and student teaching.
4. A minimum cumulative grade-point average of 2.50 on all university work attempted, on all courses taken at UCM, and in the field or fields for which teacher certification is being sought (determined on the basis of courses approved for the teaching area, whether taken at UCM or elsewhere).
5. A satisfactory appraisal for student teaching from each department or area in which student teaching placement is requested.
6. Evidence of computer proficiency. (A computer course may be taken for credit or the requirement may be met by other coursework.)
7. A doctor's certificate or other evidence of good health, if required by the school system where the student is placed for student teaching.
8. Students using UCM for certification must have earned a minimum of six semester hours of credit at UCM before qualifying for student teaching.
9. A current (within the last six months) criminal history background check.
10. The Teacher Education Council requires the PRAXIS II be taken prior to the student teaching semester.

NOTE: Students who are deficient in one or more of the requirements for Admission may petition the Teacher Education Council for permission to enroll in the Professional Education Semester. This petition privilege does not include C-BASE.

NOTE: The Director of Certification will not sign an academic contract for an undergraduate student requesting permission to teach while under contract with a school district unless there are unusual or extreme circumstances. Contact the Office of Clinical Services and Certification for additional information.

PROFESSIONAL EDUCATION REQUIREMENTS FOR SECONDARY EDUCATION, B-12 EDUCATION and K-12 EDUCATION Bachelor of Science in Education and Bachelor of Music Education Degrees

Bachelor of Science in Education and Bachelor of Music Education degree programs include the following additional professional education components toward the total of a minimum of 120 semester hours required. Majors and minors leading to certification to teach are listed in the respective departments or service fields with teaching programs. Professional education requirements listed here apply to each secondary, B-12, or K-12 program, with exceptions as noted in certain majors.

Sem. Hours	
MAJOR REQUIREMENTS	30-67

UCM offers certification as indicated under Certification (see page 109) in the College of Education.

MINOR REQUIREMENTS	0-27
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GENERAL EDUCATION REQUIREMENTS (page 41) In the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B)	45
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ADDITIONAL PROFESSIONAL EDUCATION REQUIREMENTS for Secondary, B-12, K-12 and Music Education majors. 28-31

EDFL 2100	Foundations of Education	2
EDFL 2240	Educational Psychology	3
EDSP 2100	Ed. of the Exceptional Child, 2 or	
PSY 4200	Psy. of Exceptional Children, 2	2
EDFL 4210	Tchg. of Rdg. in the Sec. School	2
EDFL 4300	Ed. Measurement & Evaluation	2
EDFL 3500	Sec. Tchg. & Behavioral Mgt.	3

FLDX	2150	Introductory Field Experience	1
FLDX	3550	Practicum in Secondary Instruction	1
FLDX	4595	Student Teaching Secondary I, 5 or	
FLDX	4495	Student Teaching Elementary I, 5 (B-12 and K-12 may take this)	5
ICAP	4468	Student Teaching Secondary II	4
		Special methods in major field	2-3
		Secondary Field Experience II in major field (may be combined with special methods class or some other class as determined by the major department)	1
		Computer literacy and media technology proficiency	0-2
		Minimal computer literacy and proficiency in media technology are required prior to student teaching. These requirements may be met by ECEL 2310 - 2 hours. Majors in Business Teacher Education, Technology Education, Mathematics, Physical Education, Agricultural Education, and Vocational Family and Consumer Sciences satisfy computer proficiency through their programs.	
FREE ELECTIVES			0-7
		See program listings as indicated above for number of hours available.	
MINIMUM TOTAL			120

Clinical Experiences for Teacher Education Students

Professional Development Schools And Clinical Faculty

UCM's education majors may participate in a field experience with one of the Professional Development Schools' partners. The Teacher Education Program has formal partnership agreements with Warrensburg, Crest Ridge, Holden and Knob Noster School Districts. Additional districts may be added to the PDS program over time. Many of the public school faculty from the districts serve as clinical faculty for UCM, and work with interns in the P-12 classrooms or present on educational issues in the university courses.

Early Field Experience

Education students are required to participate in early field/clinical experiences prior to student teaching. All education majors enroll in a six-hour block of educational foundations courses, scheduled to provide flexibility for off-campus time in field experiences, typically taken at the sophomore level. The field experience portion of this block is incorporated in FLDX 2150 Introductory Field Experience.

Early childhood, elementary and middle school majors have a field experience in EDFL 3210 (Methods of Reading Instruction). Early childhood majors have additional field experiences in EDSP 3151 (Community and Family Resources Practicum), ECEL 4830 (Early Childhood Curriculum) and ECEL 4400 (Classroom Management and Interactions). Elementary education majors have additional field experiences in EDFL 4250 (Practicum in Reading) and ECEL 4400 (Classroom Management and Interactions). Middle school majors have additional field experience in EDFL 4130 (The Middle School) and EDFL 4340 (Middle School Curriculum and Instruction).

Secondary majors, after FLDX 2150 Introductory Field Experience complete their second field experience in FLDX 3550 (Practicum in Secondary Instruction) and their third in Secondary Field Experience II in their major field which is offered in conjunction with the special methods course in the Professional Education Semester.

Professional Education Semester

Early childhood, elementary and middle school majors using this catalog are required to student teach for 14 weeks, earning 12 semester hours during the Professional Education Semester.

Majors in special education using this catalog are required to student teach for a minimum of 12 weeks (usually 14), earning 12 semester hours during the Professional Education Semester. Secondary and K-12 education majors must plan for a senior semester in which they enroll full-time in a professional block of courses which includes student teaching. The 16-week semester consists of two parts-four weeks on campus in 3-4 semester hours of course work and twelve weeks of student teaching (all day, five days a week in a school setting). Secondary, B-12 and K-12 majors customarily enroll in Secondary Field Experience II in their major field, and FLDX 4595 and ICAP 4468. See the appropriate department program listing for any variations in this requirement. Students

following programs not clearly covered by these general statements or the department program listing should see the Director of Clinical Services and Certification for information. Elementary majors with a special education area of concentration/minor will be assigned two additional hours of student teaching.

Attendance at all professional education semester activities is required. Any exceptions must be approved by the Director of Clinical Services and Certification.

Field Experience

FLDX 2150 Introductory Field Experience (1) Introductory experiences in the classroom that provide opportunities for becoming involved with students and professional teachers in the school setting. Corequisite: EDFL 2100. An additional fee is assessed for this course.

FLDX 3550 Practicum in Secondary Instruction (1) Requires a minimum of 50 hours of co-teaching with a public school classroom teacher. Prerequisite: admission to Teacher Education Program. Corequisite: EDFL 3500. Should be taken no earlier than one semester prior to student teaching.

FLDX 4493 Student Teaching Early Childhood* (6) To be taken in the Professional Semester for early childhood majors and double majors in elementary education. Prerequisites: Admission to Teacher Education Program; 2.5 cumulative GPA; ECEL 4400. Should be taken concurrently with FLDX 4496 or EDSP 4395, depending on the sequence followed. (See description of Professional Education Semester.) *Not available for graduate credit.

FLDX 4495 Student Teaching Elementary I* (3, 5, 6, 8) To be taken in the Professional Semester. For elementary majors, double majors in elementary education and special education, K-12 majors and elementary physical education. Prerequisites: admission to Teacher Education Program; ECEL 4400. Should be taken concurrently with FLDX 4496 or FLDX 4498 or ICAP 4468 or EDSP 4395, depending on the sequence followed. (See description of Professional Education Semester.) *Not available for graduate credit.

FLDX 4496 Student Teaching Elementary II* (4, 6, 8) To be taken in the Professional Semester. For elementary classroom majors and majors which provide K-12 certification (except speech pathology). Prerequisite: admission to Teacher Education Program. Corequisite: FLDX 4495 or FLDX 4595. *Not available for graduate credit.

FLDX 4497 Student Teaching Middle School I* (6) To be taken in the Professional Semester. For middle school majors, double majors in elementary education, special education, or secondary education. Prerequisites: admission to Teacher Education Program; EDFL 4340; should be taken concurrently with FLDX 4498 or ICAP 4468 or FLDX 4496 or EDSP 4395, depending on sequence followed. *Not available for graduate credit.

FLDX 4498 Student Teaching Middle School II* (6) To be taken in the Professional Semester. For middle school majors. Prerequisites: admission to Teacher Education Program; should be taken concurrently with FLDX 4497 or FLDX 4495 or FLDX 4595 or EDSP 4395. *Not available for graduate credit.

FLDX 4595 Student Teaching Secondary I* (3, 5-6) To be taken in the Professional Semester. For secondary and modern language majors. Prerequisites: admission to Teacher Education Program; EDFL 3500. Should be taken concurrently with ICAP 4468 or FLDX 4496 or FLDX 4498, depending on the sequence followed. (See description of Professional Education Semester.) *Not available for graduate credit.

Integrated Capstone

ICAP 4468 Student Teaching Secondary II* (4) To be taken in the Professional Semester. For all secondary majors, all K-12 majors, and K-9 majors in elementary physical education. Prerequisite: admission to Teacher Education Program. Corequisite: FLDX 4495 or FLDX 4595 or EDSP 4395. *Not available for graduate credit.

Career and Technology Education

For the AGRICULTURAL EDUCATION Major, Bachelor of Science in Education Degree see the program listing in the Agriculture Department.

Business Teacher Education

BUSINESS TEACHER EDUCATION

Major, Bachelor of Science in Education Degree

Certification to teach business education subjects in grades 9-12. (41-270)

The graduate with a Bachelor of Science in Education degree with a major in Business Teacher Education will use the knowledge and skills obtained in the program to:

- Meet all Missouri Standards for Teacher Educators (MoSTEP).
- Meet all competencies set by the Missouri Department of Elementary and Secondary Education for Business Education (MoSTEP Standard 1.2.1 "...knows the subject(s) applicable to the area(s) of certification ...") which include: accounting, business/consumer related law, business communications, computer applications, economics, keyboarding, management, marketing, personal finance and professional education.
- Pass the PRAXIS II subject area exam at the level set by the Missouri Department of Elementary and Secondary Education.

Students may earn Marketing Teacher Education certification through careful choice of electives and successful completion of the Marketing Education exam. See the Business Teacher Education program advisor and the Director of Clinical Services and Certification for specific course work requirements.

	Sem. Hours
MAJOR REQUIREMENTS	42
CTE 1000 Intro. to Career & Technology Education	3
BTE 2535 Data Input Technologies	3
BTE 3536 Integrated Productivity Applications	3
BTE 4210 Methods of Teaching Business Ed.	3
BTE 4243 Curriculum Construction for Business & Marketing Education.	3
BTE 4501 Managing Classroom Technologies	3
BTE 4550 Publishing Applications for Business	3
BTE 4280 Implementing Business Education	3
ACCT 2101 Principles of Financial Acct.	3
MGT 3315 Management of Organizations.	3
MGT 3325 Business Communications	3
MKT 3400 Principles of Marketing	3
BLAW 2720 Legal Environment of Business	3
CTE 3110 Financial Management Education, 3 or	3
FIN 1820 Personal Finance	3
Departmentally Approved Electives	9
GENERAL EDUCATION REQUIREMENTS (page 41) In the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B	45
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.	
COMM 1000 Div. I B (required)	3
MATH 1111 Div. I C or	3
MATH 1620 Div. I C (required)	3
BTE 1210 Div. II A (required)	2
HIST 1350 Div. II B or	3
HIST 1351 Div. II B (required)	3
ECON 1010 Div. II B (required)	3
POLS 1510 Div. II B (required)	3
PSY 4230 Psy. of Adolescence	3
Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. of Div. III.	
PROFESSIONAL EDUCATION REQUIREMENTS (page 110)	28
MINIMUM TOTAL	124

BUSINESS TEACHER EDUCATION

Minor for a Bachelor's Degree

Certification to teach Business Education in grades 5-9 with a middle school-junior high school major.

NOTE: See Director of Clinical Services and Certification. (284)

	Sem. Hours
MINOR REQUIREMENTS	21
CTE 1000 Intro. to Career & Technology Education	3
BTE 2535 Data Input Technologies	3
BTE 3536 Integrated Productivity Applications	3
BTE 4501 Managing Classroom Technologies	3
BTE 4210 Methods of Teaching Business Ed.	3
CTE 3110 Financial Management Education, 3 or	3
FIN 1820 Personal Finance, 3	3
CTE 3060 Technical Writing, 3 or	3
MGT 3325 Business Communications, 3	3

ADMINISTRATIVE SUPPORT

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (548)

	Sem. Hours
MINOR REQUIREMENTS	18
BTE 2535 Data Input Technologies	3
BTE 3536 Integrated Productivity Applications	3
BTE 4550 Publishing Applications for Business	3
CTE 3110 Financial Management Education, 3 or	3
FIN 1820 Personal Finance, 3	3
CTE 3060 Technical Writing	3
ACCT 2101 Principles of Financial Acct.	3
GENERAL EDUCATION REQUIREMENTS (page 41) BTE 1210 Div. II A (required)	2

Career and Technology Education

CTE 1000 Introduction to Career & Technical Education (3) Introduction to teaching Career & Technical Education. Philosophy and content of respective Career Education programs in Missouri, and respective state and national standards.

CTE 1300 Introduction to Engineering Design (3) Use engineering-related, problem-solving skills in design development processes. Create, analyze, and communicate model product solutions using solid modeling computer design software.

CTE 1500 Gateway to Technology (3) Introduction of Project Lead The Way's® "Gateway To Technology" MS program instructional units. Includes math, science, and technology integration for success in teaching pre-engineering skills.

CTE 2000 Technology and Society (3) Explores the nature of technology, technological systems found in all cultures, the control of technology, and implications for change.

CTE 3060 Technical Writing (3) Technical writing basics, techniques, and applications. Uses a practical focus so students internalize the skills necessary to produce clear and effective documents and reports.

CTE 3110 Financial Management Education (3) Competencies related to income, taxes, money management, spending, use of credit, saving, and investing. Issues and strategies for responsible personal financial management across the life-span.

CTE 4022 Occupational Administration/Teaching Internship (1-3) Provides a mentored administration/teaching experience at the secondary/post-secondary level. Evaluation by on-site mentor and Coordinator of Technology and Occupational Education. *May be repeated for a maximum of 6 semester hours.* Prerequisites: CTE 4145, CTE 4160, and permission of the Coordinator of T&OE.

CTE 4110 Foundations of Career & Technology Education (3) Synthesizes Career and Technical Education's history, past and current issues, legislation, and philosophical foundations. Only offered Fall semester.

CTE 4115 Lab Management & Safety* (3) Students will learn to plan and equip engineering and technology labs based on curriculum and educational standards. Students learn to develop a lab safety program. *Not available for graduate credit. Prerequisite: Junior standing or consent of instructor.

CTE 4125 Methods of Teaching Problem-based Learning* (3) The course will introduce students to problem-based learning pedagogical techniques, guided inquiry, as well as develop expertise in the delivery/presentation phase of instruction. *Not available for graduate credit. Prerequisite: Admission to the Teacher Education Program. CTE 4145 should either have been completed or taken concurrently.

CTE 4135 Professional Preparation in CTE* (3) This course will prepare students to enter the profession of teaching in public schools. Students will be prepared to be fully integrated into student teaching. *Not available for graduate credit. Prerequisites: Admission to the Teacher Education Program and Student Teaching.

CTE 4140 New Teacher Institute (3) Develop teaching/instructional management skills needed to perform effectively in classrooms/laboratories. Includes structured activities designed to assist beginning vocational-technical teachers during their first teaching years.

CTE 4145 Curriculum Construction in Career and Technical Education (3) Assist new and practicing educators in selecting and organizing course content for their career and technical education courses. Prerequisite: For BS degree, CTE 4140. For BSE degree Admission to Teacher Education Program or instructor approval.

CTE 4150 Vocational Guidance (3) Facilitate awareness and ability in vocational guidance. Includes problems, methods, and procedures for assisting individuals in choosing, preparing for, entering, and progressing in their vocation.

CTE 4160 Methods of Teaching Career and Technical Education (3) Prerequisite: For BS degree, CTE 4145. For BSE degree, admission to Teacher Education Program or instructor approval.

CTE 4165 Performance Assessment in Career and Technical Education (3) Designed to assist CTE educators and administrators in critiquing, planning, developing, implementing, evaluating, and improving student performance assessments in the cognitive, affective, and psychomotor domains. Prerequisite: Instructor consent.

CTE 4180 Adult Programs in Occupational Education (3) Principles, objectives, philosophies, organization, administration, and supervision of adult health, agricultural, industrial, and homemaking occupations.

CTE 4242 Philosophy of Career and Technical Education (2) Past and current philosophy of career and technical education.

Business Teacher Education

BTE 1200 Applied Lab for Essentials of Managing Information (1) Reinforcement activities for students with limited background in computer applications and tools, along with tutoring to prepare students for BTE 1210 Essentials of Managing Information.

BTE 1210 Essentials of Managing Information (2) Students will apply computer tools to gather, evaluate, communicate, and use information; develop an operational understanding of computer technology systems for business or academic problems.

BTE 1530 Keyboarding (2) Touch operation of alphabetic, numeric, and symbol keys found on most computer keyboards, word processors, and typewriters; introduction to document formatting.

BTE 1532 Intermediate Keyboarding (3) Emphasis on building speed and accuracy. Includes document formatting. Prerequisite: Prior instruction in touch keyboarding.

BTE 2200 Business Math Problem Solving (3) This course provides students with mathematical skills needed to address basic financial and accounting business problems as applied to common business problems.

BTE 2535 Data Input Technologies (3) Technologies and processes for managing data in an information system. Emphasizes efficient input methods and alternative technologies along with appropriate document formatting and information management. Prerequisite: Keyboarding speed of 35 wpm with 95 percent or higher accuracy on a 5-minute timed writing.

BTE 2560 Organizational Administration and Event Planning (3) Provides students with foundational knowledge of organizational administrative procedures including examination of leadership styles, and strategies for planning, conducting, and following up events.

BTE 3241 Principles of Marketing Education (3) An introduction to the basic principles of marketing education.

BTE 3536 Integrated Productivity Applications (3) Continuing emphasis on input technology proficiency and document formatting with advanced productivity tools for information management. Integrated projects and problem-based learning will facilitate learning. Prerequisites: BTE 1210 and BTE 2535 with a grade of C or higher.

BTE 4210 Methods of Teaching Business Education (3) Prepares student as teachers of business education by assisting in the development of instructional methods and techniques for student-oriented classroom instruction. Prerequisites: admission to Teacher Education Program; senior or graduate status, or by departmental approval.

BTE 4220 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with BTE 4230 during the Professional Semester. *Not available for graduate credit.

BTE 4230 Methods of Teaching Business-General* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with BTE 4220 during the Professional Semester. *Not available for graduate credit.

BTE 4241 Coordination of Cooperative Education Programs (2) Organizing and implementing cooperative career and technical education programs.

BTE 4243 Curriculum Construction for Business and Marketing Education (3) Study of curriculum design and development of teaching materials in business and marketing education.

BTE 4250 Business/Marketing Education Practicum (1-3) Students will experience a supervised internship within the business or marketing environment. *May be repeated for a maximum of 6 semester hours.*

BTE 4260 Special Topics in Business Teacher Education (1-3) Topics will be listed in appropriate course schedules. May be used to teach specific microcomputer software or to cover other critical topics in business education and office administration as new technologies develop. Prerequisite: senior or graduate status.

BTE 4280 Implementing Business Education (3) This course addresses information needed to plan, implement, and maintain business education programs.

BTE 4501 Managing Classroom Technologies (3) Students will work with current electronic media management tools that enhance classroom instruction in career education. Emphasizes resources to manage a multimedia-rich educational environment. Only offered Fall semester. Prerequisites: BTE 1210 with C grade or higher, or by departmental approval.

BTE 4510 Desktop Publishing for Business (3) This course includes business desktop publishing concepts that utilize basic to intermediate design principles for creating comprehensive document layouts with polished professional-looking images. Prerequisite: BTE 3536 or departmental approval.

BTE 4550 Publishing Applications for Business (3) Business publishing using application tools and production fundamentals for print or web-ready documents and pages. Explores effective web communication techniques and principles of e-business. Prerequisite: BTE 3536 or departmental approval.

BTE 4560 Presentations and Information Management (3) Focuses on solving business problems using technology tools available for information management. Uses case study design to create solutions for business and business education. Prerequisites: BTE 4510 or BTE 4550 or departmental approval.

Family and Consumer Sciences

VOCATIONAL FAMILY AND CONSUMER SCIENCES

Major, Bachelor of Science in Ed. Degree

Certification to teach vocational family and consumer sciences from birth to grade 12.
(41-272)

The graduate with a Bachelor of Science in Education degree in Vocational Family and Consumer Sciences will:

- Gain subject matter/content area knowledge needed for certification in Vocational Family and Consumer Sciences.
- Meet Professional Education requirements for certification.
- Interact with diverse and global environments.
- Gain knowledge and skills in order to teach today's high school and middle school students.
- Use technology, research skills, problem solving, communication and critical thinking within the teaching profession.
- Gain experience working with diverse groups.

	Sem. Hours
MAJOR REQUIREMENTS	37
CTE 1000 Introduction to Career & Tech. Ed.	3
CTE 3110 Financial Management Education	3
FACS 3120 Family Resource Management	3
CFD 1220 Child Development	3
CFD 3230 Family Systems & Lifespan Dev.	3
CFD 3240 Parent-Child Interaction	3
ECEL 3260 Practicum in Child Development	1
FOOD 2322 Food Preparation	3
D&N 3340 Nutrition	3
FACS 3710 Organization of Vocational Family & Consumer Sciences Ed	3
HED 4320 Teaching Sex. Ed. in the School	3
FAME 1450 Textile & Apparel Fabrication I	3
FAME 2442 Textiles	3
FAME 4410 Architectural Interiors	3

GENERAL EDUCATION REQUIREMENTS (page 41)

In the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B. **45**

CHEM 1104 Div. II A (required)	4
BIOL 1003 Div. II A (required)	3
POLS 1510 Div. II B (required)	3
HIST 1350 Div. II B or	
HIST 1351 Div. II B (required)	3
PSY 4230 Psy. of Adolescence	3
CFD 1010 Div. III (required)	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) 29

This includes 3 s.h. of "special methods in major field" required for certification.

FREE ELECTIVES	6
MINIMUM TOTAL	120

FAMILY AND CONSUMER SCIENCES

Minor for a Bachelor's Degree

Middle school-junior high school major; elementary education majors may use this as an area of concentration.
(850)

	Sem. Hours
MINOR REQUIREMENTS	22
CTE 3110 Financial Management Education	3
FACS 3120 Family Resource Management	3
CFD 1220 Child Development	3
CFD 3230 Family Sys. & Lifespan Dev.	3
ECEL 3260 Practicum in Child Development	1
FOOD 2322 Food Preparation	3
D&N 3340 Nutrition	3
FAME 1450 Textile & Apparel Fabrications I	3

FACS 3120 Family Resource Management (3) Effective and efficient management of family resources to maximize personal and family satisfactions. Only offered Spring semester. Prerequisite: CTE 3110.

FACS 3710 Organization of Vocational Family and Consumer Sciences Education (3) The philosophy of vocational family and consumer sciences education, curriculum development and implementation, department management, career development, and student organization management. Prerequisites: EDFL 2100 and FLDX 2150 and 10 semester hours of courses required in the major.

FACS 4000 Special Projects in Family and Consumer Sciences (1-3) Investigation of contemporary problems and issues in family and consumer services. *May be repeated for a maximum of 6 semester hours.*

FACS 4150 Special Problems in Family Economics and Management (2-3) Recent trends. Group and individual problems which will include reports, discussions, bibliographies, research, and experiments. Prerequisite: FACS 3120.

FACS 4725 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with FACS 4740 during the Professional Semester. *Not available for graduate credit.

FACS 4740 Methods of Teaching Vocational Family and Consumer Sciences* (3) Prerequisites: 15 semester hours of family and consumer sciences with 5 semester hours of foods and nutrition, 5 semester hours of textiles and clothing, and 5 semester hours in related subjects; EDSP 2100; EDFL 4300 or concurrently; and admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with FACS 4725 during the Professional Semester. *Not available for graduate credit.

FACS 4750 Curriculum in Family and Consumer Sciences Education (2) Design of programs and courses for consumer homemaking or occupational family and consumer sciences education including theory, principles, development and implementation, federal and state guidelines, trends and issues. Prerequisite: FACS 4740 or equivalent.

Instructional Technology

INSTRUCTIONAL TECHNOLOGY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. Preparation for teaching computer/technology literacy in schools. (287)

	Sem. Hours
MINOR REQUIREMENTS	21
INST 3100 Use Tech to Enhance Teaching & Learning . . . 3	
INST 4300 Principles of Online Instruction	3
INST 4330 Technology Troubleshooting for Educators . . . 2	
INST 4350 Administration of K-12 Computer Lab	3
INST 4400 Design & Production of Media for Instruction	3
INST 4920 Practicum in Instructional Tech.	1
CTE 2000 Technology & Society	3
LIS 4300 Intro. to the Internet Via Internet, 3 or	
LIS 4320 Creating WebBased Internet Sources, 3 . . . 3	

INST 3100 Using Technology to Enhance Teaching and Learning (3) The application of technology to the instructional development and delivery process. The selection, utilization, and evaluation of various media forms are studied. Laboratory experience includes preparation of instructional materials, equipment operation, and field experiences. A charge is made for expendable materials. Only offered Fall semester.

INST 4005 Special Projects in Instructional Technology (1-5) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 5 semester hours.*

INST 4300 Principles of Online Instruction (3) Introduces students to the resources, techniques, and practices of teaching and learning in the PK-12 online environment.

INST 4310 Fund Development for Educational Technology (1) Practical understanding and skills related to the creating fundable ideas, locating funding sources, writing competitive proposals, and manage funded educational technology projects.

INST 4318 Telecommunications in Education (3) Provides students in education with the concepts and skills needed in using telecommunications networks for instructional purposes, research, and information access and delivery. Only offered Spring semester. Prerequisite: ECEL 2310 or equivalent experience.

INST 4330 Technology Troubleshooting for Educators (2) Provides pre-service and in-service educators with the knowledge and skill to operate, maintain and troubleshoot (service) the various hardware devices and software found in schools.

INST 4350 Administration of the K-12 Computer Lab (3) Addresses organization and management of computer labs in a k-12 setting. Introduces students to resources and skills to evaluate, select and purchase equipment and software.

INST 4400 Design and Production of Media for Instruction (3) Design and production of print-based, computer-based, and video-based instructional materials that are related to subject areas or grade levels. Includes application of hypermedia and multimedia technology to the design and production of educational materials.

INST 4920 Practicum in Instructional Technology (1) Participation in field experiences that provide practice with teaching methodology applicable specifically to the problems and procedures encountered when working with instructional technology. *May be repeated for a maximum of 4 semester hours.* Prerequisites: INST 4400.

Occupational Education

OCCUPATIONAL EDUCATION

Major, Bachelor of Science Degree

This traditional program, or "2+2" program designed to build upon an Associate Degree, may complete Missouri DESE Career and Technical Education certification requirements for alternatively certified CTE teachers, particularly Trade, Industrial and Health Sciences Instructors. UCM does not confer teacher certification for this major. (43-249)

	Sem. Hours
MAJOR REQUIREMENTS	78
Educator Specialty Area must total:	37-38
CTE 2000 Technology & Society	3
CTE 3060 Technical Writing	3
CTE 4022 Occupational Administration/ Teaching Internship.	3
CTE 4110 Foundations of Career & Tech. Ed, 3 or	
CTE 4140 New Teacher Institute, 3	3
CTE 4145 Curriculum Construction in Career & Technology Education	3
CTE 4160 Meth. of Tchg. Career & Tech. Ed.	3
CTE 4165 Performance Assessment in Career Tech. Ed.	3
CTE 4150 Vocational Guidance, 3 or	
BTE 4241 Coord. of Cooperative Ed. Prog., 2 ..	2-3
CTE 4180 Adult Programs , 3 or	
EDFL 3500 Secondary Teaching & Behav. Mgt., 3 ..	3
EDFL 2240 Educational Psychology	3
PSY 4200 Psy. of Exceptional Children.	2
GRAP 4570 Computer Graphics	3
IGEN 3116 Creative Problem Solving	3
Teaching Specialty Area:	40-41
Teaching Specialty Area: Trade/Technical, Health Occupations or Technical Electives (primary or support area; any approved area of technology). EDFL 2240 must be taught by a state-approved two-year or four-year institution. CTE 4110, CTE 4140, CTE 4145, CTE 4150, and CTE 4160 must be taught by a state-approved four-year institution.	
GENERAL EDUCATION REQUIREMENTS In the major, CTE 2000 fulfills 3 s.h. in Div. II A; IGEN 3116 fulfills 3 s.h. in Div. IV A (CTE 2000 and IGEN 3116 must be taken at UCM)	42
MINIMUM TOTAL	120

Technology Education

TECHNOLOGY EDUCATION

Major, Bachelor of Science in Ed. Degree

Certification to teach technology education in grades 9-12. (41-229)

The graduate with a Bachelor of Science in Education degree in Technology Education will use the knowledge and skills obtained in the program to:

- Be capable of implementing a contemporary technology education program based on the Standards for Technological Literacy.
- Possess a conceptual understanding of 1) the nature and history of technology and, 2) the influence of technology on society and the environment.
- Demonstrate competence with various technologies including design, communication, manufacturing, construction, transportation, energy, and computer technology.
- Employ and teach problem solving methods to solve technical problems.
- Demonstrate the ability to operate lab equipment in an efficient and safe manner, and teach accordingly.
- Demonstrate the ability to operate, schedule and control labs for technology education programs.
- Display professional habits including involvement in professional associations related to Technology Education, continuous learning, and collegiality.

Sem. Hours

MAJOR REQUIREMENTS	43
Technical Courses	28
Communications	
CTE 1300 Introduction to Engineering Design	3
GRAP 1105 Basic AutoCAD	1
GRAP 2170 Intro. to Computer-Aided Drafting	2
GRAP 4570 Computer Graphics	3
Energy and Power	
ET 1020 General Electronics	3
ET 1050 Digital Principles & Applications	4
CTE 1500 Gateway to Technology	3
Materials and Processes	
ENGT 1000 Principles of Engineering	3
ENGT 1510 Intro. to Manufacturing Processes	3
ENGT 2515 Applied Manufacturing Processes	3
Organization and Administration	6
CTE 4125 Meth. of Tch. Problem-based Learning ..	3
CTE 4145 Curriculum Construction in CTE	3
Foundations	9
CTE 1000 Intro. to Career & Technology Ed.	3
CTE 2000 Technology and Society	3
IGEN 3116 Creative Problem Solving	3
GENERAL EDUCATION REQUIREMENTS (page 41)	
In the major, CTE 2000 fulfills 3 s.h. in Div. II A 2; IGEN 3116 fulfills 3 s.h. in Div. IV A	42
BIOL 1003 Div. II A 1 (required)	3
PHYS 1104 Div. II A 1 (required)	4
HIST 1350 Div. II B or	
HIST 1351 Div. II B (required)	3
POLS 1510 Div. II B (required)	3
PSY 4230 Psy. of Adolescence	3
GEOG 3201 Div. II D (required)	3
Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. II B.	
PROFESSIONAL EDUCATION REQUIREMENTS (page 110)	28
FREE ELECTIVES	7
MINIMUM TOTAL	120

TECHNOLOGY EDUCATION

Minor, Bachelor of Science in Ed. Degree

Certification to teach technology education in grades 5-9 available only with a major in middle school-junior high school (241)

			Sem. Hours
MINOR REQUIREMENTS			21
CTE	2000	Technology & Society	3
CTE	4145	Curriculum Construction in Career & Technology Education	3
ET	1010	Applied Electricity	3
GRAP	1110	Fundamentals of Drafting	2
MMGT	1010	Mat. for Mfg. & Construction	3
PR&T	1010	Power Mechanics	3
Departmentally approved elective. A listing of courses is available from the Chair of the Department			3

GENERAL EDUCATION REQUIREMENTS (page 41)

In the minor, CTE 2000 fulfills 2 s.h. of Div. II A

T&OE 1090 Exploratory Problems in T&OE (1-3) Individual or group work on introductory level technical problems in technology and occupational education. Provide exploration of content not available through normal course offerings. *May be repeated for a maximum of 6 hours.* Prerequisites: written contract/proposal with objectives and departmental consent.

T&OE 4000 Special Projects in Technology and Occupational Education (1-3) Investigation of contemporary problems and issues in technology and occupational education by selected individuals or groups. *May be repeated for a maximum of 6 semester hours.* Prerequisites: written contract/proposal with objectives and written department consent.

T&OE 4020 Technology Education for Elementary Schools (3)

Students will design, construct, and finish inexpensive three-dimensional projects for the purpose of developing skills and understandings in the use of tools, materials and processes as they relate to the integration of constructional activities in the elementary school.

T&OE 4090 Special Problems in Technology and Occupational Education (1-3) Meets student needs for additional research and/or laboratory experience in the development of technical knowledge and skills in the areas of technology and occupational education. *May be repeated for a maximum of 6 semester hours.* Prerequisites: written contract/proposal with objectives and written department consent.

T&OE 4120 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with CTE 4160 during the Professional Semester. *Not available for graduate credit.

Integrative Studies General

IGEN 3116 Creative Problem Solving (3) A broad approach to formal techniques in creative problem solving applicable to any field of endeavor and interest. An additional fee is assessed for this course.

Educational Foundations and Literacy

Teacher Education programs in the Educational Foundations and Literacy are accredited by the National Council for Accreditation of Teacher Education and the Missouri Department of Elementary and Secondary Education. In addition, our program has been nationally recognized by the specialized professional association as follows: Middle School/Junior High by the National Middle School Association (www.nmsa.org).

MIDDLE SCHOOL-JUNIOR HIGH SCHOOL

Major, Bachelor of Science in Education Degree

Certification to teach language arts, grades 5-9, and selected area(s) of concentration/endorsement, grades K-9 or 5-9. (41-840)

			Sem. Hours
MAJOR REQUIREMENTS			38

ECEL	2310	Computer/Technology in Education	2
EDFL	3210	Methods of Reading Instruction	3
ECEL	3220	The Teaching of Language Arts	3
EDFL	3230	Content Area Literacy in the Middle School	3
EDFL	3440	Literature for the Middle Level	2
EDFL	4130	The Middle School	3
EDFL	4220	Analysis & Corr. of Rdg. Disabil.	2
EDFL	4250	Practicum in Reading	1
HED	4310	Drugs & Youth	3
HED	4320	Teaching Sexuality Education in the School	3
HED	4330	First Aid & CPR for Educators	1
ENGL	1020	Composition I	3
ENGL	1030	Composition II	3
MATH	3812	Mathematics in the Integrated Middle School Curriculum	3
ENGL	2200	American Lit. to 1865, 3 or	
ENGL	2205	American Lit. 1865 to Present, 3 or	
ENGL	2210	British Lit. to 1798, 3 or	
ENGL	2215	British Lit. 1798 To Present, 3 or	
ENGL	2220	World Masterpieces, 3	3

A student with a math minor will not enroll in MATH 3812, see minor adviser.

MINOR REQUIREMENTS 21-27

Select one area of concentration from the following list: Art (27 s.h.), Business Teacher Education (23 s.h.), English (24 s.h.), Family and Consumer Science (22 s.h.), French (27 s.h.), Health Education (22 s.h.), Instructional Technology (21 s.h.), Mathematics (25 s.h.), Science (24 s.h.), Social Studies (24-27 s.h.), Speech Communication & Theatre (21 s.h.), Spanish (27 s.h.), Technology Education (20 s.h.)

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, ENGL 1020 and ENGL 1030 fulfill 6 s.h. of Div. I A; ENGL 2200, ENGL 2205, 2210, 2215, or ENGL 2220 fulfills 3 s.h. of Div. II C; IGEN 3468 fulfills 3 s.h. of Div. IV A **36**

MATH	1620	Div. I C (required)	3
Science Choice	Group I or Group II of Div. II A		7

Group I

ECEL	1320	Biology for Teachers	3
EASC	1004	Div. II A or	
CHEM	1104	Div. II A or	
PHYS	1104	Div. II A (required)	4

OR

Group II

ECEL	1310	Physics for Teachers	3
BIOL	1004	Div. II A (required)	4
POLS	1510	Div. II B (required)	3
GEOG	2212	Div. II B (required)	3
HIST	1350	Div. II B or	
HIST	1351	Div. II B (required)	3

Modern (Foreign) language Div. II C (required) 3
 ECEL 2110 Div. II D (required) 3
 PSY 4230 Psy. of Adolescence 3
 Middle School majors will be allowed to substitute ECEL 1310
 or ECEL 1320 to fulfill 3 s.h. of Div. II A and to substitute
 PSY 4230 to fulfill 3 s.h. in Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS 30-31

EDFL 2100	Foundations of Education	2
EDFL 2240	Educational Psychology.	3
EDFL 4300	Ed. Measurement & Evaluation	2
EDFL 4340	Tchg. Strategies in the Middle School	3
FLDX 2150	Introductory Field Experience	1
FLDX 4497	Student Teaching Middle School I	6
FLDX 4498	Student Teaching Middle School II	6
IGEN 3468	Community, School & Family Connections	3
EDSP 2100	Ed. of the Exceptional Child, 2 or	
PSY 4200	Psy. of Exceptional Children, 2	2

A teaching methods course is required for each area of concentration or area of endorsement. 2-3

MINIMUM TOTAL 125

EDFL 2100 Foundations of Education (2) An overview of the American public school; its nature, purpose, history, philosophy, organization and administration; contemporary issues and trends. Includes 30 hours of public school classroom observation. Corequisite: should be taken concurrently with FLDX 2150 during the sophomore year. An additional fee is assessed for this course.

EDFL 2240 Educational Psychology (3) Furnishes the prospective teacher with the psychological concepts, principles, theories, research findings, and techniques that are relevant to guiding the educative process. Corequisites: should be taken concurrently with EDFL 2100 and FLDX 2150 during the sophomore year.

EDFL 3210 Methods of Reading Instruction (3) Fundamental concepts, skills, attitudes and methods of developing, promoting and managing reading instruction. The course includes tutoring and teacher-aided field experiences outside of class hours. Prerequisites: 2.5 cumulative GPA; EDFL 2100 and FLDX 2150 and EDFL 2240.

EDFL 3215 Teaching Reading in Content Fields (3) An examination of reading comprehension strategies, study skills, concept development, and critical thinking, especially with regard to the reading demands of content subjects and the needs of typical and atypical learners. Prerequisite: 2.5 cumulative GPA; EDFL 3210 or equivalent.

EDFL 3230 Content Area Literacy in the Middle School (3) An examination of reading needs common to content areas and a general reading program at the middle school level. Prerequisites: 2.5 cumulative GPA; EDFL 3210 or equivalent.

EDFL 3410 Children's Literature (2) Familiarity with various types of literature for children, principles for selection of children's books, and methods of presentation for integration of children's literature into the total elementary curriculum. Prerequisites: 2.5 cumulative GPA; EDFL 2100 and FLDX 2150 and EDFL 2240.

EDFL 3440 Literature for the Middle Level (2) Familiarity with various types of literature for middle level children, principles for selection of books, and methods of presentation for integration of literature into the middle school curriculum. Prerequisites: 2.5 cumulative GPA; EDFL 2100 and FLDX 2150 and EDFL 2240.

EDFL 3500 Secondary Teaching and Behavioral Management (3)
 An analysis of the teaching/learning process with emphasis on instructional planning, component teaching skills and adolescent behavior management. This course should be taken no earlier than one semester prior to student teaching. Analysis of the teaching/learning process with emphasis on instruction and adolescent behavior management. Practical experience of 25 hours at a secondary public school is required. Should be taken no earlier than one semester prior to student teaching. Prerequisite: admission to Teacher Education Program. Corequisite: FLDX 3550. Occupational Education majors need consent of T&OE to enroll. An additional fee is assessed for this course.

EDFL 4000 Special Projects in Education (1-6) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 6 semester hours.*

EDFL 4130 The Middle School (3) An exploratory course which includes an introduction to philosophy, organization, curriculum and instructional strategies appropriate to the middle school learner. Field experience in a middle school is required for initial certification students. An additional fee is associated with this course. Prerequisite: 2.5 cumulative GPA.

EDFL 4210 The Teaching of Reading in the Secondary School (2)
 Designed to prepare both the regular secondary teacher to handle reading problems common to his/her special subject matter area and the reading teacher to carry out a general reading program in the high school. Prerequisites: admission to Teacher Education Program; EDFL 2100 and FLDX 2150 and EDFL 2240, or equivalent.

EDFL 4220 Analysis and Correction of Reading Disabilities* (2) A focus on assessment of students' reading abilities and selecting appropriate teaching methods and materials to meet individual needs in reading instruction. The course includes a practicum, or field experience component, which permits application of learning and instructional decision-making. Prerequisites: admission to Teacher Education Program; EDFL 3215 or EDFL 3230 or EDFL 4210. Corequisite: EDFL 4250. *Not available for graduate credit.

EDFL 4250 Practicum in Reading* (1) A supervised field experience in the assessment of reading, analysis of reading difficulties, and educational decision-making in planning and teaching appropriate lessons. Prerequisites: admission to Teacher Education Program, EDFL 3215 or EDFL 3230 or EDFL 4210. Corequisite: EDFL 4220. *Not available for graduate credit.

EDFL 4300 Educational Measurement and Evaluation (2) Instruction in the use and interpretation of standardized tests, the construction of classroom tests, and the interpretation of test results. Prerequisite: 2.5 cumulative GPA.

EDFL 4340 Teaching Strategies in the Middle School (3) Middle school teaching strategies building upon middle level organization and curriculum, with particular emphasis on integration and interdisciplinary teaming. Prerequisites: admission to Teacher Education Program, PSY 4230 and EDFL 4130. An additional fee is assessed for this course.

Educational Leadership and Human Development

Education Administration

This department includes the undergraduate programs in Child and Family Development and in Special Education, a library science course that satisfies the General Education technology requirement, and advanced level electives for candidates planning to work on graduate degrees. It includes graduate programs in College Student Personnel Administration, Counseling, Library Science and Information Services, School Administration, and Special Education. It is also home to the UCM cohort of the University of Missouri doctoral program in Educational Leadership and Policy Analysis

EDAD 3222 Community Advising (1) Orientation to community advising and basic principles involved in student development, helping skills, and diversity issues. Prerequisite: consent of instructor.

Child and Family Development

CHILD AND FAMILY DEVELOPMENT

Major, Bachelor of Science Degree
(43-121)

Students will be:

- Able to think critically about problems and issues facing children and families.
- Prepared to use developmentally appropriate practices to promote the optimal development of diverse children and families.
- Competent to assume leadership roles in programs providing direct and support services to children and families.
- Articulate advocates for justice for families and children in both public and private arenas.
- Aware of and sensitive to ethical implications in their professional relationships with diverse families and children.

Sem. Hours

MAJOR REQUIREMENTS 45

CFD 1220	Child Development	3
CFD 1230	Observation of Children	2
CFD 3222	Early Childhood	3
CFD 3230	Family Sys. & Lifespan Development	3
CFD 3240	Parent-Child Interaction	3
CFD 3250	Org. and Adm. of Programs	3
CFD 3710	Field Experience in Child & Family Dev.	3
CFD 4220	Sexuality Across the Lifespan	3
CFD 4250	Selected Issues (2 at 3 hours each)	6
CFD 4710	Internship	3
CFD 4745	Senior Seminar	3
CFD 4850	Family Policy & Advocacy	3
SOC 2805	Introduction to Social Research	3
AE 1450	Valuing Differences.	1
Elective from the following 3		
CTE 3110	Financial Management Education	3
FACS 3120	Family Resource Management	3
FIN 1820	Personal Finance	3

GENERAL EDUCATION REQUIREMENTS (page 41) 48

PSY 1100	Div. II B (required)	3
SOC 1800	Div. II B (required)	3
HIST 1350	OR	
HIST 1351	Div. II B (required)	3
ECEL 2110	Div. II D (required)	3
CFD 1010	Div. III (required)	3

FREE ELECTIVES (contact CFD Advisor for guidance). 27

MINIMUM TOTAL 120

CFD 1000 Trends in Child and Family Development (3) Topics will be tied to Child Development Associate (CDA) competency goals. *May be repeated for a maximum of 6 semester hours.*

CFD 1010 Individual and Family Relationships (3) Focus on family relationships and personal development including topics of self-esteem, informed decision making, gender roles, love and mate selection, stress and crisis management, communication and conflict resolution, domestic violence, sexuality, parenting and human diversity.

CFD 1220 Child Development (3) An introduction to the field of child development. Emphasis is on dynamic forces underlying growth and change. Techniques in the study and observation of children. Prerequisite: A criminal background check is required in this course.

CFD 1230 Observation of Children (2) Techniques of observation and actual observation of children.

CFD 3222 Early Childhood (3) The physical, motor, intellectual, social, and emotional development of the child. Development of an intelligent philosophy of adult-child relationships.

CFD 3230 Family Systems and Lifespan Development (3) Family relationships and human development with focus on change over the course of the family life cycle.

CFD 3240 Parent-Child Interaction (3) Development and understanding of adult-child interaction in the family setting.

CFD 3250 Organization and Administration of Programs for Young Children (3) Methods and procedures for setting up and administering a variety of programs for young children. Includes study of state licensing.

CFD 3710 Field Experience in Child and Family Development (3) Supervised training and work experience in approved professional organizations in the field of child and family development. Prerequisite: CFD 1220.

CFD 4000 Special Projects in Child and Family Development (1-3) Investigation of contemporary problems and issues in Child and Family Development. *May be repeated for a maximum of 6 semester hours.*

CFD 4220 Sexuality Across the Lifespan* (3) Addresses human sexuality across the life span using a life course and cultural contextual perspective. Historical, biological, psychological, environmental, and familial influences will be examined. *Not available for graduate credit.

CFD 4250 Selected Issues in Child and Family Development (3) In-depth study of selected issues in child and family development. Each offering covers distinct issues. For CFD majors must be taken for 6 credit hours. *May be repeated for a maximum of 9 semester hours.* Prerequisite: CFD junior standing or consent of the instructor.

CFD 4710 Internship (3) Provides experience for students in cooperating businesses, agencies and organizations. *May be repeated for a maximum of 12 semester hours.* Prerequisites: CFD 3710 and departmental consent.

CFD 4745 Senior Seminar (3) Philosophy, current issues and trends in Child and Family relationships related to occupations. Focus on problem-solving styles leading to group and individual research problems. Prerequisites: senior standing, approval of department adviser.

CFD 4850 Family Policy and Advocacy* (3) This course provides an overview of trends and issues in family policy and advocacy, emphasizing the impact of laws, policies, programs on individuals and family. *Not available for graduate credit.

Library Science and Information Services

For information regarding Library Science and Information Services certifications and programs, see the Graduate Catalog.

LIS 1600 University Library and Research Skills (2) Freshman-level course introduces traditional and computer-based resources and services available in academic libraries and strategies for locating, evaluating and using information.

LIS 4000 Special Projects in Library Science (1-5) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 5 semester hours.*

LIS 4300 Introduction to the Internet Via Internet (3) An examination and evaluation of the structure and function of the Internet and its use as a tool for communication, collaboration, and commerce.

LIS 4320 Creating Web-Based Internet Sources (3) An in-depth examination and evaluation of theoretical and practical principles, along with the development of skills necessary to create and provide resources on the Internet.

Special Education

Accreditation

The Special Education program is accredited by the Council for Exceptional Children (CEC). The Council for Exceptional Children (CEC) is located at 1110 North Glebe Road, Suite 300, Arlington, VA 22201; phone 703-620-3660; email service@cec.sped.org; web page http://www.cec.sped.org.

SPECIAL EDUCATION

Major, Bachelor of Science in Education Degree

Certification to teach cross-categorical disabilities K-12; severely developmentally disabled K-12; or early childhood special education Birth-Grade 3. (41-784)

The graduate with a Bachelor of Science in Special Education will apply knowledge and skills obtained in the program to:

- Understand the philosophical, historical, and legal foundations of the field of special education.
- Identify the characteristics of exceptional learners in order to provide for accurate selection of programs and learning opportunities.
- Become proficient in the use of assessment devices enabling effective diagnosis, evaluation and programming for exceptional learners.
- Develop a thorough understanding of instructional content and best practices for children and youth with exceptional learning needs.
- Plan and manage the teaching and learning environment for students with disabilities in a variety of educational settings.
- Understand the causes of student behavior and social interaction skills.
- Develop effective communication and collaborative partnerships among educational professionals, parents, and stakeholders in the education of children and youth with exceptional learning needs
- Practice in the field of special education using established professional and ethical practices and resources for the enhanced learning of all children.

Sem. Hours

MAJOR REQUIREMENTS 52-57

CORE REQUIREMENTS – All Certification Areas. 26

EDSP	4140	Collaborating With Families of Exceptional Children	3
EDSP	4360	Behavioral Mgt. Techniques	2
EDSP	4361	Practicum in Behav. Mgt. Tech.	1
EDSP	4620	Eval. of Abilities & Achievement	3
EDSP	4700	IEP & the Law	3
HED	4330	First Aid & CPR for Educators	1
EDFL	3210	Methods of Reading Instruction	3
ECEL	2310	Computer/Technology in Education	2
ECEL	1310	Physics for Teachers, 3 or	
ECEL	1320	Biology for Teachers, 3	3
ART	3910	Art for Elementary Schools	2
MATH	3890	Concepts & Methods of Teaching for Special Education	3
Area of Certification Requirements.			26-31
Area 1 Cross-Categorical Disabilities 26			
EDFL	3215	Teaching Reading in Content Fields	3
HED	3310	Meth. in Elem. School Health	2
EDSP	4150	Career Development for Students with Disabilities	2
EDFL	4220	Analysis & Correction of Reading Disabilities	2
EDFL	4250	Practicum in Reading	1
EDSP	4385	Introduction to Cross-Categorical Special Education	3
CD	4402	Language Acquisition for Children with Developmental Disabilities	2
EDSP	4421	Methods of Cross-Cat I: MR/OHI	3
EDSP	4422	Methods of Cross-Cat II: LD	3
EDSP	4423	Methods of Cross-Cat III: E/BD	3
MATH	4890	Math. for Special Education.	2

Area 2 Severely Developmentally Disabled 28			
NUR	4060	Physical & Health Needs of the Medically Fragile Child	3
HED	3310	Meth. in Elem. School Health.	2
EDSP	4310	Intro. to Students with Severe Developmental Disabilities	2
EDSP	4330	Ed. & Training of Students with Severe Dev. Disabilities.	3
PE	4340	Adapted Physical Education	3
EDSP	4350	Augmentative & Alter. Comm.	3
EDSP	4370	Screening, Diagnosing & Prescribing Instruction	3
CD	4402	Language Acquisition for Children with Dev. Disabilities	2
EDSP	4450	Curr. & Meth. for Tchg. the Student with SDD	3
EDSP	4470	Perceptual Motor Training for Students with Disabilities	2
MATH	4890	Math. for Special Education.	2
Area 3 Early Childhood Special Education 31			
EDSP	3150	Community & Fam. Resources	2
EDSP	3151	Community & Fam. Resources Practicum	1
EDSP	4320	Intro. to Early Child. Spec. Ed.	3
EDSP	4350	Augmentative & Alter. Comm.	3
EDSP	4370	Screening, Diagnosing & Prescribing Instruction	3
EDSP	4440	Curriculum & Methods in Tchg. Early Childhood Special Ed.	3
EDSP	4470	Perceptual Motor Training for Students with Disabilities	2
CD	2000	The Bases of Speech & Lang.	2
CFD	1220	Child Development	3
CFD	1230	Observation of Children	2
D&N	2310	Early Childhood Nutr. & Health	2
ECEL	3220	The Teaching of Language Arts	3
EDFL	3410	Children's literature	2

GENERAL EDUCATION REQUIREMENTS (page 41)

Cross-Categorical Disabilities and Severely Developmentally Disabled
 In the major, ECEL 1310 or ECEL 1320 is allowed to fulfill 3 s.h. of Div. II A; HED 3310 and 4330 are allowed to fulfill 3 s.h. of Div. III, ICAP 4468 fulfills 3 s.h. of Div. IV B. 39

MATH	1620	Div. I C (required)	3
HIST	1350	Div. II B or	
HIST	1351	Div. II B (required)	3
POLS	1510	Div. II B (required)	3
GEOG	2212	Div. II B (required)	3

GENERAL EDUCATION REQUIREMENTS

Early Childhood Special Education

In the major, ECEL 1310 or ECEL 1320 is allowed to fulfill 3 s.h. of Div. II A; IGEN 3468 fulfills 3 s.h. of Div. IV A). 42
 Students must have one course in a physical or earth science and one course in a biological science in Div. II A, each must have a laboratory (total of 7 hours).

MATH	1620	Div. I C (required)	3
HIST	1350	Div. II B or	
HIST	1351	Div. II B (required)	3
POLS	1510	Div. II B (required)	3
GEOG	2212	Div. II B (required)	3

PROFESSIONAL EDUCATION REQUIREMENTS – Cross-Categorical Disabilities and Severely Developmentally Disabled 26

EDSP	2100	Ed. of the Exceptional Child	2
EDSP	4395	Student Tchg. In Spec. Ed. I	8
EDFL	2100	Foundations of Education	2
EDFL	2240	Educational Psychology	3
FLDX	2150	Introductory Field Experience	1
PSY	2220	Child Psychology	3*
PSY	4230	Psychology of Adolescence	3*
ICAP	4468	Student Tchg. Secondary II	4

Students may select certification in elementary education through the Director of Clinical Services and Certification.

PROFESSIONAL EDUCATION REQUIREMENTS – Early Childhood

Special Education			23-25
EDSP 2100	Ed. of the Exceptional Child	.....	2
EDSP 4395	Student Tchg. in Spec. Ed. I	.....	6-8
EDSP 4396	Student Tchg. in Spec. Ed. II	.....	6
EDFL 2100	Foundations of Education	.....	2
EDFL 2240	Educational Psychology	.....	3
FLDX 2150	Introductory Field Experience	.....	1
IGEN 3468	Community, School & Family Connections	.....	3
FREE ELECTIVES			0-3
MINIMUM TOTAL			124

*NOTE: Students may substitute PSY 3220 Lifespan Psychology for PSY 2220 and PSY 4230.

SPECIAL EDUCATION/ELEMENTARY EDUCATION

Minor, Bachelor of Science in Education Degree

Elementary education majors only.
(8.54)

			Sem. Hours
MINOR REQUIREMENTS			27
EDSP 4140	Collaborating With Families of Exceptional Children	.....	3
EDSP 4150	Career Development for Students With Disabilities	.....	2
EDSP 4360	Behavioral Mgt. Techniques	.....	2
EDSP 4361	Practicum in Behavioral Management Techniques	.....	1
EDSP 4620	Evaluation of Abilities & Achievements	.....	3
EDSP 4700	IEP & the Law	.....	3
EDSP 4385	Intro. to Cross Categorical Special Education	.....	3
EDSP 4420	Methods of Cross-Categorical Special Education	.....	3
CD 4402	Language Development for the Handicapped	.....	2
MATH 4890	Math for Special Education	.....	2
PSY 4230	Psychology of Adolescence, 3 or		
PSY 3220	Lifespan Development, 3,	.....	3

NOTE: Student teaching hours are not part of a minor program, but for informational purposes students will need to enroll in FLDX 4495 for 8 semester hours and EDSP 4396 for 6 semester hours. The student teaching placement for special education will be at the secondary level (grades 5-12).

EDSP 2100 Education of the Exceptional Child (2) Identification of exceptional children, methods and techniques for teaching them, as well as possible sources of referral which may be of assistance to teachers and parents of these children.

EDSP 3150 Community and Family Resources (2) Early clinical observations and experiences using community and family resources concerned with various kinds of exceptionality. *May be repeated for a maximum of 6 semester hours.* Prerequisite: EDSP 2100 or PSY 4200. Corequisite: EDSP 3151.

EDSP 3151 Community and Family Resources Practicum (1) Provides opportunities for preservice teachers to evaluate how community and family resources impact directly/indirectly on the lives of children. Prerequisite: EDSP 2100 or PSY 4200. Corequisite: EDSP 3150.

EDSP 4000 Special Projects in Special Education (1-5) Individual or group study of problems in special areas of interest. *May be repeated for maximum of 5 semester hours.*

EDSP 4140 Collaborating With Families of Exceptional Children (3) A study of the impact of exceptionality on family systems and how empowerment and community resources can strengthen the school/family partnership. Prerequisite: EDSP 2100 or PSY 4200.

EDSP 4150 Career Development for Students with Disabilities (2)

Supportive services to students with disabilities within a career development context. Prerequisite: EDSP 2100 or PSY 4200.

EDSP 4310 Introduction to Students with Severe Developmental

Disabilities (2) Basic information pertaining to the characteristics and care of students with severe developmental disabilities.

Prerequisite: EDSP 2100 or PSY 4200.

EDSP 4320 Introduction to Early Childhood Special Education (3)

Basic information pertaining to the characteristics, care, treatment, and education of young children with special needs. Only offered Fall semester. Prerequisite: EDSP 2100 or PSY 4200.

EDSP 4330 Education and Training of Students with Severe

Developmental Disabilities (3) The treatment and training strategies used in teaching students with severe developmental disabilities. Prerequisites: EDSP 4310 and EDSP 4370.

EDSP 4350 Augmentative and Alternative Communication (3)

Study and application of communication options, including manual sign language and communication devices. Prerequisite: EDSP 2100 or PSY 4200 or consent of instructor.

EDSP 4360 Behavioral Management Techniques (2) Practical approaches to behavior management for the classroom teacher, special educator, or clinician. Prerequisite: EDSP 2100 or PSY 4200.

EDSP 4361 Practicum in Behavioral Management Techniques (1)

Practical experience in designing behavioral management programs and environments under supervision. Prerequisite: EDSP 4360 or concurrently. An additional fee is assessed for this course.

EDSP 4370 Screening, Diagnosing and Prescribing Instruction (3) Case finding, screening, diagnostic and assessment procedures to be utilized in prescriptive educational planning for infants and preschool-aged children. Prerequisite: EDSP 2100 or PSY 4200.

EDSP 4385 Introduction to Cross-Categorical Special Education (3)

Information about the characteristics and education of children with mild/moderate disabilities. Prerequisite: EDSP 2100 or PSY 4200.

EDSP 4390 Introduction to Teaching the Gifted/Talented/Creative Student

(3) Definitions, identification procedures, the nature and needs, concepts and issues concerning the gifted, talented, creative child. Prerequisite: EDSP 2100 or PSY 4200.

EDSP 4395 Student Teaching in Special Education I* (5, 6, 8)

Application for Student Teaching must be made with the Director of Clinical Services and Certification. Prerequisites: special methods course in special education in one or more certification areas (EDSP 4423, EDSP 4440, or EDSP 4450). Should be taken with EDSP 4396 or ICAP 4468 or FLDX 4495. *Not available for graduate credit.

EDSP 4396 Student Teaching in Special Education II* (5, 6, 8)

Corequisite: EDSP 4395.

*Not available for graduate credit.

EDSP 4420 Methods of Cross-Categorical Special Education (3) Teaching methods, materials and curricula for education students with mild/moderate disabilities. Prerequisite: EDSP 4385.

EDSP 4421 Methods of Cross-Categorical Disabilities I: Mental

Retardation/Other Health Impaired (3) Strategies for addressing general problems in teaching students with mental retardation and other health impairments in cross-categorical and other settings including planning, materials and methods used. Prerequisites: Admission to Teacher Education Program and EDSP 4385.

EDSP 4422 Methods of Cross Categorical Disabilities II: Learning

Disabilities (3) Characteristics, etiologies, definitions, legislation and issues related to the identification of and educational planning for individuals with learning disabilities. Prerequisites: Admission to Teacher Education Program and EDSP 4385.

EDSP 4423 Methods of Cross-Categorical Special Education III:

Emotional/Behavioral Disorders (3) Strategies for addressing general problems in teaching students with emotional and/or behavioral disorders in cross-categorical and other settings including planning, materials and methods used. Prerequisites: Admission to Teacher Education Program and EDSP 4385.

EDSP 4440 Curriculum and Methods for Teaching Early Childhood

Special Education (3) The teaching methods and curricula used for educating young children with special needs. Prerequisites: Admission to Teacher Education Program and EDSP 4320 and EDSP 4370.

EDSP 4450 Curriculum and Methods for Teaching the Student with Severe Developmental Disabilities (3) Teaching methodologies and curricula used in programming for students with severe developmental disabilities. Prerequisites: Admission to Teacher Education Program and EDSP 4330.

EDSP 4470 Perceptual Motor Training for Students with Disabilities (2) Theories, assessment, instructional procedures, materials, and equipment adaptations for early childhood special education and students with severe developmental disabilities. Prerequisite: EDSP 2100 or PSY 4200.

EDSP 4480 Curriculum and Methods for the Teaching of Gifted/Talented/Creative Students (3) Teaching methods and curricula used for educating students who are gifted/talented/creative. Prerequisite: EDSP 4390 or consent of instructor.

EDSP 4620 Evaluation of Abilities and Achievement (3) Instruction in interpretation of individualized intelligence tests, formal and informal diagnostic procedures, and in prescriptive instruction. A directed clinical experience in the diagnostic assessment process for Individual Education Programs is required. Prerequisite: EDSP 2100 or PSY 4200. An additional fee is assessed for this course.

EDSP 4700 IEP and the Law (3) Administrative procedures and policies needed in establishing a program of special education. Special emphasis is given to compliance with state and federal law. A directed clinical experience in the theory, process, and practice of IEP writing is included. Prerequisite: EDSP 4620 and Admission to Teacher Education Program or Graduate Standing.

Elementary and Early Childhood Education

Teacher Education programs in the Department of Elementary and Early Childhood Education are accredited by the National Council for Accreditation of Teacher Education (NCATE) and the Missouri Department of Elementary and Secondary Education. Our programs have been nationally recognized by their specialized professional associations as follows: Early Childhood Education by the National Association for Education of Young Children (www.naeyc.org); Elementary Education by the Association for Childhood Education International (www.acei.org).

The BSE in Elementary Education leads to certification in Missouri to teach Grades 1-6 and the BSE in Early Childhood Education leads to certification in Missouri to teach Birth-Grade 3. The Elementary/Early Childhood dual certification program leads to certification in both of these levels and dual certification is also available for elementary with special education. Students interested in two levels of certification other than the options listed should see the Director of Clinical Services and Certification.

ELEMENTARY EDUCATION

Major, Bachelor of Science in Education Degree

EARLY CHILDHOOD, Birth-Grade 3

Major Option, Bachelor of Science in Education Degree
(41-286)

Certification to teach early childhood education, Birth-Grade 3.

Sem. Hours

MAJOR REQUIREMENTS 28

ECEL	2310	Computer/Technology in Education	2
ECEL	3220	The Teaching of Language Arts	3
ECEL	3420	Tchg. Social Studies & Economics in Elementary & Middle Schools	3
ECEL	4350	Elem. Science Tchg. Strategies	3
EDFL	3210	Methods of Reading Instruction	3
EDFL	3410	Children's Literature	2
HED	3310	Meth. in Elem. School Health	2
HED	4330	First Aid & CPR for Educators	1
ART	3910	Art for Elementary Schools	2
MATH	1800	Introduction to Teaching Elementary & Middle School Mathematics	2
MATH	2801	Concepts & Methods in Elementary School Mathematics	3
MUS	3301	Music for Elementary Schools	2

AREA OF CONCENTRATION REQUIREMENTS 28

ECEL	2830	Early Childhood Principles	3
ECEL	3260	Pract. in Child Development	1
ECEL	3850	Development & Learning Through Play	3
ECEL	4830	Early Childhood Curriculum	3
CD	2000	The Bases of Speech & Lang.	2
CFD	1220	Child Development	3
CFD	3250	Org. & Adm. of Programs for Young Children	3
D&N	2310	Early Childhood Nutr. & Health	2
EDSP	3150	Community & Family Resources	2
EDSP	3151	Community & Family Resources Practicum	1
EDSP	4370	Screening, Diagnosing & Prescribing Instructions	3
PE	2410	Movement Skills & Activities for Primary Grades	2

GENERAL EDUCATION REQUIREMENTS (page 41)

In the major, HED 3310 and HED 4330 will be allowed to fulfill 3 s.h. of Div. III; IGEN 3468 fulfills 3 s.h. of Div. IV A 42

COMM 1000	Div. I B (required)	3
MATH 1620	Div. I C (required)	3
Science Choice	Group I or Group II of Div. II A	7

Group I

ECEL	1320	Biology for Teachers	3
EASC	1004	Div. II A or	
CHEM	1104	Div. II A or	
PHYS	1104	Div. II A (required)	4

OR

Group II

ECEL	1310	Physics for Teachers	3
BIOL	1004	Div. II A (required)	4

POLS	1510	Div. II B (required)	3
HIST	1350	Div. II B or	
HIST	1351	Div. II B (required)	3
GEOG	2212	Div. II B (required)	3
ART	1800	Div. II C or	
MUS	1210	Div. II C (required)	3
Modern (Foreign) language		Div. II C (required)	3
ECEL	2110	Div. II D (required)	3

Elementary Education majors will be allowed to substitute ECEL 1310 or ECEL 1320 to fulfill 3 s.h. of Div. II A.

PROFESSIONAL EDUCATION REQUIREMENTS 29

ECEL	4400	Classroom Mgt. & Interactions	3
EDFL	2100	Foundations of Education	2
EDFL	2240	Educational Psychology	3
FLDX	2150	Introductory Field Experience	1
FLDX	4493	Student Teaching Early Childhood	6
FLDX	4496	Student Teaching Elementary II	6
IGEN	3468	Community, School & Family Connections	3
PSY	2220	Child Psychology, 3 or	
PSY	3220	Lifespan Development, 3	3
EDSP	2100	Ed. of the Exceptional Child, 2 or	
PSY	4200	Psy. of Exceptional Children, 2	2

MINIMUM TOTAL 127

ELEMENTARY EDUCATION

Major, Bachelor of Science in Education Degree

GRADES 1-6

Major Option, Bachelor of Science in Education Degree

(41-285)

Certification to teach elementary education in grades 1-6.

Sem. Hours

MAJOR REQUIREMENTS 36

ECEL	2310	Computer/Technology in Education	2
ECEL	3220	The Teaching of Language Arts	3
ECEL	3420	Tchg. Social Studies & Economics in Elementary & Middle Schools	3
ECEL	4350	Elem. Science Tchg. Strategies	3
EDFL	3210	Methods of Reading Instruction	3
EDFL	3215	Tchg. Reading in Content Fields	3
EDFL	3410	Children's Literature	2
EDFL	4220	Analysis & Corr. of Rdg. Disabil.	2
EDFL	4250	Practicum in Reading	1
ART	3910	Art for Elementary Schools	2
HED	3310	Meth. in Elem. School Health	2
HED	4330	First Aid & CPR for Educators	1
MATH	1800	Introduction to Teaching Elementary & Middle School Mathematics	2
MATH	2801	Concepts & Methods in Elementary School Mathematics	3
MUS	3301	Music for Elementary Schools	2
PE	3420	Elem. School Phys. Ed. Activities	2

AREA OF CONCENTRATION REQUIREMENTS 21

An approved minor/area of concentration in a teaching/specialty is required for elementary majors.

Select one approved minor/area of concentration from the following: Art (27 s.h.), Early Childhood* (28 s.h.), English (24 s.h.), Family and Consumer Science (22 s.h.) French (27 s.h.),

German (21 s.h.), Health Education (22 s.h.), Instructional Technology (21 s.h.), Mathematics (25 s.h.), Science (24 s.h.), Social Studies (24-27 s.h.), Special Education (27 s.h.), Speech Communications/Theatre (21 s.h.), Spanish (27 s.h.).

Note: Elementary majors with special education minor/area of concentration will be assigned two additional hours of student teaching.

*Requirements for Early Childhood and Elementary (birth through 6th grade) dual certification are an additional 8 s.h. over the Early Childhood (birth through grade 3) certification.

GENERAL EDUCATION REQUIREMENTS (page 41)

In the major, HED 3310 and HED 4330 will be allowed to

fulfill 3 s.h. of Div. III; IGEN 3468 fulfills 3 s.h. of Div. IV 42

COMM 1000	Div. I B (required)	3
MATH 1620	Div. I C (required)	3
Science Choice	Group I or Group II of Div. II A	7

Group I

ECEL	1320	Biology for Teachers	3
EASC	1004	Div. II A or	
CHEM	1104	Div. II A or	
PHYS	1104	Div. II A (required)	4

OR

Group II

ECEL	1310	Physics for Teachers	3
BIOL	1004	Div. II A (required)	4

POLS	1510	Div. II B (required)	3
HIST	1350	Div. II B or	
HIST	1351	Div. II B (required)	3
GEOG	2212	Div. II B (required)	3
ART	1800	Div. II C or	
MUS	1210	Div. II C (required)	3
Modern (Foreign) language		Div. II C (required)	3
ECEL	2110	Div. II D (required)	3

Elementary Education majors will be allowed to substitute ECEL 1310 or ECEL 1320 to fulfill 3 s.h. of Div. II A.

PROFESSIONAL EDUCATION REQUIREMENTS 31

ECEL	4400	Classroom Mgt. & Interactions	3
EDFL	2100	Foundations of Education	2
EDFL	2240	Educational Psychology	3
FLDX	2150	Introductory Field Experience	1
FLDX	4495	Student Tchg. Elementary I	6
FLDX	4496	Student Tchg. Elementary II	6
IGEN	3468	Community, School & Family Connections	3
PSY	2220	Child Psychology, 3 or	
PSY	3220	Lifespan Development, 3	3
EDSP	2100	Ed. of the Exceptional Child, 2 or	
PSY	4200	Psy. of Exceptional Children, 2	2

MINIMUM TOTAL 130

EARLY CHILDHOOD EDUCATION

Minor, Bachelor of Science in Education Degree

Certification to teach grades B-3 only with an elementary education major or as part of dual certification (B-6); available with no certification when used with other major areas.

(723)

Sem. Hours

MINOR REQUIREMENTS 28

ECEL	2830	Early Childhood Principles	3
ECEL	3260	Pract. in Child Development	1
ECEL	3850	Development & Learning Through Play	3
ECEL	4830	Early Childhood Curriculum	3
EDSP	3150	Community & Family Resources	2
EDSP	3151	Community & Family Resources Practicum	1

EDSP	4370	Screening, Diagnosing & Prescribing Instructions	3
CD	2000	The Bases of Speech & Lang.	2
CFD	1220	Child Development	3
CFD	3250	Org. & Adm. of Programs for Young Children	3
D&N	2310	Early Childhood Nutr. & Health	2
PE	2410	Movement Skills & Activities for Primary Grades	2

SCIENCE

Minor, Bachelor of Science in Education Degree

Certification available to teach science in grades 5-9 for elementary/middle school-junior high school majors only. Elementary education majors 1-6 may use this as an area of concentration. This minor is not available for secondary or K-12 education majors. (821)

Sem. Hours

MINOR REQUIREMENTS	24	
ECEL 1310	Physics for Teachers	3
ECEL 1320	Biology for Teachers	3
EASC 1004	Intro. to the Sciences: Geology	4
EASC 3010	Environmental Geology	3
EASC 3114	Meteorology	3
BIOL 1004	Intro. to the Sciences: Ecology	4
CHEM 1104	Intro. to the Sciences: Chemistry	4

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, BIOL 1004 and CHEM 1104 fulfill 7 s.h. of Div. II A.

ECEL 1310 Physics for Teachers (3) A demonstration, laboratory, lecture and discussion course in physics designed for elementary and nonscience secondary teachers. Credit earned in this course may not be substituted for any courses required for a secondary major or minor in the sciences.

ECEL 1320 Biology for Teachers (3) A demonstration, laboratory, lecture, and discussion course in biology designed for elementary and nonscience secondary teachers. Credit earned in this course may not be substituted for any courses required for a secondary major or minor in the sciences.

ECEL 2110 World Diversity and America (3) Provides an analysis of global interdependence with an emphasis in cultural interaction to better understand human diversity issues, diverse perspectives, one another, and one's own place in the world and America.

ECEL 2310 Computer/Technology in Education (2) Provides pre-service teachers with basic knowledge and skill in microcomputer and instructional media operation for instructional purposes in schools. Meets the proficiency requirement for microcomputer/audiovisual equipment that is a prerequisite for student teaching.

ECEL 2830 Early Childhood Principles (3) Provides students a critical understanding concerning the application of educational principles in order to make professional decisions about young children (birth-8). Requires a minimum of 30 hours of practical experience. Prerequisite: CFD 1220.

ECEL 3220 The Teaching of Language Arts (3) An integrative approach to teaching the communication arts of reading, writing, listening, and speaking in the elementary curriculum. Prerequisites: 2.5 cumulative GPA; EDFL 2100 and FLDX 2150 and EDFL 2240.

ECEL 3260 Practicum in Child Development (1) Student observation and participation with preschool children. Students work with 2, 3 and 4-year old children. Prerequisite: CFD 1220. Corequisite: CFD 3850 if Early Childhood or Childhood Development major. An additional fee is associated with this course.

ECEL 3420 Teaching Social Studies and Economics in Elementary and Middle Schools (3) Social studies and economics education competencies are developed. These are related to teaching methods; content, skills, and attitudes; and evaluative devices and assessments. Prerequisites: 2.5 cumulative GPA, EDFL 2100 and FLDX 2150 and EDFL 2240.

ECEL 3850 Development and Learning Through Play (3) Provides theoretical and empirical perspectives connecting play to young children's learning and development. Develops knowledge and skills to implement play-based curriculum in diverse settings. Prerequisites: CFD 1220, ECEL 2830 for students seeking certification in early childhood education. Corequisite: ECEL 3260.

ECEL 4000 Special Projects in Education (1-6) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 6 semester hours.*

ECEL 4150 Summative Seminar* (1) A culminating experience for elementary education majors which will provide an opportunity for students to synthesize the learnings from their program. Prerequisite: admission to Teacher Education Program. *Not available for graduate credit.

ECEL 4314 Integration of Technology in Instruction (3) Establishes and advances the use of computer technology for both teacher productivity and instructional integration into P-12 classrooms. Prerequisite: 2.5 cumulative GPA.

ECEL 4350 Elementary Science Teaching Strategies (3) Science concepts commonly developed in the elementary grades, with special emphasis on objective materials, field trips, experiments, laboratory and other activities. Enrollment is limited to students preparing to become elementary teachers. Prerequisites: admission to Teacher Education Program; completion of a physical science and biological science, each with labs, (ECEL 1310 and BIOL 1004) or (ECEL 1320 and EASC 1004 or CHEM 1104 or PHYS 1104).

ECEL 4400 Classroom Management and Interactions* (3) Helps pre-service teachers advance their knowledge and skills using general, age appropriate classroom management techniques, integrating them with developmentally appropriate teaching strategies. Prerequisites: admission to Teacher Education Program and should be taken the semester just prior to student teaching. *Not available for graduate credit.

ECEL 4830 Early Childhood Curriculum (3) Provides students with the theories and principles of curriculum development, knowledge, and skills of implementing integrated (developmentally and culturally appropriate) curriculum in early childhood (birth-8). Prerequisites: admission to Teacher Education Program and ECEL 2830 and ECEL 3850 for undergraduate students seeking certification in early childhood education.

IGEN 3468 Community, School and Family Connections (3) Focuses on the interactions among community, school and family systems relative to existing and emerging paradigms.

College of Health and Human Services

Integrative Studies General

IGEN 3472 Sport in American Life (3) Provides for an understanding and appreciation of the role of sport in American life.

IGEN 3896 Assessing Global Change for the Information Age (3)

Challenges students to assess present and future trends, evaluate what is desirable, and reflect on their responsibility for the quality of life in the information age.

Institute for Rural Emergency Management

CRISIS & DISASTER MANAGEMENT

Major, Bachelor of Science Degree
(43-248; 43-250; 43-251)

The graduate with a Bachelor of Science degree in Crisis and Disaster Management will use the knowledge and skills obtained in the programs to:

- Demonstrate a knowledge and application of the four phases of emergency management; preparedness, mitigation, response and recovery.
- Evaluate the roles, responsibilities and relationships between the private sector, public sector and non-governmental organizations in the response and recovery phases of an event.
- Select methods to identify and evaluate risk exposures from internal and external hazards and to implement cost effective programs to maintain continuity of operations.
- Employ effective communication skills, knowledge of program management, organizational skills and critical thinking.
- Select technology to organize information, to communicate and to manage all phases of emergency management.
- Recognize societal concerns, legal, professional and ethical responsibilities in the field.
- Value the importance of continuous professional development in the discipline.

CRISIS AND DISASTER MANAGEMENT

Bachelor of Science Degree

	Sem. Hours
MAJOR REQUIREMENTS	36
CDM 3000 Intro. Crisis & Disaster Management	3
CDM 3400 Community Mitigation & Recovery	3
CDM 4200 Disaster Management Technology.	3
CDM 4400 Research Issues in Crisis & Disaster Management	3
CDM 4800 Integrated Emergency Management	3
CDM 4900 Technology Application Studies.	3
CDM 4910 Field Exercise Project	3
CDM 4990 Practicum in Crisis & Disaster Mgmt.	3
Select one of the following options	12
EMERGENCY MANAGEMENT OPTION (43-248)	
CDM 3035 Emergency Response	3
CDM 4035 Disaster and Society.	3
SAFE 3015 Emergency Preparedness	3
Departmentally approved technical elective	3
HAZARDOUS MATERIALS OPTION (43-250)	
CDM 3225 Hazardous Materials Emer. Response	3
CDM 4245 Managerial Issues in Haz. Materials	3
SAFE 4215 Trans. and Storage of Haz. Materials	3
Departmentally approved technical elective	3

BUSINESS CONTINUITY OPTION (43-251)

CDM 3715 Business Continuity Planning	3
CDM 4745 Crisis Management	3
SAFE 4720 Personnel and Information Security	3
Departmentally approved technical elective	3

GENERAL EDUCATION REQUIREMENTS (page 41) **48**

CHEM 1103 Div. II A (required), 3 or	
CHEM 1104 Div. II A (required), 4	3-4

FREE ELECTIVES **36**

MINIMUM TOTAL **120**

CDM 3000 Introduction to Crisis and Disaster Management (3)

Natural, technological, and man-caused crises and disasters. All-hazards mitigation, preparedness, response, and recovery systems. Roles and responsibilities of government, non-governmental organizations, business, and industry.

CDM 3035 Emergency Response Planning (3) Management of resources during operations. Emphasis on warning systems, emergency operations centers, and incident command systems. Topics include human behavior, public health and safety. Prerequisites: CDM 3000 or permission.

CDM 3225 Hazardous Materials Emergency Response (3) Properties of hazardous materials. Development and implementation of plans/programs required for safe response. Utilization of tools and techniques during response to spills and releases. Prerequisites: CDM 3000 or permission.

CDM 3400 Community Mitigation and Recovery (3) Concept and meaning of risk. Integration of mitigation during development, post-disaster redevelopment, and maintenance; formation of disaster-resistance communities, including sociological and political considerations. Prerequisites: CDM 3000 or permission.

CDM 3715 Business Continuity Planning (3) Planning methodologies utilized by business and industry. Risk identification, business impact analysis, and the adoption of alternative recovery methods for critical processes. Prerequisites: CDM 3000 or permission.

CDM 4000 Special Topics in Crisis and Disaster (3) Exploration of emerging issues in the management of crises and in depth examination of special topics impacting on disasters.

CDM 4035 Disaster and Society* (3) Impact of disasters on social systems. Disaster mythology; individual and community response. Communications within affected groups and organizations. Prerequisite: CDM 3000 or permission. *Not available for graduate credit.

CDM 4200 Disaster Management Technology* (3) Technologies used in support of disaster operations. Tools and techniques to collect, analyze, and manage information. Including communication systems, modeling, mapping, and emergent technologies. *Not available for graduate credit.

CDM 4245 Managerial Issues in Hazardous Materials* (3) Addresses managerial concerns of the Incident Commander at the community/organization level. Emphasis is placed on strategic goals and decision-making. Other subjects covered include response planning, personnel and training, operation of command posts, and use of the Incident Command System. Prerequisites: CDM 3000 or permission. *Not available for graduate credit.

CDM 4400 Research Issues in Crisis and Disaster Management* (3) Introduces the research process, ethics, methodology, and data analysis. Preparation of academic papers, written reports, and proposals. Prerequisites: CDM 3000 or consent. *Not available for graduate credit.

CDM 4745 Crisis Management* (3) Systematic study of crisis in business and industry; vulnerability analysis, disaster-resistant companies, crisis communications strategies, employee support services, and public relations. Prerequisites: CDM 3000 or permission. *Not available for graduate credit.

CDM 4800 Integrated Emergency Management* (3) Factors influencing multi-agency coordination during phases of disaster management. Explores relationships between public and private sector institutions and collaboration during emergency incidents. Prerequisites: CDM 3000 or permission, and senior status. *Not available for graduate credit.

CDM 4900 Technology Application Studies* (3) Individual or group study of emerging technology applications related to crisis and disaster management. *May be repeated for a maximum of 6 hours.* Prerequisite: departmental approval. *Not available for graduate credit.

CDM 4910 Field Exercise Project* (1-3) Individual or group participation in approved community, institutional, or agency emergency exercises or disaster drills. *May be repeated for a maximum of 3 hours.* Prerequisite: departmental approval. *Not available for graduate credit.

CDM 4990 Practicum in Crisis and Disaster Management* (3-6) Practicum experiences are based upon student preparation and interest. *May be repeated for a maximum of 6 hours.* Prerequisite: departmental approval and junior status. *Not available for graduate credit.

Communication Disorders

Overview of Program

The primary purpose of the B.S. Degree in Speech-Language Pathology is to prepare students for possible admission to graduate programs in either Speech-Language Pathology or Audiology. Completion of the B.S. Degree in Speech-Language Pathology does not provide the qualifications that students will need for employment as a speech-language pathologist or audiologist, nor does it guarantee admission to a graduate program in Speech-Language Pathology or Audiology; however, the undergraduate degree can lead to employment opportunities in a variety of related fields. The Master's degree is considered the entry level degree to enter the field of Speech-Language Pathology. The clinical doctorate (AuD), not currently offered at UCM, is the entry level degree to enter the field of Audiology. The Communication Disorders program at the University of Central Missouri is accredited by the Council on Academic Accreditation of the American Speech-Language Hearing Association (ASHA) in Speech-Language Pathology.

Undergraduate Student Learning Outcomes

The graduate with a Bachelor of Science in Speech-Language Pathology will use the knowledge and skills obtained in the program to:

1. Demonstrate knowledge of information regarding prevention, assessment and intervention concerning communication differences and disorders and swallowing or other upper aerodigestive disorders.
2. Provide prevention, assessment and intervention services to children and adults across a wide range of speech and language disorders and differences in a closely supervised setting.
3. Demonstrate emerging skills in oral and written language to achieve effective clinical and professional interaction.
4. Begin to exhibit professional behavior as defined in the cardinal documents of the American Speech-Language-Hearing Association (ASHA) including but not limited to Certification Standards for the Certificate of Clinical Competence in Speech-Language Pathology, ASHA Scope of Practice in Speech-Language Pathology, ASHA Code of Ethics and ASHA Preferred Practice Patterns for the Profession of Speech-Language Pathology.
5. Collaborate with professionals and provide counseling to individuals and their families regarding speech and language differences and disorders in a closely supervised setting.
6. Begin to integrate classroom-based knowledge, clinical experience and technological resources to support Evidence-Based Practice in a guided clinical setting.

Undergraduate Admission Policies and Procedures

Student enrollment is limited to the following Department of Communication Disorders' courses unless the student is either provisionally or fully admitted to the undergraduate functional major in speech-language pathology: CD 1000, CD 1800, CD 2000, CD 2301, CD 3301, CD 4401, CD 4402, CD 4900. If the student is not provisionally or

fully admitted to the undergraduate program, enrollment in Department of Communication Disorders' courses other than the ones listed above, shall be determined in conference with the director of undergraduate studies in the department.

Students who have been admitted to the undergraduate program and have not enrolled in Communication Disorders' courses for three consecutive semesters will be dropped from the undergraduate program. These students must reapply for admission to the undergraduate program prior to enrollment in any additional courses in Communication Disorders.

I. Admission of Non-Transfer Students

A. Admission Criteria:

1. Must have a minimal overall GPA of 3.0.
2. Must have earned a minimum of 30 university credit hours, applicable to graduation, including a grade of "C" or better in ENGL 1020 and ENGL 1030 or ENGL 1080.
3. Must have made a grade of "C" or better and a GPA of 3.0 or better in the following CD courses: CD 1000, CD 1800, CD 2301, CD 3301.
4. Students may enroll in the four courses listed under I.A.3. a maximum of two times.
5. Students must complete a speech, language and hearing screening.
6. Students must submit a formal application by the first week of classes of the semester prior to admission.
7. Students who do not meet requirements I. A. 1-6. are ineligible for admission to the undergraduate major in speech-language pathology.

B. Maintenance Criteria:

1. The first semester the student's overall GPA drops below a 3.0 after being admitted to the undergraduate program in Communication Disorders, the student will receive a letter of written academic warning from the Department of Communication Disorders.
2. Any student under academic warning whose overall GPA falls below a 3.0 for any subsequent semester will become ineligible to continue taking courses in the Department of Communication Disorders and/or to re-apply for admission to the undergraduate program.
3. Any student who receives a grade below "C" in any CD course or whose GPA drops below a 3.0 in CD courses will receive a letter of warning. Students must obtain a grade of "C" or better and a GPA of 3.0 or better in all CD courses taken prior to completing an undergraduate major in speech pathology. Students may enroll in any CD course a maximum of 2 times.

II. Admission of Undergraduate Transfer Students

A. Admission Criteria:

1. Transfer students must meet requirements I.A. 1-7.
2. Students who are transferring two or more of the courses listed in I.A.3. and meet other criteria listed in I.A. will be provisionally admitted and must take an additional six semester hours of Department of Communication Disorders' courses at the University of Central Missouri before applying for full admission.
3. Transfer students must demonstrate the competencies required for the UCM equivalent for any courses being transferred before applying for full admission to the undergraduate program.

B. Maintenance Criteria:

1. Same as for non-transfer students.

C. Other

1. A minimum letter grade of a "C" or better and a GPA of 3.0 or better must be obtained for the six semester hours under II.A.2. for the transfer student to be able to apply for full admission to the undergraduate program. Those courses in which the undergraduate transfer student makes a grade below a "C" can be retaken only once. If this requirement is not met, the student becomes ineligible to continue taking courses in the Department of Communication Disorders and/or to apply for full admission to the undergraduate major in speech-language pathology.

III. Post-Baccalaureate Students

Post-Baccalaureate Students must have permission of the Department Chair to enroll in any Communication Disorders' course.

IV. Clinical practicum Requirements

Undergraduate students will complete the following practicum requirements as described below:

CPR Certification

Students will obtain certification in adult and child cardiopulmonary resuscitation prior to enrolling in clinical practicum experiences. Students must maintain re-certification throughout all clinical practicum experiences.

Immunizations

Students must be tested yearly for Tuberculosis (TB) and submit results of testing to the Director of Clinical Services prior to beginning clinic each year. Additionally, students must submit proof of having initiated the three shot series of immunization against Hepatitis B prior to beginning clinical practicum.

Criminal Background Check

Prior to beginning clinic, students will receive the most recent criminal background check procedures from the Director of Clinical Services. If a background check is unsatisfactory, placement in clinic and externship/internship sites may not be possible. A student unable to be placed in clinic or externship/internship will not be able to complete the program.

Grades

Students who are under academic warning from the department may not enroll in any clinical practicum courses.

Clinician Meetings

Clinicians are required to attend clinician meetings which cover a variety of topics ranging from paperwork and procedures to assessment and intervention tools available in our clinic. These meetings are scheduled as needed throughout the semester.

Knowledge and Skills Acquisition (KASA)

The Bachelor of Science Degree in Speech-Language Pathology is a competency based program. These competencies reflect the knowledge and skills required by the ASHA Certification Standards III, Program of Study-Knowledge Outcomes and IV, Program of Study-Skill Outcomes. These required knowledges and skills are delineated on the KASA. To understand the procedures associated with the KASA documentation, students are required to attend KASA trainings offered each semester. Students will be expected to demonstrate competency related knowledges and skills throughout their undergraduate program through formative and summative assessments. Students' successful demonstration of the acquisition of knowledges and skills will be documented on the KASA. Students not demonstrating the achievement of course and practicum related knowledges and skills will be required to successfully complete remediation procedures that will then allow those knowledges and skills to be documented on the KASA. Successful completion of remediation procedures does not alter the final course grade. For all courses listed on the KASA, students must achieve a grade of C or better in all CD Major Requirements and CD specified General Education Requirements.

SPEECH-LANGUAGE PATHOLOGY

Major, Bachelor of Science Degree
(43-273)

	Sem. Hours
MAJOR REQUIREMENTS	58
CD 1000 Intro. to Comm. Disorders	3
CD 1800 Observ. of Clinical Practicum in Communication Disorders	1
CD 2301 American Phonetics	3
CD 3301 Anatomy & Physiology of Speech and Swallowing	2
CD 3304 Speech Science	3
CD 3503 Principles of Clinical Mgt.	3
CD 4102 Counseling Persons with Comm. Disorders & Their Families	2
CD 4103 Introduction to Evidence Based Practice in Comm. Disorders	2
CD 4401 Language Development	3

CD 4501 Basic Neuroscience of Speech- Language Pathologists	2
CD 4504 Introduction to Articulation & Phonological Disorders	3
CD 4505 School-age Issues in Language & Literacy	3
CD 4510 Multicultural Issues in Comm. Disorders	2
CD 4512 Best Practices in Early Ch. Intervention	3
CD 4701 Introduction to Audiology	3
CD 4706 Hearing Measurement	3
CD 4708 Aural Rehabilitation	3
CD 4803 Undergraduate Clinical Practicum	2
CD 4900 Special Topics Comm. Disorders: Beginning Sign Language	2
PSY 3220 Life-Span Development	3
PSY 4520 Statistics for the Behavioral Sciences	3
HED 4330 First Aid & CPR for Educators	1
EDSP 4700 IEP and the Law.	3

GENERAL EDUCATION REQUIREMENTS (page 41)	48
COMM 1000 Div. I B (required)	3
BIOL 1003 3, or	
BIOL 1004 4, Div. II A (required)	3-4
PSY 1100 Div. II B (required)	3
FREE ELECTIVES	14
MINIMUM TOTAL	120

- CD 1000 Introduction to Communication Disorders (3)** Etiology, incidence, and characteristics of communicative disorders. Corequisite: CD 1800.
- CD 1401 American Sign Language 1 (3)** Fundamental principles of ASL production and comprehension; the building of basic sign vocabulary for words and expressions; exploration of deaf history and culture.
- CD 1402 American Sign Language 2 (3)** A continuation of ASL 1 with attention to expanding and reinforcing receptive/expressive signing skills and awareness of cultural contexts of American Sign Language usage. Prerequisite: CD 1401 or equivalent (with permission of instructor) with a C or better
- CD 1800 Observation of Clinical Practicum in Communication Disorders (1)** Twenty-five (25) clock hours of supervised observation in the evaluation and treatment of children and adults with disorders of speech, language, and hearing. Corequisite: CD 1000.
- CD 2000 The Bases of Speech and Language (2)** Intended for non-majors; basics of normal communication, overview of communication impairments in children and effective instructional strategies, principles of collaboration with SLPs.
- CD 2301 American Phonetics (3)** Sound system of American English with emphasis on the international phonetic alphabet and dialects.
- CD 3301 Anatomy and Physiology of Speech and Swallowing (2)** The anatomical and endocrinological bases for normal production of speech and swallowing.
- CD 3304 Speech Science (3)** An introduction to basic physiological and acoustical properties of human communication. Prerequisite: admission to the undergraduate program in speech-language pathology.
- CD 3503 Principles of Clinical Management (3)** Fundamental clinical concepts as a foundation for diagnosis and intervention in communication disorders. Prerequisite: admission to the undergraduate program in speech-language pathology.
- CD 4102 Counseling Persons with Communication Disorders and Their Families (2)** Application of counseling and interviewing theory to individuals with communication disorders of all ages and their families. Ample opportunity to apply knowledge will be provided. Prerequisite: admission to the undergraduate program in speech-language pathology or with departmental approval.
- CD 4103 Introduction to Evidence Based Practice in Communication Disorders (2)** Introduction to the use of current research results to make clinical decisions regarding client care. Prerequisite: admission to the undergraduate program in speech-language pathology or departmental consent.

CD 4401 Language Development (3) Theories and sequence of normal language acquisition.

CD 4402 Language Acquisition in Children with Developmental Disabilities (2) Theories and sequences of language development with emphasis on language acquisition and deficiencies exhibited by children with various developmental disabilities.

CD 4501 Basic Neuroscience for Speech-Language Pathologists (2) An introduction to human nervous system structure and function, with special emphasis on neural processing for normal speech, language, hearing and swallowing. Prerequisite: admission to the undergraduate program in speech-language pathology or with departmental approval.

CD 4504 Introduction to Articulation and Phonological Disorders (3) An introduction to articulation and phonological disorders; diagnostic procedures and treatment approaches; knowledge of multicultural issues related to these disorders. Prerequisite: admission to the undergraduate program in speech-language pathology or departmental consent.

CD 4505 School-age Issues in Language and Literacy (3) Types of language and literacy disorders; formal/informal assessment procedures of language and literacy skills; intervention procedures for the re mediation of language and literacy disorders. Prerequisite: admission to the undergraduate program in speech-language pathology or departmental consent.

CD 4510 Multicultural Issues in Communication Disorders (2) Focused study of various issues important to multiculturalism and diversity when assessing and treating individuals with communication disorders from diverse backgrounds. Prerequisite: admission to the undergraduate program in speech-language pathology or with departmental approval.

CD 4512 Best Practices in Early Childhood Intervention (3) Nature of communication disorders in the birth – five population, special emphasis on assessment and intervention models. Required for participation in graduate level ECCSEP practicum.. Prerequisite: admission to the undergraduate program in speech-language pathology or with departmental approval.

CD 4701 Introduction to Audiology (3) Hearing impairment as related to basic acoustics and psycho acoustics, anatomy and physiology of the ear, and theories of hearing. Prerequisite: admission to the undergraduate program in speech-language pathology.

CD 4706 Hearing Measurement (3) Hearing measurement procedures including pure tone and speech audiometry and some site of lesion testing. Prerequisite: CD 4701 and admission to the undergraduate program in speech-language pathology.

CD 4708 Aural Rehabilitation (3) Effects of hearing impairment of verbal communication. Principles and methods of aural rehabilitation. Prerequisite: CD 4706.

CD 4803 Undergraduate Clinical Practicum* (1) Specialized practice in the management of communication disorders. Must be taken at least two times but can only enroll in course one time per semester. *May be repeated for 2 hours.* Prerequisites: admission to the undergraduate program in speech-language pathology or consent of department chair; overall GPA of 3.0; a grade of “C” or better in all previous CD courses, and CD 3503, CD 4701, and either CD 4504 or CD 4505; the remaining CD 4504 or CD 4505 must be taken concurrently with the first semester of clinical practicum. *Not available for graduate credit.

CD 4900 Special Topics in Communication Disorders (1-3) Selected topics of contemporary interest in speech-language pathology and audiology; variable content. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of department.

Criminal Justice

CRIMINAL JUSTICE

Major, Bachelor of Science Degree
(43-842)

The graduate with a Bachelor of Science degree in Criminal Justice will use the knowledge and skills obtained in the program to:

- Discern the basic components of the criminal justice system and understand the interrelationship within and between these components.
- Specify how justice institutions operate within society, as well as how they differ.
- Read and utilize articles from academic journals.
- Recognize personal assumptions, as well as basic American assumptions in analyzing positions on justice issues.
- Communicate effectively both in written and oral form.
- Conduct and report basic research procedures in accord with the scholarly practices of the discipline of Criminal Justice, including the principles of documentation, the acquisition of resources and do so in line with the ACJS Code of Ethics.
- Create reasonable linkages between empirical evidence and theory utilizing both inductive and deductive forms of logic.
- Recognize the complexity, ambiguity, and uncertainty that are present in the use of knowledge to address crime problems.

Sem. Hours

MAJOR REQUIREMENTS 36

CJ	1000	Introduction to Criminal Justice	3
CJ	2315	The Criminal Court System	3
CJ	3006	Corrections	3
CJ	3010	Policing a Democratic Society	3
CJ	3600	Intro. to Crim. Justice Research & Stat.	3
CJ	4605	Senior Sem. in Criminal Justice	3
SOC	3890	Criminology	3
		Criminal Justice electives	15

GENERAL EDUCATION REQUIREMENTS (page 41) In the major,			
CJ	1000	fulfills 3 s.h. of Div. II B	45
FREE ELECTIVES			39
MINIMUM TOTAL			120

CRIMINAL JUSTICE

Minor for a Bachelor’s Degree

UCM does not confer teacher certification for this minor.
(829)

Sem. Hours

MINOR REQUIREMENTS 21

CJ	1000	Introduction to Criminal Justice	3
CJ	2315	The Criminal Court System	3
CJ	3006	Corrections	3
CJ	3010	Policing a Democratic Society	3
SOC	3890	Criminology	3
		Elective in criminal justice	6

CORRECTIONS

Minor for a Bachelor’s Degree

UCM does not confer teacher certification for this minor.
(709)

Sem. Hours

MINOR REQUIREMENTS 24

CJ	1000	Introduction to Criminal Justice	3
CJ	2000	History of Corrections & Penal Inst.	3
CJ	3006	Corrections	3
CJ	4006	Probation, Parole & Community Corrections	3
CJ	3104	Institutional Operations	3
CJ	3310	Law of Corr. & Prisoners Rights	3
CJ	4330	Criminal Justice & the Mental Health Systems	3
SOC	3890	Criminology	3

INTERNATIONAL JUSTICE**Minor for a Bachelor's Degree**

UCM does not confer teacher certification for this minor.
(855)

Sem. Hours

MINOR REQUIREMENTS 21

CJ	3020	Comparative Justice Systems	3
CJ	3398	International Human Rights & Criminal Justice	3
CJ	4352	International Criminal Law	3
POLS	3530	International Organizations	3
POLS	4530	International Law	3
Electives in Criminal Justice/Geography/Political Science/Sociology 6			
CJ	2405	International Policing	3
CJ	4444	Terrorism	3
CJ	4703	International Juvenile Justice	3
SOC	3885	Globalization and the Future	3
One of the following:			
POLS	3520	Asian Government and Politics, 3 or	
POLS	3522	Modern East Asia, 3 or	
POLS	4520	Politics of Developing Nations, 3 or	
POLS	4521	Culture and Politics of the Middle East, 3 or	
POLS	4550	The European Union, 3	3
One of the following:			
GEOG	3200	Geography of Europe, 3 or	
GEOG	3225	Geography of Latin America, 3 or	
GEOG	3310	Geography of Africa, 3 or	
GEOG	4230	Geography of Asia, 3 or	
GEOG	4235	Geography of the Former Soviet Union, 3 or	
GEOG	3314	Geography of North Africa/ Southwest Asia, 3	3

Three credit hours may be granted for study in a UCM approved program or study tour in a foreign country which focuses on the justice structures of the country. 3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, POLS 3522 fulfills 3 s.h. of Div. II D

CONSERVATION ENFORCEMENT**Major, Bachelor of Science Degree,****Conservation Enforcement Studies option**

See requirements as outlined in the Department of Biology and Earth Science.

FORENSIC SCIENCE**Minor for a Bachelor's Degree**

See requirements as outlined in the Department of Biology and Earth Science.

General

CJ 1000 Introduction to Criminal Justice (3) The history, nature and function of the criminal justice system in America. Special attention is given to the philosophical basis underlying this system and to the problems associated with crime control in a democratic society. At each stage of the process, major issues confronting the system are examined.

CJ 2000 History of Corrections and Penal Institutions (3) Historical analysis of the development of corrections and penal institutions and the influence of social thought and philosophy on this development. Prerequisite: CJ 1000 or consent.

CJ 3006 Corrections (3) An overview course in correctional theory and practice. Traces the historical development of corrections with emphasis on changing social standards and philosophies. Examines the various types of correctional institutions, their mission, physical structure, management, and problems. Also examines probation and parole, including theory, practice and major issues confronting these correctional alternatives. Prerequisite: CJ 1000.

CJ 3010 Policing a Democratic Society (3) An in-depth look at the relationship between law enforcement and American society. Focus is on police-community relations, the police sub-culture, and the need for police objectives to conform to constitutional procedures. Prerequisite: CJ 1000.

CJ 3020 Comparative Justice Systems (3) An examination of comparative crime rates among nations and the world's major models of justice systems.

CJ 4000 Special Projects in Criminal Justice Administration (1-3) Individual or group study of problems in special areas of interest. *May be repeated.*

CJ 4006 Probation, Parole and Community Corrections (3) An examination of the roles of probation, parole and other community correctional methods as they relate to other elements of the criminal justice system. Prerequisite: CJ 3006.

CJ 4010 Criminal Justice International Study (3) Credit granted for study in a department approved program or study tour in a foreign country. Prerequisite: consent.

CJ 4025 Comparative Corrections (3) This course provides a comparative overview of correctional practices in various countries.

Administration

CJ 2101 Police Organization and Management (3) The principles and practices common to the effective management of American law enforcement agencies. Prerequisite: CJ 1000.

CJ 2102 Jail Management (3) An in-depth study of jail operations and procedural guidelines which define the role, duties and responsibilities of jail personnel.

CJ 3104 Institutional Operations (3) An examination of the procedures of correctional institutions and of the problems encountered in the classification, care and treatment of incarcerated offenders. Prerequisite: CJ 3006.

CJ 4101 Criminal Justice Planning (3) Planning concepts and development of comprehensive criminal justice plans; their integration into meaningful crime reduction and resistance programs; and their influence on the operations of police, judicial and correctional agencies.

Law

CJ 2300 Criminal Law (3) Origin, development, and classification of the substantive criminal law, defenses, and criminal responsibility. Prerequisite: CJ 1000 or consent.

CJ 2315 The Criminal Court System (3) An overview of the goals, substance, and process of the criminal court system with an examination of current legal issues and trends in criminal justice. Prerequisite: CJ 1000 or consent.

CJ 3303 Criminal Procedure (3) Selected constitutional aspects of law enforcement including the law of arrest, search and seizure. Students are encouraged to take CJ 2300 prior to taking CJ 3303. Prerequisite: CJ 1000.

CJ 3310 Law of Corrections and Prisoners' Rights (3) An examination of federal and state laws and resultant judicial interpretation regarding the substantive and procedural protections applied in the correctional setting with regard to the rights of the confined. Only offered Spring semester. Prerequisite: CJ 3303 or consent.

CJ 3398 International Human Rights and Criminal Justice (3) A presentation of the legal standards of international human rights for criminal justice and their comparison with and impact upon national criminal justice systems.

CJ 4300 Case Preparation and Courtroom Procedure (3) Criminal procedure from arrest through trial. Preparation for and participation in mock trial. Recommended that students complete CJ 3303 Criminal Procedure before this course.

CJ 4302 Criminal Evidence (3) Rules of evidence as they relate to the prosecution and defense of criminal cases. It is recommended that students complete CJ 2300.

CJ 4321 Civil Remedies in Criminal Justice (3) State and federal legal liabilities and remedies in criminal justice and policy implications. Prerequisite: CJ 3303 or consent.

CJ 4330 Criminal Justice and the Mental Health Systems (3) The relation of the criminal justice system and the mental health process; legal concepts regarding the mentally disabled. Prerequisite: CJ 1000 or consent.

CJ 4352 International Criminal Law (3) Survey of international criminal law examining responsibilities of nation-state and individual, international cooperative efforts and tribunals, and various international crime and defenses, including international terrorism.

CJ 4390 The Death Penalty (3) An examination of the jurisprudence, history and current issues about the death penalty.

Investigation

CJ 2405 International Policing (3) Overview of international policing operations includes an examination of organizational and administrative operations, duties of various police organizations, police relations with the public.

CJ 3400 Criminal Investigation (3) Principles involved in the investigation of crimes with particular attention given to its historical origins, the investigator, organization and management of the investigative function, and investigative methods; including crime scene processing, suspect identification and use of information sources. Consideration is also given to the investigation of specific crimes.

CJ 3405 Homicide Investigation (3) Study of homicide investigation including tactics, procedures, problems, forensic techniques, and legal issues. Recommended that students complete CJ 3400 Criminal Investigation prior to taking this course.

CJ 4403 Sexual Assault and the Criminal Justice System (3) In-depth study of sexual assault and sex offenders. Investigation into the motivation of sex offenders, the victim's responses to assault, and investigative procedures.

CJ 4420 Organized Crime (3) An analysis of both the historical development of organized crime and its current impact on society. The enforcement, prosecutorial, judicial, and legislative actions utilized to combat organized crime will be examined.

CJ 4444 Terrorism (3) Study of violent political and religious movements around the world and the difficulties they pose to the institutions of justice in a democratic society.

Problems and Research

CJ 3600 Introduction to Criminal Justice Research and Statistics (3)

An introductory examination of the research methods and statistics with application most commonly utilized in criminological and criminal justice research.

CJ 4601 Directed Studies* (1-6) Individual research and study in student's field of interest as approved and directed by major professors. *May be repeated for a maximum of 6 semesters hours.* Prerequisite: consent. *Not available for graduate credit.

CJ 4602 Internship in Criminal Justice (1-6) Practical experience in the operation of various components of the criminal justice system. *May be repeated for a maximum of 12 semester hours.* Prerequisite: consent.

CJ 4605 Senior Seminar in Criminal Justice* (3) Current issues and trends in criminal justice with emphasis on group discussion. Each student will be required to prepare, submit and defend a senior thesis. Successful completion of the thesis is mandatory. Prerequisite: senior major in Criminal Justice. *Not available for graduate credit.

CJ 4607 Issues in International Justice (3) Seminar on current and developing issues in international justice. Prerequisite: consent of instructor.

Juvenile Justice

CJ 2700 Introduction to Juvenile Justice (3) An examination of the origins, philosophy and objectives of the juvenile justice system. Focus is on the operation, legal processes, current trends and roles of the various actors within the juvenile justice system.

CJ 4701 The Juvenile and the Law (3) The jurisdiction of juvenile courts, role of law enforcement agents, judicial process, fact-finding hearings, dispositions, waivers, appeals, philosophy of the juvenile court with attention to the legal rights of children, and comparative analyses of juvenile codes.

CJ 4702 Juvenile Corrections (3) An analysis of the theories, concepts, practices and special problems of juvenile corrections, including a review of contemporary juvenile correctional systems and discussion of recent research concerning the juvenile institution and the various field services.

CJ 4703 International Juvenile Justice (3) An overview of international juvenile justice, through an examination of how the international society reacts to juvenile misbehavior and various juvenile justice models.

**Health and Human Performance
Athletic Training**

To learn more about the application/admission process, student retention, matriculation, transfer policy, and clinical experiences to the UCM Athletic Training Education Program (ATEP) please visit the program's student handbook at www.ucmo.edu/at.

Learning Objectives and Program Status:

Students who successfully complete the Athletic Training program should be able to:

1. Demonstrate cognitive, psychomotor and affective skills in the following areas: risk management and injury prevention, pathology of injuries and illnesses, assessment and evaluation, acute care of injury and illness, pharmacology, therapeutic modalities and exercise, general medical conditions and disabilities, nutritional aspects of injury and illness, psychosocial intervention and referral, health care administration and professional development and responsibilities.
2. Demonstrate clinical proficiency in the following areas: risk management and injury prevention, pathology of injuries and illnesses, assessment and evaluation, acute care of injury and illness, pharmacology, therapeutic modalities and exercise, general medical conditions and disabilities, nutritional aspects of injury and illness, psychosocial intervention and referral, health care administration and professional development and responsibilities.
3. Upon completion of this degree program, the student will be eligible to apply and sit for the Board of Certification examination.

ATHLETIC TRAINING

Major, Bachelor of Science Degree
(43-853)

Sem. Hours

MAJOR REQUIREMENTS		70
AT	1610	Introduction to Athletic Training 2
AT	1611	Introduction to Athletic Training Lab I 1
AT	1620	Responding to Emergencies for the Professional Rescuer 3
AT	1630	Foundations of Athletic Training. 2
AT	1631	Foundations of Athletic Training Lab II 1
PE	2320	Analysis & Tchg. of VWeight Training 1
AT	2600	Medical Terminology 1
AT	2610	Orthopedic Assessment: Lower Extremity . . . 2
AT	2611	Orthopedic Assessment: Lower Extremity Lab III 1
AT	2620	Orthopedic Assessment: Upper Extremity . . . 2
AT	2621	Orthopedic Assessment: Upper Extremity Lab IV 1
AT	2630	Therapeutic Modalities 2
AT	2631	Therapeutic Modalities Lab 1
AT	3620	Clinical Athletic Training Lab V. 2
AT	3630	Therapeutic Rehabilitation 2
AT	3631	Therapeutic Rehabilitation Lab 1
AT	3640	Clinical Athletic Training Lab VI. 2
AT	3650	Sport & Exercise Pharmacology 2
AT	4610	Clinical Athletic Training Lab VII 2
AT	4620	Clinical Athletic Training Lab VIII. 2
AT	4630	Org. & Admin. of Athletic Training 3
AT	4640	Senior Seminar in Athletic Training 2
PE	4740	Legal Liability in Fitness/Wellness, Physical Education, Recreation, & Sports Settings 2
PE	2800	Human Anatomy 3
PE	2850	Found. of Exercise Physiology 3
PE	3800	Kinesiology 3
PE	4830	Psychological Aspects of Phys. Ed. 2
PE	4850	Assessment & Eval. of Fitness/Wellness . . . 3
HED	4300	Nutrition & Human Performance 2
HED	4370	Human Diseases 3
BIOL	2401	Anatomy &Physiology I. 4

BIOL 2402	Anatomy & Physiology II	4
PSY 4520	Statistics for Behavioral Sciences	3
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, BIOL 2401 and BIOL 2402 are allowed to fulfill		
3 s.h. of Div. II A		45
COMM 1000	Div. I B (required)	3
MATH 1111	Div. I C (required)	3
CHEM 1104	Div. II A (required)	4
PSY 1100	Div. II B (required)	3
PE 1206	Div. III (required)	3
IGEN 3472	Div. IV (required)	3
FREE ELECTIVES		5
MINIMUM TOTAL		120

AT 1610 Introduction to Athletic Training (2) Introduction to clinical athletic training for first year athletic training majors. Emphasis on clinical education competencies, athletic training staff policies/procedures and entry-level taping skills. Corequisites: AT 1611 and AT 1620.

AT 1611 Introduction to Athletic Training Lab I (1) Introduction to Clinical Athletic Training. The student must complete 75 clinical hours which apply toward program admission. Corequisite: AT 1610.

AT 1620 Responding to Emergencies for the Professional Rescuer (3) Accident, injury and illness situations for immediate first-aid, and legal parameters involved in emergency care. Certification in CPR/AED for the professional Rescuer and First-Aid is attained. Corequisites: AT 1610 and AT 1611.

AT 1630 Foundations of Athletic Training (2) Provide the athletic training student with the foundation needed to recognize the cause of injuries, prevent injuries from occurring and to effectively manage injuries. Prerequisites: AT 1610, AT 1611 and AT 1620.

AT 1631 Foundations of Athletic Training Lab II (1) Provides the foundations to recognize cause of injury, prevention of injuries and to effectively manage injuries in a laboratory. The student must complete 75 clinical hours which apply toward program admission. Prerequisites: AT 1610, AT 1611, and AT 1620. Corequisite: AT 1630.

AT 2600 Medical Terminology (1) Terminology, note writing, and documentation techniques in sports medicine. A treatment cycle will be introduced.

AT 2610 Orthopedic Assessment: Lower Extremity (2) Common types of orthopedic/sports dysfunctions to the lower extremity. Viewpoints include: etiology and mechanism of injury, pathology, recognition and evaluation techniques, protocols, and prevention. Prerequisites: AT 1610, AT 1611, AT 1620, AT 1630, AT 1631, AT 2600, and PE 2800. Corequisite: AT 2611.

AT 2611 Orthopedic Assessment: Lower Extremity Lab III (1) Evaluation of orthopedic injuries occurring to the lower extremity. Student must complete 150 clinical hours. Prerequisites: AT 1610, AT 1611, AT 1620, AT 1630, AT 1631, AT 2600, and PE 2800. Corequisite: AT 2610.

AT 2620 Orthopedic Assessment: Upper Extremity (2) Common types of orthopedic/sports dysfunctions to the upper extremity will be discussed including mechanism of injury, pathology, recognition and evaluation techniques, protocols, and prevention. Prerequisites: AT 1610, AT 1611, AT 1620, AT 1630, AT 1631, AT 2600, AT 2610, AT 2611, PE 2800 and PE 2850. Corequisites: AT 2621 and PE 3800.

AT 2621 Orthopedic Assessment: Upper Extremity Lab IV (1) Evaluation of orthopedic injuries occurring to the upper extremity. Student must complete 150 clinical hours. Prerequisites: AT 1610, AT 1611, AT 1620, AT 1630, AT 1631, AT 2600, AT 2610, AT 2611, PE 2800 and PE 2850. Corequisite: AT 2620.

AT 2630 Therapeutic Modalities (2) The theoretical knowledge for the clinical application of therapeutic modalities. Principles of the physiological effects and therapeutic indications and contraindications with application of these modalities. Prerequisites: AT 1610, AT 1611, AT 1620, AT 1630, AT 1631, AT 2620, and AT 2600. Corequisites: AT 2610, AT 2611, and AT 2631.

AT 2631 Therapeutic Modalities Lab (1) Students will apply the techniques and clinical skills related to the application of therapeutic modalities. Prerequisites: AT 1610, AT 1611, AT 1620, AT 1630, AT 1631, AT 2600, PE 2800, and PE 2850. Corequisites: AT 2610, AT 2611, and AT 2630.

AT 3620 Clinical Athletic Training Lab V (2) The application of athletic training practices in selected clinical and educational settings. The student must complete 175 clinical hours. Prerequisites: AT 2610, AT 2611, AT 2620, AT 2621.

AT 3630 Therapeutic Rehabilitation (2) Theoretical knowledge in the clinical application of rehabilitation programs, physical examinations, therapeutic exercises, open and closed chain exercises, muscle reeducation, special therapeutic techniques including aquatic therapy. Prerequisites: AT 1610, AT 1611, AT 1620, AT 1630, AT 1631, AT 2620, AT 2621, AT 2630, AT 2631, PE 2850 and PE 3800.

AT 3631 Therapeutic Rehabilitation Lab (1) Clinical skills relating to the rehabilitation of athletic injuries. 100 documented clinical hours will afford the opportunity to use the knowledge and techniques from the course. Prerequisites: AT 1610, AT 1611, AT 1620, AT 1630, AT 1631, AT 2620, AT 2621, AT 2630, AT 2631, PE 2850 and PE 3800.

AT 3640 Clinical Athletic Training Lab VI (2) The application of athletic training practices in selected clinical and educational settings. The student must complete 175 hours of documented clinical hours. Prerequisites: AT 2610, AT 2611, AT 2620, AT 2621, and AT 3620.

AT 3650 Sport and Exercise Pharmacology (2) Discuss medications and their impact upon the active population. Issues in ethical concerns and legal implications will be addressed. Prerequisite: Junior standing.

AT 4610 Clinical Athletic Training Lab VII* (2) The application of athletic training practices in selected clinical and educational settings. The student must complete 200 hours of documented clinical hours. Prerequisites: AT 2610, AT 2611, AT 2620, AT 2621, AT 2630, and AT 2631. *Not available for graduate credit.

AT 4620 Clinical Athletic Training Lab VIII* (2) The application of athletic training practices in selected clinical and educational settings. The student must complete 200 hours of documented clinical hours. Prerequisites: AT 2610, AT 2611, 2620, AT 2621, AT 2630, and AT 2631. *Not available for graduate credit.

AT 4630 Organization and Administration of Athletic Training* (3) Legal liabilities, budget/inventory management, facility designs, and maintenance will be addresses. Additionally, discussions on daily supervision, scheduling, and administration of the athletic training room. Prerequisites: AT 1610, AT 1611, AT 1620, AT 1630, AT 1631, AT 2620, AT 2621, AT 2630, AT 2631, AT 3620, PE 2850 and PE 3800 *Not available for graduate credit.

AT 4640 Senior Seminar in Athletic Training (2) Prerequisite: Senior standing.

Dietetics And Nutrition

DIETETICS

Major, Bachelor of Science Degree

Registration as a dietitian requires internship beyond Bachelor of Science degree. Fulfills the "Didactic Program in Dietetics Academic Requirements" of the American Dietetic Association. (43-274)

The graduate with a Bachelor of Science degree in Dietetics will qualify for a post-baccalaureate internship program. Student outcome goals:

- Solve service-oriented problems utilizing knowledge of nutritional assessment, intervention and evaluation skills.
- Utilize current knowledge, technology, and research to enhance the practice of dietetics.
- Exhibit behaviors consistent with attitudes based on beliefs that an understanding/appreciation of global concerns and the diversity of humankind.
- Attend professional dietetic meetings at the local, state, and/or the national level.
- Acquire the knowledge and skills for the successful participation in a supervised dietetics program, employment related to foods and nutrition, or graduate study.
- Acquire the knowledge, skills, professionalism and ethical conduct needed to become a competent entry-level dietitian.
- Apply scientific knowledge and principles to food service systems in the practice of dietetics.
- Apply scientific knowledge and principles related to nutrition needs and processes through the life cycle in health and disease.
- Generate, interpret, and use research and knowledge of foods and nutrition in clinical dietetics, community nutrition, and food service.
- Participate in activities that promote public awareness of nutrition and advance the profession of dietetics.

Sem. Hours

MAJOR REQUIREMENTS 62

FOOD 2322	Food Preparation	3
FOOD 3332	Quantity Food Prod. & Service	3
FOOD 3333	Food Systems Management	3
FOOD 3334	Food Service Equip. & Purch.	3
FOOD 4326	Experimental Foods	3
D&N 1300	Introduction to Dietetics	1
D&N 3340	Nutrition	3
D&N 3350	Community Nutrition	3
D&N 4340	Advanced Nutrition	3
D&N 4342	Medical Nutrition I	3
D&N 4343	Medical Nutrition II	3
D&N 4345	Senior Dietetics Seminar	3
BIOL 2401	Anatomy & Physiology I	4
BIOL 2402	Anatomy & Physiology II	4
BIOL 3611	Microbiology	4
CHEM 1604	Elem. Organic & Biochemistry	4
ACCT 2100	Survey of Accounting	3
MGT 3315	Management of Organizations	3
HRM 3920	Human Resource Management	3
PSY 4520	Statistics for the Behavioral Sciences	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, BIOL 2401 and BIOL 2402 fulfill 3 s.h. of Div. II A) 45

CHEM 1104	Div. II A (required)	4
PSY 1100	Div. II B (required)	3
SOC 1800	Div. II B (required)	3

FREE ELECTIVES 13

MINIMUM TOTAL 120

D&N 1300 Introduction to Dietetics (1) Overview dietetics and nutrition including history, current trends and career opportunities.

D&N 2310 Early Childhood Nutrition and Health (2) Application of principles of nutrition, significance of food habits, including the influences of family living, cultural patterns, and commercialization in relation to the health of young children.

D&N 3340 Nutrition (3) Digestive process and fundamental principles of nutrition and their application to the feeding of individuals. Prerequisite: CHEM 1103 or CHEM 1104.

D&N 3350 Community Nutrition (3) Public health nutrition and nutrition care delivery in community programs. Only offered Spring semester. Prerequisite: D&N 3340.

D&N 3360 Entrepreneurship for Dietetics Professionals (3) Identifies and develops dietetic entrepreneurial opportunities in a rapidly changing employment environment. Prerequisites: FOOD 3333 and D&N 3340.

D&N 4340 Advanced Nutrition (3) An in-depth study of human nutrition and the evaluation of nutritional status. Prerequisites: BIOL 2402, D&N 3340 and CHEM 2650 or CHEM 4421.

D&N 4341 Child Nutrition (2) Nutritive requirements of mothers during pregnancy and lactation and of children during early childhood. Bases of determining reliability of nutrition information. Prerequisite: D&N 3340.

D&N 4342 Medical Nutrition I (3) Role of nutrition in the prevention and dietary treatment of disease. Only offered Fall semester. Prerequisites: BIOL 2402, D&N 3340 and CHEM 2650 or CHEM 4421.

D&N 4343 Medical Nutrition II (3) A case study oriented approach to nutritional medicine with an in-depth emphasis on pathophysiology and the nutritional care plan in the prevention and treatment of disease. Only offered Spring semester. Prerequisite: D&N 4342.

D&N 4345 Senior Dietetics Seminar* (3) Philosophy and current issues and trends in dietetics. Group and individual problems which will lead to investigation of individual research problem. Prerequisites: PSY 4520 or equivalent and senior class standing. *Not available for graduate credit.

D&N 4350 Special Problems in Foods and Nutrition (2-3) An in-depth study of human nutrition; some foods emphasis. Group and/or individual problems including reports, discussion, bibliographies, research, and experiments. *May be repeated for a maximum of 6 semester hours.* Prerequisite: senior class standing.

D&N 4351 Geriatric Nutrition (2) Dietary needs and feeding of the elderly. Prerequisite: D&N 3340 or consent.

Food

FOODS

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (124)

Sem. Hours

MINOR REQUIREMENTS 21

AGRI 3415	Meat Science	3
FOOD 2322	Food Preparation	3
FOOD 3332	Quantity Food Prod. & Service	3
FOOD 3333	Food Systems Management	3
FOOD 3334	Food Service Equip. & Purch.	3
D&N 3340	Nutrition	3
ACCT 2100	Survey of Accounting	3

GENERAL EDUCATION REQUIREMENTS (page 41) CHEM 1104 Div. II A is required

FOOD 2322 Food Preparation (3) Properties and preparation of grains, fruits, vegetables, milk products, protein foods, fats, sugar products, and flour mixtures through demonstrations and laboratory experiences. Prerequisite: grade of C or better in CHEM 1104 or equivalent. An additional fee is associated with this course.

FOOD 3332 Quantity Food Production and Service (3) Principles and standard methods of quality food production, menus, and service in institutions and their application in work experience. Prerequisite: FOOD 2322.

FOOD 3333 Food Systems Management (3) Organization and management in food service areas including administrative responsibilities, qualifications, personnel management, and cost control. Only offered Fall semester. Prerequisite: ACCT 2100 or concurrently.

FOOD 3334 Food Service Equipment and Purchasing (3) Selection, layout and maintenance of equipment in large quantity food service areas. Also a study of food purchasing for institutions. Only offered Spring semester. Prerequisite: FOOD 3332 or concurrently.

FOOD 4326 Experimental Foods (3) An experimental approach to the study of factors which influence the behavior of foods. Group and individual experiments. Only offered Fall semester. Prerequisite: FOOD 2322 or equivalent. An additional fee is associated with this course.

Health Education

HEALTH EDUCATION

Minor, Bachelor of Science in Education Degree

Recommendation for certification to teach health education for grades PK-9 requires 29 semester hours, 30 semester hours for teaching grades 9-12, and 32 semester hours for grades PK-12. The additional classes needed for certification are HED 4320, HED 4390, and health electives. Elementary Education Majors (grades 1-6) may use this as an area of concentration. See Director of Clinical Services and Certification for current requirements. (804)

The student will demonstrate a knowledge and/or competencies in the following areas:

- The structures, functions, and interrelationships of body systems as they apply to improving and maintaining healthful living.
- The principles of nutrition and their application to maintaining good health and preventing health problems.
- The use and abuse of legal and illegal drugs and their effects on the human body and society.
- The prevention and management of communicable and chronic diseases and related health care.
- The consumer health issues related to the marketing, selection, and use of health products and services.
- The attaining and maintaining good mental health and its effects on the health of the body.
- The dynamics of interpersonal relationships as related to family life, human sexuality, and growth and development.
- The process of behavior change that favorably affect personal health.
- The expanded model of the Comprehensive School Health Program and the interrelationships of its components.
- The basic concepts of injury prevention both intentional and unintentional, first aid, emergency systems, and the effects of trauma.

Sem. Hours

MINOR REQUIREMENTS 22

HED 1100	Personal Health	3
HED 1350	Responding to Emergencies	3
HED 3360	Meth. in Secondary School Health	2
HED 4300	Nutrition & Human Performance	2
HED 4310	Drugs & Youth	3
PE 2800	Human Anatomy	3
PE 2850	Found. of Exercise Physiology	3
PSY 4230	Psy. of Adolescence	3

Biology majors may substitute BIOL 2401 for PE 2850.

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor,

HED 1100 fulfills 3 s.h. of Div. III; PSY 4230 fulfills 3 s.h. of Div. II B.

HED 1100 Personal Health (3) Health issues in today's society with special reference and application to the present and future life of the student.

HED 1350 Responding to Emergencies (3) The first aid practice and theory for common emergencies. Certification for the American Red Cross Responding to Emergencies course may be earned upon completion of all specific requirements.

HED 3310 Methods in Elementary School Health (2) Curriculum and lesson plan development, basic health concepts, and methodology of teaching elementary health education.

HED 3360 Methods in Secondary School Health (2) Explores the current trends in curriculum development in health education and the legal aspects of school health. Prerequisite: EDFL 2240.

HED 4000 Special Projects in Health Education (1-5) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 6 semester hours.*

HED 4300 Nutrition and Human Performance (2) Nutrition as it applies to athletics, physical exercise, and health. Prerequisites: PE 2800 and PE 2850 or equivalent.

HED 4310 Drugs and Youth (3) Use and abuse of alcohol and drugs; current problems relative to drug use, abuse, and control; programs in education, law enforcement, and community agencies.

HED 4320 Teaching Sexuality Education in the School (3) Prepares the teacher for course development, instruction and integration of sexuality education into the school curriculum.

HED 4330 First Aid and CPR for Educators* (1) Skills and principles of first aid and accident prevention in the schools. Students may receive American Red Cross first aid and CPR certification. *Not available for graduate credit.

HED 4350 Advanced First Aid and Emergency Care (3) Emphasizes the essential knowledge and skills needed to develop the functional first aid capabilities required by policemen, firemen, emergency squad and rescue squad members, ambulance attendants, and other special interest groups. Students taking this course may complete requirements for the American Red Cross Advanced First Aid and Emergency Care Certificate.

HED 4360 CPR Instructors Training (1) Procedures, theories, and techniques involved in the teaching of the American Red Cross CPR Modular System course. Students may complete requirements for the Red Cross CPR Modular System Instructor Certificate. Prerequisite: current Red Cross CPR Modular System Certificate.

HED 4370 Human Diseases (3) An overview of the agents of disease, the processes of contagion, and the effects on humans. Prerequisites: PE 2850 or BIOL 2401 or equivalent.

HED 4390 Community Health Education (2) Various types of health programs conducted by private, volunteer, and official agencies are explored.

HED 4760 Organization and Administration of the School Health Program (2) The organization and administration of the school health program emphasizing the areas of healthful school living, health services, and health instruction. Prerequisites: HED 3310 or HED 3360.

Hospitality Management

HOTEL AND RESTAURANT ADMINISTRATION

Major, Bachelor of Science Degree

(43-275)

The graduate with a Bachelor of Science degree in Hotel and Restaurant Administration will:

- Exhibit professional hotel and restaurant management knowledge and skills.
- Interact with diverse environments.
- Apply scientific principles to hospitality entrepreneurship.
- Demonstrate knowledge and skills of organizational hierarchy systems and tasks within those systems.
- Use critical thinking, problem solving, communication and investigative skills specific to hotel and restaurant management.
- Gain information of professional organizations and attend meetings in the hospitality industry.

Sem. Hours

MAJOR REQUIREMENTS 59

FOOD 2322	Food Preparation	3
FOOD 3332	Quantity Food Prod. & Service	3
FOOD 3333	Food Systems Management	3
HM 1800	Intro. to Hospitality	3
HM 4710	Internship	5
HM 4720	Hospitality Technology	2
HM 4745	Senior Seminar	3
HM 2830	Hotel-Res. Sanitation & Safety	2
HM 3800	Front Office Oper. & Management	3
HM 3844	Dining Room Management	3
HM 3850	Plant Operation & Maint. Mgt.	2
HM 3860	Beverage Mgt. & Marketing	3
HM 4800	Hotel & Restaurant Management	3
HM 4840	Legal Aspects of Hotel & Res. Mgt.	3
HM 4850	Hospitality Operations Analysis	3
ACCT 2100	Survey of Accounting	3

MGT 3315	Management of Organizations.	3
HRM 3920	Human Resource Management	3
TOUR 4720	Tourism Planning & Development	3
TOUR 4730	Tourism Marketing	3
GENERAL EDUCATION REQUIREMENTS (page 41)		48
CHEM 1104	Div. II A (required)	4
ECON 1010	Div. II B (required)	3
BTE 1210	Div. II A or	
LIS 1600	Div. II A (required)	2
FREE ELECTIVES		13
MINIMUM TOTAL		120

HM 1800 Introduction to Hospitality (3) Hospitality industry overview including history, current ventures and career opportunities.

HM 2830 Hotel-Restaurant Sanitation and Safety (2) Sanitation and safety procedures, laws and policies for operations in the hotel-restaurant industry.

HM 3800 Front Office Operation and Management (3) Function, procedures, systems and management of the front office within the lodging industry. Delineation of relationships between front office and other hotel department functions.

HM 3844 Dining Room Management (3) Develop knowledge and skills necessary for managing the front-of-house areas of food service operations. Prerequisite: FOOD 2322.

HM 3850 Plant Operation and Maintenance Management (2) Problems relating to building and plant maintenance. Maintenance and engineering management, organization problems, physical plant maintenance and mechanical maintenance topics as they relate to institutional management are developed.

HM 3860 Beverage Management and Marketing (3) An historic perspective of alcoholic beverages and operations. Management's rights, obligations and duties to guests, employees and the public. Merchandising techniques, target marketing and point of sale opportunities for the beverage operation. Only offered Spring semester. An additional fee is associated with this course.

HM 4000 Special Projects in Hospitality Management (1-3) Investigation of current problems and issues in hospitality management. *May be repeated for a maximum of 9 semester hours.* Prerequisite: Consent of instructor.

HM 4710 Internship (3-6) Provides experience for students in cooperating businesses and agencies/organizations. *May be repeated for a maximum of 12 semester hours with no more than 6 semester hours graduate credit.* Prerequisites: 20 semester hours of major course offerings; undergraduate grade-point average of C or above; departmental approval.

HM 4720 Hospitality Technology (2) Hotel, restaurant, and industry specific global technologies for management, employees and guests. Prerequisite: BTE 1210 or LIS 1600 or consent of instructor.

HM 4745 Senior Seminar* (3) Philosophy, current issues and trends in hospitality management. Focus on problem-solving styles leading to group and individual research problems. Prerequisites: senior standing and approval of Department Adviser. *Not available for graduate credit.

HM 4800 Hotel and Restaurant Management (3) Specialized managerial functions involved in operation of hotels, restaurants, and other facilities in the hospitality industry.

HM 4840 Legal Aspects of Hotel and Restaurant Management (3) Examination of federal and state laws, including judicial interpretations relevant to hotel and restaurant operations, as well as tort, negligence and criminal liability. Methods for prevention of legal action will be investigated.

HM 4850 Hospitality Operations Analysis* (3) Comprehensive application of manager's final reports in the hospitality industry. Examination of hospitality financial and managerial accounting approach to accounting practices, financial statements, operating activities. Prerequisite: ACCT 2100.

Physical Education

PHYSICAL EDUCATION

Major, Bachelor of Science Degree (43-817)

The graduate with a Bachelor of Science degree with a major in Physical Education will:

- Develop a foundation for a professional philosophy based on both historical and current knowledge of physical education, physical activity, and fitness/wellness.
- Understand physical activity through the use of knowledge of human anatomy, kinesiology, physiology and analysis of movement patterns.
- Expand his/her skills, knowledge and understanding in a variety of physical activities including games, sports, rhythms, and fitness skills.
- Understand and apply first aid procedures, safety factors and risk management involved in physical activity settings.
- Gain an awareness of administering physical education and fitness/wellness programs for diverse populations.
- Properly apply measurement and evaluation in the assessment of physical education and fitness/wellness programs.
- Develop an appreciation for the benefits of an active, healthy lifestyle. Sem. Hours

MAJOR REQUIREMENTS 45-57

PE 2303	Analysis & Tchg. of Aerobic Cond.	2
PE 2320	Analysis & Tchg. of Weight Training	1
PE 2800	Human Anatomy	3
PE 2850	Foundations of Exercise Physiology	3
PE 3610	Care & Prevention of Injuries	2
PE 3800	Kinesiology	3
PE 4110	History & Philosophy of Phys. Ed.	2
PE 4340	Adapted Physical Education	3
PE 4740	Legal Liability in Fitness/Wellness, Physical Education, Recreation, & Sports Settings	2
PE 4390	Eval. Procedures in Phys. Ed. (Area 1), 3 or	
PE 4850	Assessment & Evaluation of Fitness/Wellness (Areas 2 & 3), 3	3

Students select from one of the following areas (see departmental adviser). 31-40

Area 1		
Elementary - Secondary certification K-12. 31		
PE 1450	Growth & Dev. in Elem. PE	3
PE 2240	A&T of Ind/Dual Activities	3
PE 2290	A&T of Innovative Activities	2
PE 3280	A&T of Team Activities	3
PE 3300	Teaching of Dance	2
PE 3315	A&T Outdoor Leisure Skills	1
PE 3430	Creative Dance/Rhythms for El. School	2
PE 3450	Techniques of Teaching PE Activities in Elem. School	3
PE 3460	Techniques of Teaching PE Activities in Mid/High School	3
PE 3850	Motor Learning & Control	3
PE 4830	Psychological Aspects of PE	2
PE 4840	Social Aspects of Phys. Activity	2
PE 4760	Physical Education Curriculum	2
Area 2		
Fitness/Wellness I (Corporate Fitness) 34-36		
PE 1204	Stress Management	1
PE 4341	Physical Activity & Older Adult	2
PE 4765	Internship	2-4
PE 4860	Fitness Program & Implementation	3
HED 1350	Responding to Emergencies	3
HED 4300	Nutrition & Human Performance	2
HED 4310	Drugs & Youth	3
ACCT 2101	Principles of Financial Acct.	3
BLAW 2720	Legal Environment of Business.	3
MKT 3400	Principles of Marketing	3
MKT 3420	Principles of Advertising	3

MKT	3430	Personal Selling	3
PSY	1100	General Psychology	3
Area 3			
Fitness/Wellness II (Exercise Science)			36-40
PE	1204	Stress Management	1
PE	4341	Physical Activity & Older Adult	2
PE	4765	Internship	2-4
PE	4860	Fitness Program & Implementation	3
PSY	4520	Statistics for Behavioral Sciences	3
HED	1350	Responding to Emergencies	3
HED	4300	Nutrition & Human Performance	2
HED	4310	Drugs & Youth	3
D&N	3340	Nutrition	3
CHEM	2650	Elementary Organic & Biochemistry 5, or	
PHYS	1104	Intro to Sciences: Physics 4, or	
ECEL	1310	Physics for Teachers 3,	3-5
BIOL	2401	Anatomy & Physiology I	4
BIOL	2402	Anatomy & Physiology II	4
SOC	1800	General Sociology	3

GENERAL EDUCATION REQUIREMENTS (page 41) In Area 1, ICAP 4468 fulfills 3 s.h. of Div. IV B. **45-48**
 PE 1206 Div. III (required) 3

FREE ELECTIVES (Professional Education courses may be required for Area 1 for certification) **15-30**

MINIMUM TOTAL **120**

Students may earn teacher certification through careful choice of electives. See the Director of Clinical Services and Certification (LOV 2170) and departmental adviser for specific course work in both General Education and major requirements.

COACHING

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.

Certification to coach is not required in the state of Missouri. (731)

Sem. Hours

MINOR REQUIREMENTS		25
PE	2303	Analysis & Tchg. Aerobic Condition 2
PE	2320	Analysis & Tchg. Weight Training 1
PE	2800	Human Anatomy 3
PE	2850	Foundations of Exercise Physiology 3
PE	3610	Care & Prevention of Injuries 2
PE	3800	Kinesiology 3
PE	4740	Legal Liability in Fitness/Wellness, Physical Education, Recreation, & Sports Settings 2
PE	4830	Psychological Aspects of Phys. Ed. 2
Elective from the following		3
PE	2240	Analysis & Tchg. Ind. & Dual Activities 3
PE	3280	Analysis & Tchg. of Team Activities 3
Electives from the following		4
PE	4520	Theory & Coaching of Basketball 2
PE	4530	Theory & Coaching of Track & Field 2
PE	4541	Theory & Coach. of Football 2
PE	4550	Theory & Coach. of Volleyball 2
PE	4551	Theory & Coach. of Wrestling 2
PE	4560	Theory & Coach. of Softball & Baseball 2
PE	4561	Theory & Coach. of Soccer 2

FITNESS/WELLNESS

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (841)

Sem. Hours

MINOR REQUIREMENTS **23-24**

PE	1204	Stress Management	1
PE	1206	Lifetime Fitness	3
PE	2303	Analysis & Tchg. of Aerobic Cond.	2
PE	2320	Analysis & Tchg. of Weight Training	1
PE	3610	Care & Prevention of Injuries	2
PE	2800	Human Anatomy	3
PE	2850	Foundations of Exercise Physiology	3
PE	3800	Kinesiology	3
PE	4850	Assessment & Evaluation of Fitness/Wellness	3
PE	4340	Adapted Physical Education, 3 or	
PE	4341	Physical Activity & the Older Adult, 2	2-3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, PE 1206 fulfills 3 s.h. of Div. III.

- PE 1100 Orientation to Physical Education (1)** Orients students to the profession of physical education and to the physical education program at UCM.
- PE 1120 Microcomputer Applications in Physical Education, Exercise and Sport Science (2)** Prepares the undergraduate physical education major to develop and use microcomputer multi-media applications specific to the discipline of physical education, exercise/sport science.
- PE 1200 Fitness Through Activity and Sport (1)** Develops concepts of personal physical fitness as they relate to optimal healthful living.
- PE 1203 Aerobic Conditioning (1)** Preventive and corrective cardiovascular activities and programs.
- PE 1204 Stress Management (1)** Causes, effects and coping techniques vital to living successfully with personal stress and tension.
- PE 1205 Aerobic Dance for Fitness (1)** Aerobic routines for cardiovascular fitness.
- PE 1206 Lifetime Fitness (3)** Developing a healthy lifestyle through exercise and diet. Includes assessment of status, planning, and participating in a program based on the student's needs. Includes scheduled lab.
- PE 1210 Badminton (1)**
- PE 1220 Beginning Bowling (1)** Fundamentals and participation in bowling. (Recommended for the handicapped.)
- PE 1230 Beginning Golf (1)** An additional fee is associated with this course.
- PE 1241 Beginning Tennis (1)**
- PE 1251 Beginning Swimming (1)**
- PE 1255 Jazz Dance (1)** Basic jazz dance technique, warm-ups and variety of jazz movement phases.
- PE 1260 Modern Dance I (1)** Basic modern dance technique and incorporation into dance phrases.
- PE 1270 Ballroom Dance I (1)** Techniques in leading/following, basic positions and steps in the American waltz, fox trot, lindy (single, double, triple), polka, and schottische.
- PE 1271 Volleyball (1)**
- PE 1273 Ballroom Dance II (1)** Techniques in leading/following, basic steps and positions in the cha-cha-cha, rumba, samba, tango, and mambo. Prerequisite: PE 1270 or consent.
- PE 1280 Basketball (1)**
- PE 1450 Growth and Development in Elementary Physical Education (3)** The sequential and developmental phases of children and the relationship of movement to growth and development.
- PE 2200 Weight Training (1)**
- PE 2220 Weight Control (1)** The relationship between diet, exercise, and weight and the planning of weight control programs based on individual needs.
- PE 2230 Beginning Fencing (1)**
- PE 2240 Analysis and Teaching of Individual and Dual Activities (3)** Knowledge, skill development, teaching cues, skills analyses and teaching skills of individual and dual activities.

- PE 2290 Analysis and Teaching of Innovative Activities (2)** Knowledge, skill development, teaching cues, skill analyses and teaching skills of innovative activities.
- PE 2303 Analysis and Teaching of Aerobic Conditioning (2)** Basic skills to participate in and instruct in the area of aerobic conditioning.
- PE 2314 Analysis and Teaching of Recreational Sports (1)** Four square, floor table tennis, horseshoes, table tennis, wall paddle tennis, croquet.
- PE 2320 Analysis & Teaching of Weight Training (1)**
- PE 2360 Basic Dance Skills (1)** An introduction to dance through basic steps and rhythmical analysis.
- PE 2410 Movement Skills and Activities for Primary Grades (2)** Knowledge, understanding, and applications in teaching motor skills.
- PE 2800 Human Anatomy (3)** Detailed study of the structure of the human body. Emphasis on gross and microscopic anatomy of the musculoskeletal, cardiovascular-respiratory, and nervous systems.
- PE 2850 Foundations of Exercise Physiology (3)** The study of cardiovascular, muscle, and nerve physiology. Prerequisite: PE 2800.
- PE 3200 Intermediate Bowling (1)** More advanced fundamentals and participation in bowling.
- PE 3220 Advanced Beginning/Intermediate Swimming (1)**
- PE 3260 Modern Dance II (1)** A continuation of PE 1260 at a more advanced dance technique level. Prerequisite: PE 1260 or consent.
- PE 3270 Intermediate Golf (1)** Advanced skills instruction in putting, approach shots, wood shots and playing experience. Prerequisite: PE 1230. An additional fee is associated with this course.
- PE 3280 Analysis and Teaching of Team Activities (3)** Knowledge, skill development, teaching cues, skills analyses and teaching skills of team activities. Prerequisite: PE 2240 or PE 2290.
- PE 3300 Teaching of Dance (2)** Rhythmical analysis of dance forms and methods for teaching them.
- PE 3315 Analysis and Teaching of Outdoor Leisure Skills (1)** Introduction to orienteering and angling. Prerequisite: physical education majors only.
- PE 3420 Elementary School Physical Education Activities (2)** Theory and practice in stunts and tumbling, self-testing activities, rhythms, skills, and games.
- PE 3430 Creative Dance and Rhythms for the Elementary School (2)** Rhythmical activities in the elementary school, emphasizing basic movement and movement exploration. Prerequisite: 1 semester hour of dance.
- PE 3450 Techniques of Teaching Physical Education Activities in the Elementary Schools (3)** Effective teaching knowledge, skill, and techniques for physical education programs at the elementary level. Prerequisite: admission to Teacher Education Program.
- PE 3460 Techniques of Teaching Physical Education Activities in Middle Schools and High Schools (3)** Effective teaching knowledge, skill and techniques for physical education programs at the middle and high school levels. Prerequisite: admission to Teacher Education Program.
- PE 3610 Care and Prevention of Injuries (2)** Accepted athletic training procedure in the care and prevention of athletic injuries. Prerequisite: PE 2800.
- PE 3800 Kinesiology (3)** Intensive investigation and analysis of human movements. The basic mechanical principles of force, motion, and aerodynamics as related to fundamental physical skills and their application to sports and dance. Prerequisite: PE 2800 and MATH 1111 or MATH 1620.
- PE 3850 Motor Learning and Control (3)** Parameters which influence the acquisition and control of movement skills. Conditions of practice as well as those predominant factors which effect motor learning, i.e., feedback, transfer, motivation, memory and attention.
- PE 4000 Special Projects in Coeducational Physical Education (1-5)** Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 5 semester hours.*
- PE 4110 History and Philosophy of Physical Education* (2)** An investigation of the historical and philosophical development of physical education. *Not available for graduate credit.
- PE 4320 Choreography (2)** Basic choreography as to forms, formations, lines, qualities, relationships, choreographic styles, choreographers of renown and their works, constructive criticism, notation. Prerequisite: consent.
- PE 4340 Adapted Physical Education (3)** A study whereby the full educational services of physical education may be made available to atypical students on all school levels.
- PE 4341 Physical Activity and the Older Adult (2)** Principles of activity applicable to older adults, including recommended programs and evaluations.
- PE 4350 Physical Education for Special Education (2)** Activities and program development as an integral tool in the physical education of the mentally retarded, learning disabled, and emotionally disturbed.
- PE 4390 Evaluation Procedures in Physical Education (3)** The theory of measurement in health and physical education, including the selection, administration, and evaluation of appropriate tests and the interpretation of the results.
- PE 4500 Football Officiating* (1)** Lectures, readings, class discussions, and field experience in the officiating of intramural, school, and college football games. *Not available for graduate credit.
- PE 4510 Basketball Officiating* (1)** Lectures, readings, class discussions, and field experience in the officiating of intramural, school, and college basketball games. *Not available for graduate credit.
- PE 4520 Theory and Coaching of Basketball (2)** Coaching aids, techniques, strategy, and systems of the activity.
- PE 4530 Theory and Coaching of Track and Field (2)** Coaching aids, techniques, strategy, and systems of training.
- PE 4541 Theory and Coaching of Football (2)** Coaching aids, techniques, strategy, and systems of the activity.
- PE 4550 Theory and Coaching of Volleyball (2)** Coaching theory and techniques, aids, strategy, and systems of volleyball.
- PE 4551 Theory and Coaching of Wrestling (2)** Squad and practice organization, techniques, budget, equipment, match management, and strategy.
- PE 4560 Theory and Coaching of Softball and Baseball (2)** Coaching aids, techniques, strategy, and systems of softball and baseball.
- PE 4561 Theory and Coaching of Soccer (2)** Coaching theory and techniques, aids, strategy, and systems of soccer.
- PE 4590 Administration of Interscholastic Athletics (2)** Organization and management of a program of competitive athletics for schools and colleges.
- PE 4740 Legal Liability in Fitness/Wellness, Physical Education, Recreation and Sport Settings (2)** Acquaints the student with legal research and basic concepts of negligence in governing the school sport and fitness industries.
- PE 4760 Physical Education Curriculum* (2)** Problems involved in organization and design of physical education curricula. Prerequisite: admission to Teacher Education Program. *Not available for graduate credit.
- PE 4765 Internship* (2-4)** Practical experience in fitness/wellness programs in community centers, corporation settings, or businesses. Prerequisite: PE 4850 and approval of department. *Not available for graduate credit.
- PE 4830 Psychological Aspects of Physical Education (2)** An application of psychological principles to physical education.
- PE 4840 Social Aspects of Physical Activity (2)** The application of sociological concepts and theories to the study of physical education and sport in American society.
- PE 4850 Assessment and Evaluation of Fitness/Wellness* (3)** The selection, administration, and interpretation of test and protocols for fitness assessment. Prerequisite: PE 2850. *Not available for graduate credit.
- PE 4860 Fitness Programming and Implementation* (3)** Planning, developing and implementing a fitness/wellness program. Prerequisite: PE 4850. *Not available for graduate credit.
- PE 4880 Methods of Teaching Physical Education* (2)** Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with PE 4885 during the Professional Semester. *Not available for graduate credit.
- PE 4885 Secondary Field Experience II* (1)** Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with PE 4880 during the Professional Semester. *Not available for graduate credit.

Integrative Studies General

IGEN 3472 Sport in American Life (3) Provides for an understanding and appreciation of the role of sport in American life.

Recreation

GENERAL RECREATION

Major, Bachelor of Science Degree*
(43-814)

The graduate with a Bachelor of Science degree in General Recreation will:

- Impart an understanding of the benefits and impacts of leisure to patrons of his/her community, based on a sound understanding of the conceptual foundations of leisure.
- Develop and implement recreation programs in a range of activity content areas for various populations, marshaling diverse community and human services resources.
- Use diverse community, institutional, natural, cultural, and human service resource to promote and enhance the leisure experience, thus improving the quality of life for all populations.
- Assess goals and objectives for groups and individuals within the leisure service.
- Utilize sound managerial, marketing, and financial processes in the administration/management of leisure service delivery.
- Utilize diverse communication, interaction and facilitation techniques, including leadership, instructional strategies, and emergency management.
- Demonstrate knowledge and use of legal concepts and legislative processes as applied to leisure services, including implementation of risk management plans.

Sem. Hours

MAJOR REQUIREMENTS 40

REC 1100	Introduction to Recreation	3
REC 2200	Developing Rec. & Tourism Prog.	3
REC 3210	Leadership & Group Dynamics in Recreation & Tourism Services	3
REC 3530	Outdoor Rec. Skills & Adventure	3
REC 4710	Managing Recreation & Tourism Enterprises	3
REC 4720	Financing Recreation & Tourism Enterprises	3
REC 4740	Seminar	2
REC 4980	Internship	6
TOUR 3500	Microcomputer Applications for Tourism & Recreation	3
TOUR 4720	Tourism Planning & Development	3
TOUR 4730	Tourism Marketing	3
TOUR 4740	Special Events Planning	3
PE 4740	Legal Liability	3

Students should see the Program Coordinator for certification requirements in specific areas of interest. Prior to enrollment in REC 4980, the student must complete a 500-hour field work experience in an approved setting, have a minimum of 2.50 grade-point average in the major, and a minimum overall grade-point average of 2.25.

MINOR RECOMMENDED 18-25

GENERAL EDUCATION REQUIREMENTS (page 41) 48

FREE ELECTIVES 7-32

MINIMUM TOTAL 120

*May lead to Missouri Park and Recreation Association Leader Certification.

GENERAL RECREATION

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor; Missouri Park and Recreation Association certification is not available with this minor.
(802) Sem. Hours

MINOR REQUIREMENTS 24

REC 1100	Introduction to Recreation	3
REC 2200	Developing Rec. & Tourism Prog.	3
REC 3210	Leadership & Group Dynamics in Recreation & Tourism Services	3
REC 3530	Outdoor Rec. Skills & Adventure	3
REC 4710	Managing Recreation & Tourism Enterprises	3
REC 4720	Financing Recreation & Tourism Enterprises	3
TOUR 3500	Microcomputer Applications for Tourism & Recreation	3
TOUR 4740	Special Events Planning	3

REC 1100 Introduction to Recreation (3) Designed to introduce the student of recreation and leisure services to the philosophy, history, and significant social forces inherent in the growth and development of the leisure services field.

REC 2100 Implications of Disabling Conditions for Therapeutic Recreation (3) Skills for awareness of and service to individuals with disabilities.

REC 2200 Developing Recreation and Tourism Programs (3) Provides an overview and practical experience with the program planning process for recreation and tourism services. Only offered Spring semester. Prerequisite: REC 1100 or TOUR 1900.

REC 3210 Leadership and Group Dynamics in Recreation and Tourism Services (3) The basics of group dynamics and leadership as applied to techniques in recreation tourism environments. Prerequisite: REC 1100 or TOUR 1900.

REC 3530 Outdoor Recreation Skills and Adventure (3) An introduction to experiential education through outdoor recreation adventure programs.

REC 4000 Special Projects in Recreation* (1-5) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 5 semester hours.* *Not available for graduate credit.

REC 4710 Managing Recreation and Tourism Enterprises* (3) Basic functions, management techniques, and operations procedures currently practiced in providing recreation and tourism related services. Prerequisite: REC 3210. *Not available for graduate credit.

REC 4720 Financing Recreation and Tourism Enterprises* (3) Covers the basic methods and problems of financing public and private recreation and tourism services. *Not available for graduate credit.

REC 4740 Seminar (2) Covers new and significant publications in the recreation and tourism industry and provides the student with an opportunity to develop basic research skills. Prerequisite: Consent of instructor.

REC 4980 Internship* (6) Experience in recreation or tourism services while working in an approved agency under qualified and experienced supervision. Prerequisites: REC 4740 and approval of the internship coordinator. *Not available for graduate credit.

Tourism

TOURISM

Major, Bachelor of Science Degree
(43-843)

The graduate with a Bachelor of Science degree in Tourism will:

- Interact with a variety of clients and consumers.
- Understand perspectives of potential employers and customers.
- Solve service-oriented problems utilizing appropriate concepts, principles, theories and technology.
- Exhibit an understanding/appreciation of global concerns, the diversity of humankind, risk assessment, professional ethics, and legal environments.
- Obtain knowledge related to professional organizations, service learning, and other external sources of professional enrichment.
- Obtain skills needed for professional management within the tourism sector.

		Sem. Hours
MAJOR REQUIREMENTS		44
TOUR 1900	Introduction to Tourism	3
TOUR 3300	Tourism Destinations	3
TOUR 3500	Microcomputer Applications for Tourism & Recreation	3
TOUR 3710	Group Tour Operations	3
TOUR 4310	International Tourism	3
TOUR 4700	Conf. & Convention Planning	3
TOUR 4720	Tourism Planning & Development	3
TOUR 4730	Tourism Marketing	3
TOUR 4740	Special Events Planning	3
TOUR 4920	Senior Seminar	2
TOUR 4980	Internship	6
REC 2200	Developing Rec. & Tourism Prog.	3
REC 4720	Financing Rec. & Tourism Enterprises.	3
HM 4800	Hotel & Restaurant Management	3

Prior to enrollment in TOUR 4980, the student must complete a 500-hour field work experience in an approved setting, have a minimum of 2.5 grade-point average in the major, and a minimum overall grade-point average of 2.25.

MINOR RECOMMENDED18-25

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000	Div. I B (required)	3
BTE 1210	Div. II A or	
LIS 1600	Div. II A (required)	2
BIOL 1004	Div. II A (required)	4
ECON 1010	Div. II B (required)	3
GEOG 2212	Div. II B (required)	3
HIST 1350	Div. II B or	3
HIST 1351	Div. II B (required)	3
GEOG 3201	Div. II D (required)	3

FREE ELECTIVES3-10

MINIMUM TOTAL 120

TOURISM MANAGEMENT

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(822)

Sem. Hours

MINOR REQUIREMENTS 24

TOUR 1900	Introduction to Tourism	3
TOUR 3300	Tourism Destinations	3
TOUR 4310	International Tourism	3
TOUR 3500	Microcomputer Applications for Tourism & Recreation	3
REC 2200	Developing Rec. & Tourism Prog.	3
HM 4800	Hotel & Restaurant Management.	3
TOUR 3710	Group Tour Operations, 3 or	
TOUR 4740	Special Events Planning, 3.	3
TOUR 4700	Conf. & Convention Planning, 3 or	
TOUR 4730	Tourism Marketing, 3	3

GENERAL EDUCATION REQUIREMENTS

BTE 1210	Div. II A or	
LIS 1600	Div. II A (required)	2

TOUR 1900 Introduction to Tourism (3) The course presents a basic understanding of travel and tourism and provides insight into the development and operations of the various components of the travel industry.

TOUR 3300 Tourism Destinations (3) Includes the description of tourism related attributes of various countries.

TOUR 3500 Microcomputer Applications for Tourism and Recreation (3) Assists the student in becoming literate in the use of microcomputers in the tourism and recreation field. Prerequisite: BTE 1210 or LIS 1600 or consent of instructor.

TOUR 3710 Group Tour Operations (3) Provides an overview of the group travel industry and the role of group tour operators in providing travel opportunities. Only offered Spring semester. Prerequisite: TOUR 1900.

TOUR 4310 International Tourism* (3) A presentation of the phenomena and relationships arising from the interaction of international tourists, business suppliers, host governments, and host communities in the process of attracting and hosting international tourists. Only offered Spring semester. Prerequisite: TOUR 1900 or HM 1800. *Not available for graduate credit.

TOUR 4700 Conference and Convention Planning* (3) Provides an insight into the planning techniques and management strategies used in conference and convention operations. Prerequisite: TOUR 1900 or HM 4800. *Not available for graduate credit.

TOUR 4720 Tourism Planning and Development* (3) The processes involved in planning quality recreation and tourism destination areas. Only offered Spring semester. *Not available for graduate credit. Prerequisite: HM 1800 or REC 1100 or TOUR 1900.

TOUR 4730 Tourism Marketing (3) An examination of the procedures involved in planning, developing, and implementing a tourism and recreation marketing campaign. Only offered Spring semester. Prerequisite: HM 1800 or REC 1100 or TOUR 1900.

TOUR 4740 Special Events Planning* (3) Presents an overview of the special events field and the current practices in event planning and management. *Not available for graduate credit. Prerequisite: TOUR 1900.

TOUR 4900 Special Projects in Tourism* (1-5) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 5 semester hours.* Prerequisite: Consent of Instructor. *Not available for graduate credit.

TOUR 4920 Senior Seminar* (2) Develop skills necessary to be prepared for addressing current issues/trends in the tourism industry. Prerequisite: Consent of instructor. *Not available for graduate credit.

TOUR 4980 Internship* (6) Experience in tourism services while working in an approved agency under qualified and experienced supervision. Prerequisites: TOUR 4920 and approval of internship coordinator. *Not available for graduate credit.

Nursing

Department of Nursing Statement of Policy

Program

UCM's Department of Nursing offers a Bachelor of Science in Nursing. The program is accredited by the Commission on Collegiate Nursing Education, One Dupont Circle NW, Suite 530, Washington, DC 20036-1120, and approved by the Missouri State Board of Nursing.

Accreditation

The nursing program is approved by the Missouri State Board of Nursing and the Commission on Collegiate Nursing Education. Contact numbers for the Nursing Department's accrediting agencies are: Missouri State Board (573) 751-0681; Commission on Collegiate Nursing Education (202) 887-6791. The Commission on Collegiate Nursing Education is located at One Dupont Circle, NW, Suite 530, Washington, DC 20036.

Student Learning Outcomes

The graduate with a Bachelor of Science degree in Nursing will use the knowledge, skills and attitudes obtained in the program to:

- Communicate in a manner that reflects that communication is a reciprocal process utilizing multiple modes in adapting language and communication strategies appropriate to professional role and setting
- Demonstrate intellectual skill based on the use of theories and principles guided by logic and sound judgment to allow for the provision of safe quality nursing care. Using reasoning, the student will be able to assess, plan, intervene and evaluate while providing holistic care in diverse environments utilizing pertinent resources.
- Actively engage in interaction based on mutual respect with collaboration toward goal achievement
- Internalize and demonstrate ethically grounded behaviors reflective of the ANA Nursing: *Scope and Standards of Practice* (2003) and ANA *Code of Ethics for Nurses* (2001)
- Organize, store, retrieve, evaluate, synthesize and annotate professionally related information from print, electronic and other sources to make clinical judgements and solve problems

Admission

Students entering UCM as freshmen or by transfer should indicate a pre-nursing major. Admission to the nursing program is conditional upon completion of a minimum of sixty semester hours, completion of all prerequisites necessary for admission to the first semester in the nursing program and the requirements for admission listed below. Admission to the nursing program involves competition between all eligible candidates. The Department of Nursing reserves the right to select among all qualified candidates. Students are admitted in March for Fall semester nursing classes and in October for Spring. The necessary application and forms are available after meeting with an adviser in the Department of Nursing.

Admission Criteria to the Undergraduate Nursing Program

1. Evidence of good moral character as determined by the Missouri State Board of Nursing in the Nurse Practice Act (1999) and by the American Nurses' Association Code of Ethics for Nurses (2001).
2. All nursing prerequisites must be completed at the time of admission. Computer literacy is required to be admitted to the nursing program.
3. A minimum of a 2.75 cumulative grade-point average is required at the time of application.
4. Minimum grade of C in all nursing prerequisites and nursing courses. A student receiving a grade lower than C in any nursing prerequisite may repeat that course only one time. If the course was taken at UCM, it must be repeated at UCM.
5. A student receiving more than one D and/or F in a course or courses with a nursing prefix will not be eligible for admission into the program.
6. Students will not be permitted to withdraw more than one time from a nursing prerequisite course without permission of the Department of Nursing.
7. Science prerequisites, as identified in NURSING Major, Bachelor of Science Degree, must have been taken within 10 years of requested semester admission.

8. Applicants for the nursing program must complete the College-BASE Examination with a 235 or better on all 4 subject areas (English, Mathematics, Science and Social Studies) and a minimum grade level equivalent of 12 on the Nelson-Denny Reading Test to be eligible for consideration before the Admissions and Progression Committee of the Department of Nursing.
9. Completion of additional requirements such as speech and hearing exam, assessment(s), etc. at the time of application. Check with the nursing department for these requirements.
10. Completed application and examination forms are to be in the office of the Department of Nursing by January 1 for admission to Fall semester nursing classes and July 1 for admission to Spring semester nursing classes.
11. Official transcripts-it is the students responsibility to request ALL official transcripts from other universities and colleges be submitted to the Admissions Department of the University to be posted as part of the student's official transcript by 5 p.m., December 31 for Fall admission and June 30 for Spring admission.
12. Required immunizations and a satisfactory criminal history background check must be complete and validated before the first day of clinical.
13. English as second language students (any student whose primary and secondary education was in a country where the native and official language was not English excluding native American citizens who attended American high schools in another country) must successfully complete the University requirements:
 - a. TOEFL - A score of 600 with a minimum of 55 on each sub-score.
 - b. Test of Spoken English - A minimum score of 250.
 - c. Test of Written English - A minimum score of 5.
 Any student not obtaining these scores can receive assistance in the English Department through the English Language Institute.
14. Writing assessment and references (2) may be required. Additional considerations given to the following:
 - Academic history with patterns and trends indicating potential for academic success.
 - The functional abilities required to be successful in the nursing program, with reasonable accommodation. See Core Performance Standards.
 - Eligibility for licensure. Completion of the nursing program does not guarantee eligibility to take licensure examination. Refer to the Nurse Practice Act in the state in which you anticipate licensure. In Missouri refer to Sections 335.046 and 335.066 at www.ecodev.state.mo.us/pr/nursing.
 - Number of credit hours taken at The University of Central Missouri. Students will be categorized in two classifications for consideration for admission to the nursing program:
 - a. Students who have taken all nursing prerequisite courses at UCM; and
 - b. Students who have transferred credit for one or more nursing prerequisite course(s) from another institution.
 Nursing prerequisite courses are CHEM 1104, BIOL 2401, BIOL 2402, BIOL 3611, PSY 1100, SOC 1800, D&N 3340, NUR 1700. Grade point averages are a determining factor in selection.
 - Additional assessments may be required.

Direct Admission Policy:

Upon admission to the University, a student who meets the following criteria may be guaranteed direct admission to the nursing program:

1. Admitted to UCM as freshmen with ACT 24 or higher and a high school CGPA of 3.0.
2. Declared nursing as a major.
3. Maintains a 3.0 GPA at UCM at the end of sophomore year.
4. Meet criteria published in the UCM undergraduate catalog and Department of Nursing Undergraduate Handbook as of the date of formal application.
 - Direct admission is limited to 40 students per semester based on admission date to UCM.
 - Students who are directly admitted have the same period of time to complete their degree program as other UCM students.
 - Direct Admission nursing students complete the nursing application by the set deadlines like all other nursing students.
 - A direct Admission nursing student may lose his/her guaranteed place in the nursing program if he/she falls below the specified standards.

Special Expenses

1. Additional expenses for nursing majors include: uniforms, shoes, picture ID badge, watch with second hand, stethoscope, sphygmomanometer, health insurance, background check, vaccinations and blood tests, selected books and testing expenses. Testing experiences apply across the entire nursing program.
2. Nursing students must have access to transportation upon admission to the nursing program.
3. Nursing students must be certified in 2-person cardiopulmonary resuscitation for health care providers according to CNE orientation manual.
4. During the semester of anticipated graduation, licensing expenses, the nursing school pin, university graduation expenses, nursing graduation pictures and invitations are additional expenses.

Kansas City Experience

Theory and clinical learning occur in Kansas City during the last year. These experiences make possible exposure to nursing practice in both rural and urban settings.

Core Performance Standards for Admission and Progression

FUNCTIONAL ABILITY : STANDARD : SOME EXAMPLES OF NECESSARY ACTIVITIES (Not Inclusive)

Thinking skills: Critical thinking ability sufficient for sound clinical judgment. Identify cause-effect relationships in clinical situations, develop nursing care plans to integrate data from different sources and decide whether to initiate action or report, ability to interpret variations in vital signs, lab values, among other skills.

Interaction: Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of socio-economic and cultural backgrounds. Establish rapport with patients/clients and colleagues. Works as a team member.

Communication: Communication abilities sufficient for productive interaction with others in verbal and written form and other formats. Explain treatment procedures, initiate health teaching, document and interpret nursing actions and patient/client responses.

Motor skills: Gross and fine motor abilities sufficient to provide safe and effective nursing care. Move around work area and within confined spaces. Calibrate and use equipment, position clients, insert catheters, injections.

Sensory/Perceptual: Auditory/visual and tactile ability sufficient to monitor and assess health needs. Hear monitor alarm, (IV alarm, etc.), emergency signals, auscultatory sounds, cries for help.

Re-Application for Admission

A student re-applying for admission to the nursing program within 6 months to a year of the initial application is not required to obtain a new physical exam or speech/hearing exam.

A student re-applying for admission to the nursing program over a year's time, but within 18 months of the initial application, is required to obtain a repeat physical exam with only those tests being repeated that

are deemed necessary by the physician or nurse practitioner. Students need not repeat speech/hearing exam.

A student re-applying for admission to the nursing program over 18 months from the initial application is required to obtain a repeat physical exam and a repeat speech/hearing exam.

Students in non-compliance with these requirements will be referred to the Health Committee.

It is the responsibility of the applying student to provide documentation of compliance with these health requirements by the time of admission. Students not in compliance with these requirements will be referred to the Health Committee.

The Health Committee recommends that each student assume responsibility for personal health maintenance. An annual health assessment is strongly encouraged. Students are required to maintain insurance coverage for illness and accidents throughout their time in the program.

Requirements for Progression in the Nursing Program

1. Following admission to the nursing program, the student will follow the typical 4-year program for class enrollment. The courses in each semester are designed to be taken concurrently. Any changes in the courses taken must receive approval from the department chair prior to modifying enrollment.
2. A student must make a minimum grade of C in all nursing courses to progress in the nursing program. A student receiving a grade lower than C in any nursing course may repeat that course only one time.
3. A student who receives a D or F in a nursing course will be suspended from the program and is required to seek retention in order to repeat the course. The retention process is initiated by the student with the instructor whose course was failed. Completion and filing of the Request for Retention Form is the responsibility of the student. If a student is not retained within a year, that student may be required to repeat all courses within the major.
4. A student receiving more than one D and/or F in a same course with a nursing prefix will not be allowed to reapply.
5. Students who withdraw from the nursing program must follow the Nursing Department's **Withdrawal Policy** contained herein and compete with other students for retention into the program.
6. Requirements for retention to the program are all those set forth in this policy as well as those contained in the current Undergraduate Student Handbook for the Department of Nursing.
7. Students must be successful in passing each course in a particular semester in the program to progress to the next semester.

Withdrawal Policy

Students within the program who withdraw from any nursing course are automatically suspended from the program and must follow the Nursing Department's Retention Policy in order to be retained. Students who withdraw from a nursing course and do not follow the requirements of the Nursing Department Withdrawal Policy as stated below will not be considered for retention.

Students who withdraw from any nursing course must compete with other students for retention to the program. Students may be readmitted only once to the nursing program based on the decision of the Admissions and Progression Committee.

Students who have been attending meetings of a nursing course and wish to withdraw should:

Clinical/practicum courses

1. Notify their instructor in writing of their desire to withdraw and their reason for this decision.
2. Meet with the chair.
3. Follow the University process for withdrawal (See UCM's University Calendar and Handbook or Catalog for information).

Theory courses

1. Notify their instructor in writing of their desire to withdraw and their reason for this decision.
2. Follow the university policy for withdrawal (See UCM's University Planner/Handbook or Catalog for information).

Students are not eligible to withdraw from a nursing clinical/practicum course when they have received their final grade from the instructor. Students who receive a final grade of D or F from the instructor and withdraw from the course will have their erroneous "W" changed to

the appropriate failing grade by the Department of Nursing. Students who have not attended classes in the semester they wish to withdraw may withdraw from nursing courses by following the University Withdrawal Policy.

Transfer into the Nursing Major

Transfer of upper-level nursing credit will be considered according to the following procedure:

1. Students will meet the General Education requirements as listed in the current University Catalog.
2. Only students in good standing at a nationally accredited baccalaureate nursing program are eligible for transfer. Credits will be evaluated and allowed in accordance with current UCM and Department of Nursing policy.
3. Evaluation of each transfer student will be made within the Department of Nursing on an individual basis.
4. Students will take a minimum of 30 semester hours of upper-level courses, with a minimum of 30 semester hours in the nursing major at UCM.
5. Students will apply for admission to the Department of Nursing and be subject to the regular program admission policy. In addition, the following evaluation process will be followed:
Credit for nursing courses will be based on a review of content, course description, syllabi, and catalog description,
 - a. If content is basically the same, the Nursing Department Transfer Committee may approve the course for nursing credit. The credit hours approved may be at the maximum credit hour allocation for the UCM nursing course.
 - b. If the content is fairly similar, the Nursing Department Transfer Committee may approve credit and in addition require NUR 4000, Special Projects (2-6 credits).
 - c. Only discrete courses in the content areas of research and ethics, pharmacology and observation and assessment will be considered for transfer as meeting the departmental required courses in these areas.
6. The student will have the chair or dean from the nursing school they are transferring from write a letter to the chair of UCM's Department of Nursing stating they are a student in good standing.
7. All prospective transfer students will be interviewed by the department Chairperson.

RN-BS in Nursing Track for Students Holding the R.N.

1. Credits from accredited nursing programs will be evaluated and allowed in accordance with current UCM policy.
2. Students will meet the General Education requirements as listed in the current University Catalog for nursing majors.
3. Evaluation of each R.N. student will be made within the Department of Nursing to determine placement in the program.
4. Students will take a minimum of 30 semester hours of upper-level courses, with a minimum of 30 semester hours in the nursing major through UCM.
5. Students will apply for admission to the Department of Nursing and be subject to the regular program admission policy. In addition, the following criteria will be followed:
 - a. Applicants must have a current license to practice nursing in Missouri.
 - b. Credit for non-college nursing courses may be applied to the nursing major upon successful performance on challenge examinations. A maximum of 30 semester hours of special credit may be awarded by challenge.

NURSING

Generic Track, Bachelor of Science Degree
(43-133)

Sem. Hours

MAJOR REQUIREMENTS 76

NUR	1700	Introduction to Professional Nursing	1
NUR	2700	Professional Nursing Seminar	1
NUR	3200	Pathophysiology	4
NUR	3210	Pharmacological Therapeutics	3
NUR	3304	Assessment Across the Lifespan	2
NUR	3305	Assessment Across the Lifespan Lab	1
NUR	3410	Concepts of Nursing in Wellness	3
NUR	3411	Concepts of Nursing in Wellness Practicum	2
NUR	3412	Technological Nursing Applications I	1
NUR	3510	Concepts of Gerontic Nursing	2
NUR	3610	Concepts of Adult & Older Adult Nursing I	3
NUR	3611	Concepts of Adult & Older Adult Nursing I Practicum	4
NUR	3612	Technological Nursing Applications II	2
NUR	4012	Evidence-based Practice/Research	2
NUR	4013	Health Policy & Nursing Ethics	2
NUR	4410	Concepts of Maternal-Child Nursing	3
NUR	4411	Concepts of Maternal-Child Nursing Practicum	2
NUR	4510	Concepts of Adult & Older Adult Nursing II	3
NUR	4511	Concepts of Adult & Older Adult Nursing II Practicum	3
NUR	4512	Advanced Technology & Pharmacological Nursing Applications	2
NUR	4602	Synthesis of Nursing Concepts	1
NUR	4600	Concepts of Nursing Leadership in Management & Community/Mental Health	6
NUR	4601	Concepts of Nursing Leadership in Management & Community/Mental Health Practicum	6
BIOL	2401	Anatomy & Physiology I	4
BIOL	2402	Anatomy & Physiology II	4
BIOL	3611	Microbiology	4
D&N	3340	Nutrition	3
Electives from the following			2
NUR	2020	Health: Women's Perspective	2
NUR	3010	Nursing Leadership in Service Learning	2
NUR	4020	Grief & Loss	2
NUR	4030	Human Sexuality	2
NUR	4040	Nursing Informatics	2
NUR	4405	Aging of Self & Others	2
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, BIOL 2401 and BIOL 2402 are allowed to fulfill 4 s.h. of Div. II A 44			
CHEM	1104	Div. II A (required)	4
PSY	1100	Div. II B (required)	3
SOC	1800	Div. II B (required)	3
ICAP	4111	Div. IV (required)	3
FREE ELECTIVE			2
MINIMUM TOTAL			122

RN-BS Nursing Track, Bachelor of Science Degree
(43-288)

		Sem. Hours
MAJOR REQUIREMENTS		30
NUR 3304	Assessment Across the Lifespan	2
NUR 3305	Assessment Across the Lifespan Lab	1
NUR 4012	Evidence-Based Practice	2
NUR 4013	Health Policy and Ethics	2
NUR 4050	RN-BS Role Transition	4
NUR 4052	Advanced Concepts of Wellness	3
NUR 4406	RN-BS Concepts of Community Health Nursing	3
NUR 4407	RN-BS Concepts of Community Health Nursing Practicum	2
NUR 4608	RN-BS Concepts of Nursing Leadership in Management	4
NUR 4609	RN-BS Concepts of Nursing Leadership in Management Practicum	2
ICAP 4111	Socio-Econ. Factors Impact Health	3
BIOL 2401	Anatomy & Physiology I	4
BIOL 2402	Anatomy & Physiology II	4
BIOL 3611	Microbiology	4
D&N 3340	Nutrition	3
Nursing elective from the following		2-6
NUR 3010	Nursing Leadership in Service Learning	2
NUR 4020	Grief & Loss	2
NUR 4030	Human Sexuality	2
NUR 4040	Nursing Informatics	2
NUR 4405	Aging of Self & Others	2
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, BIOL 2401 and BIOL 2402 are allowed to fulfill 4 s.h. of Div. II A		44
CHEM 1104	Div. II A (required)	4
PSY 1100	Div. II B (required)	3
SOC 1800	Div. II B (required)	3
ICAP 4111	Div. IV (required)	3
MINIMUM TOTAL		120

NUR 1700 Introduction to Professional Nursing (1) Introduces the learner to the outcomes assessment curriculum utilized by the Department of Nursing.

NUR 2000 Special Projects: e-Health and Cyber Wellness (3) This course provides an opportunity for students to apply e-health and cyber wellness skills to a self selected wellness project.

NUR 2020 Health: The Women's Perspective (2) An introduction to the physiological, psychosocial, and economic factors that historically have impacted upon the health of women from selected cultural backgrounds with emphasis upon major health care issues currently affecting women. Open to nursing and nonnursing majors.

NUR 2700 Professional Nursing Seminar (1) Introduces the learner to the profession and philosophy of nursing. Focuses on essential competencies for success in the nursing major as defined by program outcomes. Prerequisite: NUR 1700 or may take concurrently with consent of department chair.

NUR 3010 Nursing Leadership in Service Learning (2) Basic information about nursing leadership roles in health care settings. Active participation in a service learning experience. Prerequisite: Sophomore standing

NUR 3200 Pathophysiology (4) An examination of common pathophysiological alterations in human structure and function across the lifespan Prerequisites: BIOL 2401 and BIOL 2402.

NUR 3210 Pharmacological Therapies (3) Effects of chemicals used in the prevention, diagnosis and treatment of disease. Incorporation of patient teaching about pharmacological therapeutics. Prerequisites: CHEM 1104; Admission to nursing program for nursing majors.

NUR 3304 Assessment Across the Lifespan (2) Professional nursing observation and physical assessment of the individual in health care delivery systems. Basic for systematic assessment skills used within the nursing process framework. Prerequisites: BIOL 2401 and BIOL 2402. Corequisite: NUR 3305.

NUR 3305 Assessment Across the Lifespan Lab (1) Application of nursing assessment skills including interviewing, taking health histories, and physical examination. Prerequisites: BIOL 2401 and BIOL 2402. Corequisite: NUR 3304.

NUR 3410 Concepts of Nursing in Wellness (3) An introduction to functional health patterns and lifespan implications for health promotion and disease prevention from a nursing perspective. Prerequisite: Admission to the nursing program. Corequisite: NUR 3411. An additional fee is associated with this course.

NUR 3411 Concepts of Nursing in Wellness Practicum (2) Application of health promotion and disease protection from a nursing perspective. The nursing role is explored within the context of individual, family and community health. Prerequisite: Admission to the nursing program. Corequisite: NUR 3410.

NUR 3412 Technical Nursing Applications I (1) Theory and application of basic nursing and technological skills. Prerequisite: Admission to the nursing program. An additional fee is associated with this course.

NUR 3510 Concepts of Gerontic Nursing (2) An overview of nursing science specific to care of the aging adult with focus on physiologic, emotional, and spiritual aspects of aging. Prerequisite: NUR 3411. Corequisite: NUR 3611.

NUR 3610 Concepts of Adult and Older Adult Nursing I (3) Continuation of nursing process with emphasis on nursing science applicable to individuals experiencing chronic alterations in health. Prerequisites: NUR 3410 and NUR 3411. Corequisites: NUR 3611 and NUR 3612. An additional fee is associated with this course.

NUR 3611 Concepts of Adult and Older Adult Nursing I Practicum (4) Continued application of nursing process with emphasis on nursing science applicable to individuals experiencing chronic alterations in health. Prerequisites: NUR 3410 and NUR 3411. Corequisites: NUR 3610 and NUR 3612.

NUR 3612 Technology Nursing Applications II (2) A performance based course focusing upon current clinical technology applications in nursing and theoretical rationales associated with these applications. Corequisites: NUR 3610 and NUR 3611. An additional fee is assessed for this course.

NUR 4000 Special Projects in Nursing (1-3) Investigation of contemporary problems and issues in nursing by selected individuals or groups.

NUR 4012 Evidence-based Practice/Research (2) An overview of research designed to introduce the student to the intellectual skills needed to identify, conduct, report and critique nursing research studies. Prerequisite: Admission to the nursing program or RN standing.

NUR 4013 Health Policy and Nursing Ethics* (2) An overview of professional issues and ethics in nursing. Exploration of health policies impacting nursing practice. Prerequisite: Junior or RN standing. *Not available for graduate credit.

NUR 4020 Grief and Loss (2) A seminar designed to assist various pre-professionals to understand and deal with loss and death either in a professional capacity or on a personal basis. Open to nursing and nonnursing majors.

NUR 4030 Human Sexuality (2) Current theory regarding the biological, cultural, and behavioral parameters of human sexuality. Open to nursing and nonnursing majors.

NUR 4040 Nursing Informatics (2) Introduces the student to the synergistic use of nursing, information and computer sciences unique to nursing informatics. Explores impact on nursing practice roles and quality of patient care. Prerequisite: meeting general education requirement for technology.

NUR 4050 RN-BS Role Transition* (4) Nursing concepts and theories for role transition and outcomes-based learning for the returning registered nurse. Only offered Fall semester. Prerequisite: Registered Nurse License. *Not available for graduate credit.

NUR 4052 RN-BS Concepts of Wellness (3) Concept of health patterns occurring throughout the life span and implications of health promotion, disease prevention and health maintenance are viewed from a nursing perspective. Prerequisites: Admission to the RN-BS track, NUR 4050 or concurrently.

Safety Sciences

NUR 4060 Physical and Health Needs of the Medically Fragile Child (3)

This course is designed to assist teachers and nurses in understanding and planning instruction/interventions for students with severe chronic medical and/or physical conditions. Prerequisite: EDSP 2100 or permission of instructor.

NUR 4405 Aging of Self and Others (2) Seminar concerning an individual's aging in our society. Focus is on how one perceives and adapts to the aging of self and others. Open to nursing and nonnursing majors.

NUR 4406 Concepts of Community Health Nursing (3) Clinical application of theories, concepts, and skills of dynamic, creative nursing and nursing leadership within a selected setting of today's changing health care environment. Prerequisite: NUR 4050. Corequisite: NUR 4407.

NUR 4407 RN-BS Concepts of Community Health Nursing Practicum (2) Application of theories and skills of community health nursing to individuals, families, groups, and communities experiencing physical and psychosocial alterations or potential alterations in health. Prerequisite: NUR 4406 or concurrently.

NUR 4410 Concepts of Maternal-Child Nursing (3) This course is a continuation of the nursing process with emphasis on nursing science applicable to the childbearing and childrearing family. Prerequisites: NUR 3610 and NUR 3611. Corequisite: NUR 4411.

NUR 4411 Concepts of Maternal-Child Nursing Practicum (2) Continuation of nursing process with emphasis on nursing science applicable to the childbearing and childrearing family. Prerequisite: NUR 3611. Corequisite: NUR 4410.

NUR 4510 Concepts of Adult and Older Adult Nursing II (3) Overview of nursing science applicable to the acutely and critically ill adult. Prerequisites: NUR 3610, NUR 3611, NUR 3510, NUR 3612. Corequisite: NUR 4511.

NUR 4511 Concepts of Adult and Older Adult Nursing II Practicum (3) This course is designed to provide the student the opportunity to apply skills and concepts of nursing practice in the delivery of nursing care to acutely and critically ill adults. Prerequisites: NUR 3610 and NUR 3611. Corequisite: NUR 4510.

NUR 4512 Advanced Technological and Pharmacological Nursing Applications (2) This course is designed to increase knowledge of and ability to apply advanced pharmacology and technology to nursing practice. Corequisites: NUR 4410, NUR 4411, NUR 4510 and NUR 4511.

NUR 4600 Concepts of Nursing Leadership in Management and Community Health/Mental Health (6) Integrates concepts of community and mental health nursing with concepts of nursing leadership and management. Overview of concepts and skills of dynamic and creative leadership and management for high quality nursing. Prerequisites: NUR 4410, NUR 4411, NUR 4510, NUR 4511, NUR 4512. Corequisite: NUR 4601.

NUR 4601 Concepts of Nursing Leadership in Management and Community Health/Mental Health Practicum (6) Application of leadership and management functions along with community and mental health nursing concepts within health care settings. Corequisite: NUR 4600.

NUR 4602 Synthesis of Nursing Concepts (1) Synthesis of program outcomes for transition into nursing practice as a graduate nurse. Prerequisites: NUR 4511, NUR 4512, NUR 4411.

NUR 4608 RN-BS Concepts of Nursing Leadership in Management (4) Application of leadership and management theories and skills within the ever changing health care settings. Prerequisites: NUR 4050 and NUR 4609 or concurrently.

NUR 4609 RN-BS Con of Nursing Leadership in Management Practicum (2) Application of leadership and management theories and skills within the ever changing health care settings. Prerequisites: NUR 4050 and NUR 4608 or concurrently.

Integrative Studies Capstone

ICAP 4111 Socio-Economic Factors Impacting Health* (3) Examines selected socio-economic issues and their impact on health. *Not available for graduate credit.

SAFETY MANAGEMENT

Major, Bachelor of Science Degree
(43-243)

Program Outcomes.

The graduate with a Bachelor of Science degree in Safety Management will use the knowledge and skills obtained in the programs to:

- Demonstrate an awareness of legal, professional and ethical responsibilities.
- Understand the importance of continuous professional development.
- Possess knowledge of contemporary Safety Science and Technology issues faced in local, national and global contexts.
- Identify managerial solutions using business principle models.
- Identify behavioral solutions to occupational safety and health problems.

Admission Statement

Students seeking admission to this program must have a minimum 2.20 cumulative grade-point average and have completed a semester each of college algebra (or higher math), chemistry with lab, and physics, and achieve a grade-point of 2.00 averaged over the three courses. These courses meet basic program assessment outcomes in science and math.

Application should be made when the student has completed more than 30 semester hours and has at least 30 semester hours remaining. An assessment examination must be completed during the last semester of course work. Students may apply to the program by obtaining a degree audit via the Student Portal at <http://ucmo.edu/portal/> and submitting it to the department for approval.

Sem. Hours

MAJOR REQUIREMENTS	55
SAFE 1000 Exploring Safety Sciences	1
SAFE 3000 Prin. of Accident Causation & Prev.	3
SAFE 3070 Safety Leadership	3
SAFE 3120 Industrial Hygiene	3
SAFE 3430 Industrial Hazard Control	3
SAFE 4000 Ergonomics in Safety & Health	3
SAFE 4010 Accident Investigation	3
SAFE 4020 Legal Aspects of Safety & Health	3
SAFE 4035 Safety Program Management	3
SAFE 4140 Safety & Health Laboratory	3
SAFE 4425 Safety & Health Legislation & Standards	3
SAFE 4430 Workers Compensation Legislation	3
SAFE 4435 Environmental Compliance	3
SAFE 4510 Loss Control	3
SAFE 4520 Safety & Risk Analysis	3
SAFE 4560 Systems Safety	3
SAFE 4850 Industrial Fire Protection	3
SAFE 4940 Statistical Analysis for Risk Management	3
SAFE 4990 Internship Safety Sciences, 3 or Departmentally approved elective, 3	3
MINOR REQUIREMENTS	18-22
GENERAL EDUCATION REQUIREMENTS (page 41)	48
MATH 1111 Div. I C (required)	3
PHYS 1103 Div. II A (required)	3
CHEM 1104 Div. II A (required)	4
PSY 1100 Div. II B (required)	3
ICAP 4115 Div. IV B (required)	3
MINIMUM TOTAL	121

SAFETY

Minor for a Bachelors Degree

UCM does not confer teacher certification for this minor.
Students seeking a Safety Management Major, Bachelor of Science Degree are restricted from pursuing a Safety Minor.
(193)

			Sem. Hours
MINOR REQUIREMENTS			24
SAFE 3000	Prin. of Accident Causation & Prev.	3	
SAFE 3015	Emergency Preparedness	3	
SAFE 4010	Accident Investigation	3	
SAFE 4035	Safety Program Management	3	
SAFE 3120	Industrial Hygiene	3	
SAFE 4425	Safety & Health Legislation & Standards	3	
SAFE 4430	Workers Compensation Legislation	3	
SAFE 1800	Introduction to Fire Science	3	

FIRE SCIENCE

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(177)

			Sem. Hours
MINOR REQUIREMENTS			24
SAFE 4020	Legal Aspects of Safety & Health	3	
SAFE 1800	Introduction to Fire Science	3	
SAFE 2800	Fire Prevention & Protection	3	
SAFE 4800	Water & Sprinkler Systems Analysis	3	
SAFE 4810	Fire Extinguishing & Alarm Sys.	3	
SAFE 4830	Fire Investigation	3	
SAFE 4850	Industrial Fire Protection	3	
SAFE 3015	Emergency Preparedness, 3 or		
CMGT 3330	Bldg. Codes & Code Adm., 3	3	

SECURITY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(185)

			Sem. Hours
MINOR REQUIREMENTS			21
SAFE 1700	Introduction to Security	3	
SAFE 3700	Security Org. & Management	3	
SAFE 4710	Security Technology	3	
SAFE 4830	Fire Investigation	3	
ACCT 2101	Principles of Financial Acct.	3	
SAFE 3015	Emergency Preparedness, 3 or		
MGT 1300	Introduction to Business, 3	3	
SAFE 4020	Legal Aspects of Safety & Health, 3 or		
BLAW 2720	Legal Environment of Business, 3	3	

OCCUPATIONAL SAFETY AND HEALTH

Major, Bachelor of Science Degree

(43-276)

The graduate with a Bachelor of Science degree in Occupational Safety and Health will use the knowledge and skills obtained in the programs to:

- Demonstrate an awareness of legal, professional and ethical responsibilities.
- Understand the importance of continuous professional development.
- Possess knowledge of contemporary Safety Science and Technology issues faced in local, national and global contexts.
- Identify technical solutions to occupational safety and health problems.
- Identify scientific solutions to the mitigation of hazardous exposures.

OSH Program Educational Objectives

Additionally, the graduate with a Bachelor of Science in Occupational Safety and Health will use the knowledge and skills obtained in the programs to demonstrate the following Program Educational Objectives:

- Demonstrate the ability to communicate professionally both verbally and in writing.
- Apply professional integrity and ethical standards.
- Analyze the importance of contemporary, global and societal issues as they relate to the practice of occupational safety and health.
- Develop, coordinate and/or participate on multidisciplinary teams to protect people, property and the environment.
- Engage in life-long learning for the purpose of enhancing discipline specific technical competencies.
- Evaluate, recommend and implement appropriate technical and scientific hazard mitigation strategies.

Admission Statement

Students seeking admission to this program must have a minimum 2.20 cumulative grade-point average and have completed a course in college algebra (or higher math), CHEM 2650, and PHYS 1104, with a minimum 2.00 grade-point average for the three courses combined. These three courses meet basic program assessment outcomes in science and math. Application should be made when the student has completed more than 30 semester hours and has at least 30 semester hours of course work remaining.

An assessment examination must be completed during the last semester of course work. Students may apply upon completion of the above requirements to the program by printing a degree audit from MyCentral and submitting it to the department for approval.

Accreditation

The Occupational Safety and Health program is accredited by the Applied Science Accreditation Commission of ABET located at 111 Market Place, Suite 1050, Baltimore, MD 21202-4012; phone 410-347-7700.

Sem. Hours

MAJOR REQUIREMENTS

SAFE 1000	Exploring Safety Sciences	1
SAFE 3000	Prin. of Accident Causation & Prev.	3
SAFE 3120	Industrial Hygiene	3
SAFE 3430	Industrial Hazard Control	3
SAFE 4000	Ergonomics in Safety & Health	3
SAFE 4010	Accident Investigation	3
SAFE 4020	Legal Aspects of Safety and Health	3
SAFE 4035	Safety Program Management	3
SAFE 4140	Safety & Health Laboratory	3
SAFE 4160	Ind. Ventilation for Env. Safety & Health	3
SAFE 4425	Safety & Health Legislation & Standards	3
SAFE 4430	Workers Compensation Legislation	3
SAFE 4435	Environmental Compliance	3
SAFE 4560	Systems Safety	3
SAFE 4850	Industrial Fire Protection	3
SAFE 4940	Statistical Analysis for Risk Management	3
SAFE 4990	Intern. in Safety Sciences	3
BIOL 2401	Anatomy & Physiology I	4
CHEM 2650	Elem. Organic & Biochemistry	4
	Departmentally approved electives	6

GENERAL EDUCATION REQUIREMENTS (page 41)

MATH 1111	Div. I C (required)	3
CHEM 1104	Div. II A (required)	4
PHYS 1104	Div. II A (required)	4
PSY 1100	Div. II B (required)	3
ICAP 4115	Div. IV B (required)	3

FREE ELECTIVES

MINIMUM TOTAL

DRIVER EDUCATION

Endorsement to teach driver education in grades 9-12. Teacher must be certificated in another elementary, middle school or secondary teaching field.
(213)

Sem. Hours

MINOR REQUIREMENTS			12
DRED 2010	Introduction to Safety Education	3	
DRED 2020	Driver Task Analysis	3	
DRED 2030	Dev. Vehicle Operation Skills & Competencies	3	
DRED 2040	Developing Classroom Knowledge	3	

General Safety

SAFE 1000 Exploring the Safety Sciences (1) An overview of safety as an academic endeavor including consideration of the sub disciplines of safety, requirements of students, and professional opportunities.

SAFE 2010 Safety: A Personal and Societal Focus (3) A critical examination of the role of safety in today's world. Enhances the student's critical thinking processes so the learner can analyze variables influencing risks associated with life's activities.

SAFE 3000 Principles of Accident Causation and Prevention (3) Traces the development of the safety movement, provides a background useful in handling problems and procedures of typical school, industrial, transportation, civil defense, and emergency safety programs.

SAFE 3015 Emergency Preparedness (3) Legal responsibilities of environmental and human protection. An examination of staff functions and responsibilities during major emergencies, resulting from human errors and natural disasters, as they influence human and environmental loss potentials.

SAFE 3070 Safety Leadership (3) Problems of behavior, causes of accidents, and the application of principles of psychology, philosophy, and ethics in the development and management of safe behavior on and off the job.

SAFE 4000 Ergonomics in Safety and Health (3) An introduction into the role and application of ergonomics in a comprehensive safety program.

SAFE 4010 Accident Investigation (3) Fundamentals and techniques of investigating accidents. Prerequisite: SAFE 3000 and SAFE 3120.

SAFE 4015 School Safety, Security and Crisis Management (3) Provides school personnel with current information addressing school safety and security needs, including an analysis of threat identification, violence prevention, safety plans, and crisis response.

SAFE 4020 Legal Aspects of Safety and Health (3) An investigation of the legal problems confronting the safety and health specialist. Prerequisite: SAFE 3000.

SAFE 4035 Safety Program Management (3) Examination of theory and practices of safety and health management. Includes planning programs, contemporary safety and health management practices, and programmatic impact of organizational theory. Prerequisite: Senior status or consent of instructor.

Industrial Hygiene

SAFE 3120 Industrial Hygiene (3) The recognition, evaluation and control of workplace health hazards.

SAFE 4140 Safety and Health Laboratory (3) A lab course using instrumentation commonly used in the evaluation of the workroom environment and equipment for safety. Prerequisites: SAFE 3120 and SAFE 3430, or equivalent. An additional fee is associated with this course.

SAFE 4150 Noise Measurements (2) Physics of sound, measurement and control of noise. Laboratory required. Prerequisite: one year of college physics or equivalent.

SAFE 4160 Industrial Ventilation for Environmental Safety and Health (3) Industrial ventilation systems designed to control health and safety hazards in the work environment with emphasis given to the design of local exhaust systems. Prerequisite: SAFE 3120 or equivalent.

Transportation Safety

SAFE 4215 Transportation and Storage of Hazardous Materials (3) A study of the state-of-the-art of safe methods for the transportation and storage of hazardous materials. Prerequisite: SAFE 3000 or CDM 3000 or equivalent.

SAFE 4250 Traffic Engineering (3) Planning, design and operation of effective and efficient traffic movement systems. Various types of traffic studies, traffic control techniques and devices, traffic flow patterns, street lighting and street and parking are presented and discussed. Students participate in field studies.

SAFE 4260 Management of Fleet Safety Programs (3) The role and responsibilities transportation officials have in the administration and operation of a motor fleet safety program; the study of U.S. Department of Transportation Regulations.

Industrial Safety

SAFE 3430 Industrial Hazard Control (3) The techniques for the control of mechanical, electrical and chemical hazards. The Occupational Safety and Health Standards which interface with these areas will also be included. Prerequisite: SAFE 3000 or SAFE 3120.

SAFE 4425 Safety and Health Legislation and Standards (3) A comprehensive study of legislation and standards designed to protect the worker. Prerequisite: SAFE 3000.

SAFE 4430 Workers Compensation Legislation (3) An overview of the principles and statutes that govern workers compensation as they apply to the industrial setting. Prerequisite: SAFE 3000.

SAFE 4435 Environmental Compliance (3) Comprehensive study of federal and state environmental legislation and standards to protect the health and safety of citizens. Prerequisite: SAFE 3000.

Loss Control

SAFE 4510 Loss Control (3) Provides a background in loss control by investigating professional safety management. Emphasis is placed on incident recall, management's role in loss control, total job observation, total job analysis, and supervisory training. Techniques of implementing a total loss control program are explored. Prerequisite: SAFE 3000.

SAFE 4520 Safety and Risk Analysis (3) Identification of safety risks and analytical treatment of those risks in various work settings. Prerequisites: SAFE 3000 or equivalent.

SAFE 4560 Systems Safety (3) Techniques and concepts of hazard control within the constraints of operational effectiveness, time, and cost attained through the specific application of management and scientific principles throughout all phases of a system life cycle. Prerequisite: SAFE 3000 or equivalent.

Security

SAFE 1700 Introduction to Security (3) A survey of the role of security in society with emphasis on industrial and government security.

SAFE 2700 Physical Security Systems (3) Physical security hardware as applied in business, industry, and government.

SAFE 3700 Security Organization and Management (3) Organization and management of security programs in business, industry, and government.

SAFE 4700 Special Security Problems (3) An overview of security as applied to contemporary situations in business, industry, and government.

SAFE 4710 Security Technology (3) A survey of security detection, including electromechanical and electronic systems. Future applications of technology are discussed. Prerequisite: college level math course.

SAFE 4720 Personnel and Information Security (3) Methods used in screening personnel and safeguarding information.

Fire Science

SAFE 1800 Introduction to Fire Science (3) An overview of the principles of fire protection and fire prevention as they apply to the industrial setting. Emphasis on the chemistry of fire, classification of fires, factors contributing to fires, identification of hazardous materials, techniques of fire prevention, and considerations in fire protection.

SAFE 2800 Fire Prevention and Protection (3) Provide a background in fire related codes, laws, and ordinances. Emphasis on the implementation of prevention, protection, investigation, and inspection programs. Prerequisite: SAFE 1800.

SAFE 4800 Water and Sprinkler Systems Analysis (3) Water supply, how to determine quantity, and basic fire service water requirements. An in-depth study of the design, installation, operations and maintenance of sprinkler systems that use water. Only offered Fall semester. Prerequisite: MATH 1111 or equivalent.

SAFE 4810 Fire Extinguishing and Alarm Systems (3) Basic types of extinguishing systems, other than sprinkler systems, and their use. Fire alarm systems, their use, installation and components.

SAFE 4830 Fire Investigation (3) Fire investigation techniques with emphasis on fire causation, equipment, evidence, and reporting. Prerequisite: SAFE 1800 or equivalent.

SAFE 4850 Industrial Fire Protection (3) The recognition, control or elimination of fire hazards in industrial settings. Prerequisites: CHEM 1104 and MATH 1111, or consent of instructor.

Individual Study and Research

SAFE 4900 Directed Studies (1-6) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 6 semester hours.*

SAFE 4910 Special Projects in Safety Sciences (1-3) Individual or group study of problems in special areas of interest. *May be repeated for a maximum of 6 semester hours.*

SAFE 4940 Statistical Analysis for Risk Management (3) Mathematical and statistical methods designed for the efficient collection and rational interpretation of data by individuals responsible for analysis in a variety of settings. Prerequisite: high school algebra or equivalent.

SAFE 4990 Internship in Safety Sciences* (1-6) Internships are based upon student preparation and interest. Actual work experiences in education, institutions, government, industry, or business are provided. *May be repeated for a maximum of 6 semester hours.* Prerequisite: departmental approval and must have completed one-half of major/minor courses in area of study. *Not available for graduate credit.

Integrative Studies Capstone

ICAP 4115 Safety and Health Management* (3) Integration of safety information using conceptual and technical data to resolve safety and health issues. The case study approach will be emphasized. Prerequisites: admission to program, 27 semester hours of SAFE courses and senior standing. *Not available for graduate credit.

Driver Education

DRED 2010 Introduction to Safety Education (3) Provides a background in safety that will give insight to the possible accident situations present in various school situations.

DRED 2020 Driver Task Analysis (3) Curriculum content overview for driver and traffic safety education in secondary schools; classroom instruction and laboratory experience; driving skills and abilities of future teachers are evaluated. Prerequisite: DRED 2010.

DRED 2030 Developing Vehicle Operation Skills and Competencies (3) A methods and materials course for driver education in the secondary schools. Techniques of teaching beginning drivers in both classroom and laboratory settings. Practicum arranged as a portion of the course. Only offered Summer semester. Prerequisite: DRED 2020.

DRED 2040 Developing Classroom Knowledge (3) Operation, maintenance, and techniques of teaching with driving simulators and multiple-car driving ranges. Practicum arranged as a portion of the course. Only offered Summer semester. Prerequisite: DRED 2030.

Sociology and Social Work

Sociology

SOCIOLOGY

Major, B.A. Degree
(42-755)

The graduate with a Bachelor of Arts degree in Sociology will use the knowledge and skills obtained in the program to:

- Develop an awareness of personal assumptions, as well as basic American assumptions in analyzing positions on social issues.
- Discern the basic components of culture including group diversity, socialization, identity, and cultural symbols.
- Delineate the basic process and consequences of stratification across social categories including ethnicity, race, social class, gender, and societies.
- Recognize how social institutions operate organizationally within society and how they vary over time and space.
- Create reasonable linkages between empirical evidence and theory utilizing both inductive and deductive forms of logic.
- Develop effective ways of communicating in professional contexts.
- Understand basic research procedures in accord with the scholarly practices of the discipline of Sociology including the utilization of research journals and their documentation, construction of a research document to report findings, and the proper citation of sources.
- Critically evaluate the relative strengths and weaknesses of competing theoretical views and everyday frameworks of understanding, recognizing the complexity and uncertainty that are always present.

Sem. Hours

MAJOR REQUIREMENTS 27

SOC 1800	General Sociology	3
SOC 2805	Introduction to Social Research	3
SOC 3800	History of Social Thought	3
SOC 4860	Contemporary Sociological Thought	3
SOC 4890	Social Survey Research	3
SOC 4895	Sociology Capstone Seminar	3
	Electives in sociology	9

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, SOC 1800 fulfills 3 s.h. of Div. II B; the Modern Language Requirement fulfills 3 s.h. of Div. II C. **42**

MODERN LANGUAGE REQUIREMENT 3-9

Refer to Bachelor's Degree Requirements section for fulfillment options.

FREE ELECTIVES 42-48

MINIMUM TOTAL 120

SOCIOLOGY

Major, Bachelor of Science Degree
(43-756)

The graduate with a Bachelor of Science degree in Sociology will use the knowledge and skills obtained in the program to:

- Develop an awareness of personal assumptions, as well as basic American assumptions in analyzing positions on social issues.
- Discern the basic components of culture including group diversity, socialization, identity, and cultural symbols.
- Delineate the basic process and consequences of stratification across social categories including ethnicity, race, social class, gender, and societies.
- Recognize how social institutions operate organizationally within society and how they vary over time and space.
- Create reasonable linkages between empirical evidence and theory utilizing both inductive and deductive forms of logic.
- Develop effective ways of communicating in professional contexts.
- Understand basic research procedures in accord with the scholarly practices of the discipline of Sociology including the utilization of research journals and their documentation, construction of a research document to report findings, and the proper citation of sources.
- Critically evaluate the relative strengths and weaknesses of competing theoretical views and everyday frameworks of understanding, recognizing the complexity and uncertainty that are always present.

	Sem. Hours
MAJOR REQUIREMENTS	36
SOC 1800 General Sociology	3
SOC 2805 Introduction to Social Research	3
SOC 3800 History of Social Thought	3
SOC 4860 Contemporary Sociological Thought	3
SOC 4890 Social Survey Research	3
SOC 4895 Sociology Capstone Seminar	3
Electives in sociology	18
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, SOC 1800 fulfills 3 s.h. of Div. II B	45
FREE ELECTIVES	39
MINIMUM TOTAL	120

SOCIOLOGY**Minor for a Bachelor's Degree**

UCM does not confer teacher certification for this minor.
(757)

	Sem. Hours
MINOR REQUIREMENTS	18
SOC 1800 General Sociology, 3 or	
SOC 1830 Social Problems, 3	3
SOC 2805 Introduction to Social Research	3
SOC 3800 History of Social Thought.	3
Electives in sociology	9
GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, SOC 1800 fulfills 3 s.h. of Div. IIB	

SOC 1800 General Sociology (3) Explores the relationships of individuals, groups, and society in the context of changing social institutions. Addresses basic concepts and subfields in sociology.

SOC 1830 Social Problems (3) The sociology of social problems; background and analysis of selected social problems such as race, crime, population, civil rights, poverty; social changes in light of social controls and democratic values.

SOC 2805 Introduction to Social Research (3) An overview of the concepts and practice of research including measurement, sampling, design, basic descriptive statistics and ethics. Attention to both qualitative and quantitative approaches.

SOC 2825 Marriage and Family Relations (3) Theory and research on husband and wife and parent-child relations are examined. Other topics include dating, cohabitation, and blended families. Prerequisite: SOC 1800.

SOC 2830 Demography (3) Examine patterns of population change over time and across cultures. Students will engage in applied demographic coursework.

SOC 3800 History of Social Thought (3) Development of social origins of sociology; analysis and evaluation of social thought patterns as they relate to contemporary social problems. Prerequisite: 3 semester hours of sociology or consent of instructor.

SOC 3810 Culture and Society (3) Examines culture including art, popular culture, folk/ethnic culture, consumer culture, and post-modern culture. Emphasis on meaning and power. Prerequisites: 3 semester hours of sociology or consent of instructor.

SOC 3825 Race and Ethnic Relations (3) The study of principles, processes and consequences of interracial and ethnic group relations. Emphasis on the social construction of ethnicity, ethnic stratification, and ethnic movements. Prerequisite: 3 semester hours of sociology or consent of instructor.

SOC 3845 Social Inequality (3) A theoretical and methodological examination of the relationships between social class, inequality, and mobility. Prerequisite: 3 semester hours of sociology or consent from instructor.

SOC 3870 Personality and Society (3) Emphasizes theories of micro-sociological principles. Focuses on interpersonal relationships and how issues such as socialization and identity impact human behavior and views of the self. Prerequisite: 3 semester hours of sociology or consent from instructor.

SOC 3885 Globalization and the Future (3) This course explores the impact of the globalization phenomenon upon the future development of the world's economic, political and sociocultural aspects. Prerequisite: three semester hours of sociology or consent of instructor.

SOC 3890 Criminology (3) The nature and characteristics of crime and criminals; the historical perspectives of criminology; theoretical analysis of criminal behavior.

SOC 4810 Urban Sociology (3) Urbanization, rise and growth of cities; attention to demography, ecology and changes in urban society; social problems such as land utilization, housing, slums, politics, crime, and living standards. Prerequisite: 6 semester hours of sociology, graduate standing or consent of instructor.

SOC 4815 Special Projects in Sociology (1-6) Study, interpretation, and discussion of special topics and problems in sociology. *May be repeated for a maximum of 6 semester hours.*

SOC 4820 Collective Behavior (3) An application of social-psychological principles to various forms of collective phenomena, including cults, civil disturbances, and social movements. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4825 Sociology of Education (3) Education as a social institution; its relationship to other institutions and the community. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4830 Media, Culture, and Society (3) The purpose of this course is to provide students with a critical political economy framework for understanding the effects of mass media on society. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4840 Sociology of Sport (3) An investigation and analysis of the relationships between sport and society. Focus will be upon the development and changing nature of sport as an institution in modern society.

SOC 4845 Juvenile Delinquency (3) The nature, extent, and causes of juvenile delinquency; types of juvenile offenders and their career patterns; institutional controls and treatment programs. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4846 Corrections and Preventions (3) Views and methods of dealing with criminals and juvenile delinquents; types of correctional systems and prevention programs. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4850 Work and the Modern Society (3) Critical inquiry into the workings of modern society and its cultures and subcultures, ideologies, institutions, elites, classes, and the processes of power relations.

Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4855 Sociology of Gender (3) Explores impact of gender stratification and roles on the attitudes and behavior of women and men, gender and social institutions, theories of gender, and sexuality.

Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4860 Contemporary Sociological Thought (3) Assessment of current sociological thought as it is reflected by outstanding scholars in the field. Prerequisite: SOC 3800 and 3 additional semester hours of sociology, graduate standing, or consent of instructor.

SOC 4865 Family Diversity (3) Focus on the institutional implications of the family. Diversity in ethnicity, sexuality, and class are emphasized. Intersection of work and family is explored. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4872 Sociology of Organizations (3) A systematic study of the structural and interactional processes of work related organizations. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4875 Medical Sociology (3) Social factors and institutional settings for physical and mental health care; public needs and medical services; research in medical sociology. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4880 Sociology of Law (3) The development of legal institutions; law as a system of social control; law and social change. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4885 Religion and Society (3) The structure and function of religion in society; social sources of religions; religion and the individual. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4890 Social Survey Research (3) Major concepts in social survey research design, measurement, sampling, and data collection techniques. Quantitative analysis of survey data and micro-computer applications. Only offered Fall semester. Prerequisite: SOC 2805, graduate standing, or consent of instructor.

SOC 4894 Sociology of Aging (3) The aging process and its consequences for the individual and society; an examination of the problem of aging in terms of demographic, economic, psychologic and sociologic implications; and emphasis on sociological principles and perspectives. Prerequisite: 6 semester hours of sociology, graduate standing, or consent of instructor.

SOC 4895 Sociology Capstone Seminar* (3) Focus on the history and trajectory of sociology as a discipline, demonstrate professional ethics, and develop a career plan in the discipline. Prerequisite: Sociology major and senior standing or consent of department chair. Only offered Fall semester. *Not available for graduate credit.

Social Work

Social Work Statement of Policy

Admission Policy

Students entering UCM as freshmen should indicate a social work major. Transfer students must meet all requirements. Admission to the social work program is conditional upon the successful completion of all necessary requirements.

Requirements for Admission to the Social Work Program

1. Completion of General Education courses listed as requirements of the social work major.
2. Cumulative grade-point average of 2.00.
3. A minimum grade of C for courses listed as curriculum requirements of the social work major.
4. Completion of PSY 1100, SOC 1800, BIOL 2010, SOWK 2600, and SOWK 3601.
5. Students must complete a social work prefix course in residence prior to applying for admission into the social work program.
6. Submission of:
 - a. Application for Admission to social work program.
 - b. Transcript of all university work.
 - c. A minimum of three references.
 - d. Autobiographical statement.
 The necessary Application of Admission Forms and Reference Forms will be available in the department office or from the Social Work Faculty Adviser.
7. Successful completion of an interview with Social Work Admissions Committee.
8. Provisional admission to the program requires the student to successfully complete a plan of corrective action and a subsequent interview with the Admissions Committee.

Criteria for Retention

Social Work students will be permitted to continue in the Social Work major by meeting certain "Criteria for Retention" as established by the program.

1. An earned grade of C or above in all courses listed as requirements of the social work major.
2. Students failing to earn a grade of C or above in either SOWK 4660 Field Practicum or ICAP 4478 Integrative Social Work Practicum Seminar are not permitted to repeat these courses.
3. Adherence to the National Association of Social Workers' Code of Ethics.
4. Maintenance of social functioning that allows for effective beginning level professional social work practice. (Social functioning refers to the students' ability to cope with demands generated by their interaction with their environment including areas such as school, work, family, and personal relationships.)
5. Demonstration of effective verbal and written communication skills.
6. Continued enrollment as a student in good standing at UCM.

Accreditation

The principal educational objective of the Bachelor of Social Work program is to prepare students for generalist social work practice. The Bachelor of Social Work program is accredited by the Council on Social Work Education, a specialized accrediting body recognized by the Council for Higher Education Accreditation (CHEA). The Council on Social Work Education (CSWE) is located at 1725 Duke Street, Suite 500, Alexandria, VA 22314-3457; phone 703-683-8080; email info@cswe.org.

SOCIAL WORK

Major, Bachelor of Social Work Degree
(48-847)

The graduate with a Bachelor of Social Work degree will use the knowledge and skills obtained in the program to:

- Apply critical thinking skills within the context of professional social work practice.
- Practice within the values and ethics of the social work profession.
- Practice without discrimination and with respect, knowledge, and skills related to clients' age, class, color, culture, disability, ethnicity, family structure, gender, marital status, national origin, race, religion, sex, and sexual orientation.
- Demonstrate awareness of the impact of self on others through personal reflection and self-discipline.
- Understand the forms and mechanisms of oppression and discrimination and apply strategies of advocacy and social change that advance social and economic justice.
- Understand and interpret the history of the social work profession and its contemporary structures and issues.
- Apply the knowledge and skills of generalist social work practice with systems of all sizes.
- Apply knowledge of bio-psycho-social factors that affect individual development and behavior, and use empirically tested theoretical frameworks to understand the interactions among individuals and between individuals and social systems.
- Analyze, formulate, and influence social policies.
- Evaluate research studies and apply findings to practice, and under supervision, to evaluate his/her own practice interventions and those of other relevant systems.
- Use oral and written communication skills differentially and effectively with a variety of client populations, colleagues, and members of the community.
- Use supervision and consultation appropriate to generalist practice.
- Critically evaluate one's professional practice and develop an agenda for continuing professional learning and growth.

Sem. Hours

MAJOR REQUIREMENTS	60
SOWK 2600 Intro. to Soc. Welfare & Social Work	3
SOWK 3601 Soc. Work Practice & Agency Experience	3
SOWK 3605 Methods of Inquiry & Evaluation for Social Workers	3
SOWK 3610 Social Work Practice: Basic Skills	3
SOWK 3612 Human Behavior Across the Lifespan	3
SOWK 4610 Special Topics in Social Work 3, or	
SOWK 4620 Social Services and Policy with Older Adults, 3	3
SOWK 4612 Human Behavior in the Social Environment II	3
SOWK 4630 Social Work Practice: Intervention with Families & Groups	3
SOWK 4640 Social Work Practice: Intervention with Communities & Org.	3
SOWK 4650 Social Policy & Economic Justice	3
SOWK 4660 Field Practicum	9
SOC 1800 General Sociology	3
SOC 2805 Introduction to Social Research	3
SOC 3825 Race & Ethnic Relations	3
PSY 1100 General Psychology	3
PSY 4440 Abnormal Psychology	3
BIOL 2010 Human Biology	3
ICAP 4478 Integrative Social Work Practicum Seminar	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, SOC 1800 and PSY 1100 fulfill 6 s.h. of Div. II B; ICAP 4478 fulfills 3 s.h. of Div. IV B **39**

FREE ELECTIVES **21**

MINIMUM TOTAL **120**

SOWK 3601 Social Work Practice and the Agency Experience (3) Presents a generalist framework for practice with individuals, families, groups, organizations and communities. Students observe application of this practice framework in social work practice setting. Prerequisites: SOWK 2600.

SOWK 3605 Methods of Inquiry and Evaluation for Social Workers (3) Advanced research methods course for undergraduate social work majors, including quantitative and qualitative methods and data analysis and case/program-level evaluation. Open to social work majors only. Prerequisite: SOC 2805.

SOWK 3610 Social Work Practice: Basic Skills (3) Development of interpersonal skills and interviewing techniques for micro, mezzo, and macro levels of generalist practice. Open to social work majors only. Prerequisite: SOWK 3601.

SOWK 3612 Human Behavior Across the Lifespan (3) Examines human development and behavior across the life span, studying essential biophysical, psychological and social dimensions, emphasizing the fundamental reciprocity between persons and society/culture. Prerequisites: SOWK 3601 or concurrently, BIOL 2010 or concurrently.

SOWK 4610 Special Topics in Social Work (3) Selected Topics of contemporary interest in social work or specialized fields of practice; variable content. *May be repeated for a maximum of 9 semester hours.* Prerequisite: SOWK 3601 or concurrently or graduate standing or consent of instructor.

SOWK 4612 Human Behavior Social Systems* (3) Utilizes a social systems approach to examine the processes of human behavior within groups, organizations, communities and societies/cultures. Prerequisite: SOWK 3601 or concurrently. *Not available for graduate credit.

SOWK 4620 Social Services and Policy with Older Adults (3) Development of public policy and social service programming. Present and potential utility of individual, group and community intervention modalities as they relate to both the private troubles and public issues of aging. Prerequisite: SOWK 3601 or concurrently or graduate standing or consent of instructor.

SOWK 4630 Social Work Practice: Intervention with Families and Groups* (3) Integrates knowledge, theory, values and interviewing skills for practice of primary intervention skills with individuals, families and groups. Open to social work majors only. Prerequisite: SOWK 3610. *Not available for graduate credit.

SOWK 4640 Social Work Practice: Intervention with Communities and Organizations* (3) In-depth application of the generalist model of social work practice with an emphasis on macro-level skills. Open to social work majors only. Prerequisites: SOWK 3601; SOWK 4612 or concurrently. *Not available for graduate credit.

SOWK 4650 Social Policy and Economic Justice* (3) Develops an operational and critical understanding of the relationships among social welfare policy, social and economic justice issues, and social work practice. Open to social work majors only. Prerequisites: SOWK 2600 and consent of instructor. *Not available for graduate credit.

SOWK 4660 Field Practicum* (9) Educationally directed 500-hour field experience in a social service agency under qualified agency supervision. Open to social work majors only. Corequisite: ICAP 4478. Prerequisites: all other required major courses must be completed and consent of Coordinator of Field Education. *Not available for graduate credit.

Integrative Studies Capstone

ICAP 4478 Integrative Social Work Practicum Seminar* (3) Integration of classroom knowledge with 500 hours in social service agency practicum. Open to social work majors only. Corequisite: SOWK 4660. Prerequisites: all other required major courses must be completed and consent of the Coordinator of Field Education. *Not available for graduate credit.

SOWK 2600 Introduction to Social Welfare and Social Work (3) An overview of income maintenance and services to families, children, adolescents, aged and the mentally and physically challenged. Open to non majors.

College of Science and Technology

College of Science and Technology

Pre-Professional Programs

Students interested in the premedical, pre-osteopathy, and pre-veterinary medicine program should plan to attend the University for four years and graduate with a Bachelor of Science degree. The student should major in biology and minor in chemistry or major in chemistry and minor in biology. Additional electives are required depending upon the student's needs and interest area.

Students interested in pre-dental, pre-optometry, and pre-physical therapy should plan to attend the University two or more years to meet the minimum requirements in biology, chemistry, mathematics, and physics required by the professional school. Additional electives are required depending upon the student's needs and interest area.

Students interested in the pre-pharmacy program should consult the Chair of the Biochemistry, Chemistry and Physics Department for suggested curriculum.

Agriculture

AGRICULTURAL TECHNOLOGY

Major, Bachelor of Science Degree
(43-279)

The graduate with a Bachelor of Science degree in Agricultural Technology will use the knowledge and skills obtained in the program to:

- Use language and concepts of agriculture effectively in written and oral communications.
- Demonstrate computer literacy.
- Demonstrate an understanding of theories and principles of economics and agri-business appropriate to the agricultural firm.
- Demonstrate an understanding of the basic practices and theory of agricultural production (agricultural literacy).
- Provide evidence of an international-global perspective of agriculture.
- Demonstrate appropriate and effective social interactions.
- Demonstrate ability to analyze situations and solve problems in an agricultural context.

Sem. Hours

MAJOR REQUIREMENTS 76

AGRI 2010	Computer Applications for Agriculturists	3
AGRI 1100	Introduction to Agriculture	1
AGRI 3140	Agriculture Analysis & Statistics	3
AGRI 1200	Agriculture Mechanics	3
AGRI 1300	Introductory Plant Science	1
AGRI 2330	Introduction to Soil Science	3
AGRI 4300	Soil Fertility & Fertilizers	3
AGRI 1420	Animal Husbandry	3
AGRI 2425	Livestock Evaluation	3
AGRI 3610	Agriculture Pest Management	3
AGRI 3810	Internship in Agriculture	3
AGRI 4820	Agriculture Safety	3
ECON 1011	Principles of Microeconomics	3
AGRI 1310	Agronomy I: Row Crops, 2 or	
AGRI 2315	Agronomy II: Forages, 2	2
AGRI 3110	Agri-Business Management, 3 or	
AGRI 3120	Dist. & Mktg. Agri. Products, 3	3
AGRI 1600	Introductory Horticulture Science, 3 or	
AGRI 1610	Establishment & Care of Greenhouse Plants, 3	3

Departmentally approved electives from
one of the following areas 33

Area 1 Animal Technology

Area 2 Agronomic Technology

Area 3 Horticultural Technology

Area 4 Agricultural Mechanization

List of electives available from Chair, Department of Agriculture.

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM 1000	Div. I B (required)	3
MATH 1111	Div. I C (required)	3
CHEM 1104	Div. II A (required)	4
SPAN any	Div. II C (required)	3
AGRI 2130	Div. II D (required)	3
ICAP 4101	Div. IV B (required)	3

MINIMUM TOTAL 124

AGRICULTURE

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(110)

Sem. Hours

MINOR REQUIREMENTS 25

AGRI 3120	Dist. & Mkt. Agri. Products	3
AGRI 1300	Introductory Plant Science	1
AGRI 1310	Agronomy I: Row Crops	2
AGRI 2330	Introduction to Soil Science	3
AGRI 1420	Animal Husbandry	3
CHEM 1104	Intro. to the Sciences: Chemistry	4
ECON 1011	Principles of Microeconomics	3
AGRI 1200	Agriculture Mechanics, 3 or	
AGRI 3200	Farm Power & Machinery, 3	3
AGRI 1600	Introductory Horticulture Science, 3 or	
AGRI 1610	Establishment & Care of Greenhouse Plants, 3	3

GENERAL EDUCATION REQUIREMENTS (page 41)

In the minor, CHEM 1104 fulfills 4 s.h. of Div. II A.

AGRICULTURE-BUSINESS

Major, Bachelor of Science Degree

(43-277)

The graduate with a Bachelor of Science degree in Agriculture-Business will use the knowledge and skills obtained in the program to:

- Use language and concepts of agricultural business effectively in written and oral communications.
- Demonstrate computer literacy.
- Demonstrate an understanding of theories and principles of economics and agri-business appropriate to the agri-business firm.
- Demonstrate an understanding of the basic practices and theory of agricultural production (agricultural literacy.)
- Provide evidence of an international-global perspective of agriculture.
- Demonstrate appropriate and effective social interactions.
- Demonstrate ability to analyze situations and solve problems in an agri-business context.
- Demonstrate a knowledge of how national and international policies impacting agriculture are developed.

Sem. Hours

MAJOR REQUIREMENTS 73

AGRI 2010	Computer Applications for Agriculturists	3
AGRI 1100	Introduction to Agriculture	1
AGRI 3110	Agri-Business Management	3
AGRI 3120	Dist. & Mktg. Agri. Products	3
AGRI 3140	Agriculture Analysis & Statistics	3
AGRI 4110	Agricultural Futures Trading	3
AGRI 4120	International Agriculture	3
AGRI 4140	Agricultural Policy	3
AGRI 4150	Natural Resource Economics	3
AGRI 1300	Introductory Plant Science	1
AGRI 2330	Introduction to Soil Science	3
AGRI 2331	Soils	3
AGRI 1420	Animal Husbandry	3
AGRI 2425	Livestock Evaluation	3
AGRI 3420	Animal Nutrition	3

AGRI 1600	Introductory Horticulture Science	3
AGRI 4820	Agricultural Safety	3
ECON 1011	Principles of Microeconomics	3
ECON 3030	Intermediate Microeconomics	3
FIN 1820	Personal Finance	3
MKT 3430	Professional Sales	3
BLAW 2720	Legal Environment of Business	3
AGRI 1200	Agriculture Mechanics, 3 or	
AGRI 3200	Farm Power & Machinery, 3	3
AGRI 1310	Agronomy I: Row Crops, 2 or	
AGRI 2315	Agronomy II: Forages, 2	2
AGRI 4340	Agri. Sprays & Chemicals, 3 or	
AGRI 3610	Agriculture Pest Management, 3	3
ACCT 2100	Survey of Accounting, 3 or	
ACCT 2101	Principles of Financial Acct., 3	3
GENERAL EDUCATION REQUIREMENTS (page 41)		48
COMM 1000	Div. I B (required)	3
MATH 1111	Div. I C (required)	3
CHEM 1104	Div. II A (required)	4
ECON 1010	Div. II B (required)	3
SPAN any	Div. II C (required)	3
AGRI 2130	Div. II D (required)	3
ICAP 4101	Div. IV B (required)	3
FREE ELECTIVES		3
MINIMUM TOTAL		124

AGRICULTURAL EDUCATION

Major, Bachelor of Science in Ed. Degree

Certification to teach agricultural education in grades 9-12. (41-328)

The graduate with a Bachelor of Science in Education degree in Agricultural Education will use the knowledge and skills obtained in the program to:

- Understand the components of a complete secondary agricultural program including the essentials of a successful FFA chapter and an adult agricultural education program.
- Formulate strategies and tools to use in planning a local agricultural education program to address local, state, national, and international needs.
- Apply the Missouri State Standards and Quality Indicators for agricultural program improvement.
- Distinguish methods of developing successful partnerships using community resources and successfully marketing an agricultural education program.
- Demonstrate computer literacy.
- Provide evidence of an international-global perspective of agriculture.
- Use language and concepts of agriculture effectively in written and oral communications.
- Demonstrate ability to analyze situations and solve problems in an agricultural context.
- Demonstrate an understanding of the basic practices and theory of agricultural production (agricultural literacy).
- Demonstrate appropriate and effective social interactions.

Sem. Hours

MAJOR REQUIREMENTS		53
AGRI 2010	Computer Applications for Agriculturists	3
AGRI 1100	Introduction to Agriculture	1
AGRI 3110	Agri-Business Management	3
AGRI 3120	Dist. & Mktg. Agri. Products	3
AGRI 1200	Agriculture Mechanics	3
AGRI 3200	Farm Power & Machinery	3
AGRI 1300	Introductory Plant Science	1
AGRI 1310	Agronomy I: Row Crops	2
AGRI 2315	Agronomy II: Forages	2
AGRI 2330	Introduction to Soil Science	3
AGRI 1420	Animal Husbandry	3
AGRI 3420	Animal Nutrition	3
AGRI 1600	Introductory Horticulture Science	3
AGRI 4820	Agricultural Safety	3

AGRI 4900	Planning & Conducting Programs in Agricultural Education	3
AGRI 4910	Supervised Agricultural Experience Programs in Agricultural Education	2
AGRI 4920	Lab Management in Agricultural Ed.	2
ECON 1011	Principles of Microeconomics	3
BIOL 1004	Intro. to the Sciences: Ecology	4
AGRI 4430	Animal Science: Beef, 3 or	
AGRI 4435	Animal Science: Pork, 3	3
GENERAL EDUCATION REQUIREMENTS (page 41)		
In the major, BIOL 1004 fulfills 3 s.h. of Div. II A		45
MATH 1111	Div. I C (required)	3
CHEM 1104	Div. II A (required)	4
HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
AGRI 2130	Div. II E (required)	3
PSY 4230	Psy. of Adolescence	3
ICAP 4101	Div. IV B (required)	3
Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. II B.		
PROFESSIONAL EDUCATION REQUIREMENTS (page 110)		28
AGRI 4930	Methods of Teaching Agricultural Ed.	3
AGRI 4940	Secondary Field Exp. II	1
MINIMUM TOTAL		126

General

AGRI 1000 Exploratory Problems in Agriculture (1-3) Individual or group work on introductory level technical problems in agriculture. Provide exploration of content not available through normal course offerings. Prerequisite: Departmental consent.

AGRI 2010 Computer Applications for Agriculturalists (3: 3 lecture, 0 lab) Understanding and using computers to define, analyze, and solve agricultural problems. Topics include descriptive statistics, farm budgets, decision models, information retrieval and agri-marketing techniques. Only offered Fall semester.

AGRI 4000 Special Projects in Agriculture (1-6) Investigation of contemporary problems and issues in agriculture by selected individuals or groups. An additional fee is associated with some sections of this course. *May be repeated for a maximum of 9 semester hours.*

Agricultural Business and Economics

AGRI 1100 Introduction to Agriculture (1) Orientation to the philosophy, development and current trends in the professional preparation for careers in agriculture. Must be taken during the first year of the agriculture program. Only offered Fall semester.

AGRI 2110 Agricultural Records (3) Fundamental principles and practices of record buyers as applied to the organization and operation of agricultural enterprises. Only offered Fall semester.

AGRI 2120 Agricultural Cooperatives (1) Environment, organization and business function of modern agricultural cooperatives. Prerequisite: ECON 1011.

AGRI 2130 Global Agriculture (3) Interaction of culture and farming/food systems worldwide emphasizing the interaction of cultures with agricultural production/food systems and the influence this has on social, economic, governmental, and environmental factors.

AGRI 3110 Agri-Business Management (3) Management functions and economics of agricultural organizations and operations, including input-output analysis, efficient allocations of resources, enterprise combinations, and budgeting analysis. Only offered Fall semester. Prerequisites: ECON 1011; AGRI 2010 or concurrently; MATH 1111 or concurrently.

AGRI 3120 Distribution and Marketing Agriculture Products (3) Principles governing the distribution, prices, and marketing of agriculture products. Only offered Fall semester. Prerequisite: ECON 1011.

AGRI 3140 Agricultural Analysis and Statistics (3) Statistical analysis and experimental designs as applied to agriculture. Only offered Fall semester. Prerequisite: MATH 1111 and AGRI 2010.

AGRI 4110 Agricultural Futures Trading (3) Examination of techniques used in pricing products in the agricultural commodities futures market. Emphasis on futures trading as a marketing tool with some consideration of alternative speculating techniques. Only offered Spring semester. Prerequisites: AGRI 2010 and AGRI 3120.

AGRI 4120 International Agriculture (3) Economic, cultural, governmental and environmental factors which influence agricultural production and trade among countries. Only offered Spring semester. Prerequisites: AGR 2130 and AGRI 3120.

AGRI 4140 Agricultural Policy (3) History, principles, settings, objectives, and methods of policy development as applied to agriculture in our society. Only offered Spring semester. Prerequisites: AGRI 3110 and AGRI 3120.

AGRI 4150 Natural Resource Economics (3) Nature of natural resources; economic efficiency as basis for natural resource use; externalities in natural resource use; factors influencing environmental quality; alternate public policy tools for influencing natural resource use. Only offered Spring semester. Prerequisite: ECON 1010 and ECON 1011.

Agricultural Mechanization

AGRI 1200 Agriculture Mechanics (3: 3 lecture, 0 lab) Selection and use of hand and power tools for the farm shop. Basic processes and procedures in hot metal work and elements of woodworking used in the repair and maintenance of the farm. An additional fee is associated with this course.

AGRI 3200 Farm Power and Machinery (3) Mechanical work on the farm, including selection, cost, and care of farm machinery. Includes laboratory practices on tractors, gas engines, plows, mowers, and other farm machinery. Only offered Spring semester.

AGRI 3210 Soil and Water Management (3) Soil and water conservation. Use of farm level, laying out and establishing terraces, water ways, diversion channels, and farm ponds.

Prerequisite: AGRI 2330.

AGRI 4200 Advanced Agriculture Mechanics (3) Application of shop principles to the design and construction of farm mechanical projects. Prerequisite: AGRI 1200.

Agronomy

AGRI 1300 Introductory Plant Science (1: 1 lecture, 0 lab) Emphasis on the structure/function relationships of anatomy, morphology, and physiology of horticultural and agronomic crops.

AGRI 1310 Agronomy I: Row Crops (2: 2 lecture, 0 lab) Principles and practices in cereal crop production. Prerequisite: AGRI 1300.

AGRI 2315 Agronomy II: Forages (2) Principles and practices of forage crop production. Prerequisite: AGRI 1300

AGRI 2330 Introduction to Soil Science (3: 3 lecture, 0 lab) Chemical and physical properties of soils. Prerequisite: CHEM 1104. An additional fee is associated with this course. Only offered Fall semester.

AGRI 2331 Soils (3) Emphasis on soil formation, classification, and fertility. Only offered Spring semester. Prerequisite: AGRI 2330.

AGRI 3320 Field Crop Management (3) Management of crops, crop rotation, and crop utilization. Prerequisites: AGRI 1310 or AGRI 2315, and AGRI 2330.

AGRI 4300 Soil Fertility and Fertilizers (3) Theory and practice of utilizing agricultural fertilizers to maximize soil productivity. Only offered Spring semester. Prerequisite: AGRI 2330.

AGRI 4310 Plant Improvement (3) The principles and practices involved in the selection and breeding of farm crops. Only offered Fall semester. Prerequisites: AGRI 1600; AGRI 1310 or AGRI 2315. An additional fee is associated with this course.

AGRI 4320 Agricultural Plant Diseases (3) Agricultural plant diseases with emphasis on recognition and control. Only offered Fall semester. Prerequisites: AGRI 1600; AGRI 1310 or AGRI 2315.

AGRI 4330 Soils Management (3) Principles of soils management as applied to physical improvement and fertility maintenance of soils. Prerequisite: AGRI 2330.

AGRI 4340 Agricultural Sprays and Chemicals (3: 3 lecture, 0 lab) Types of agricultural chemicals and their application in control of insects, parasites, and weeds. Only offered Fall semester. Prerequisite: AGRI 2330; AGRI 1310 or AGRI 2315.

Animal Science

AGRI 1420 Animal Husbandry (3) A comprehensive view of the industry and the science of biology as utilized in modern livestock management.

AGRI 2425 Livestock Evaluation (3: 3 lecture, 0 lab) An advanced study of livestock evaluation with emphasis in selection of breeding and market animals. The evaluation of beef cattle, dairy cattle, and swine will be emphasized. Only offered Spring semester. Prerequisite: AGRI 1420.

AGRI 3410 Animal Breeding (3) Selecting and improving livestock through genetic principles, breeding systems, and visual evaluation. Only offered Fall semester. Prerequisite: AGRI 1420 and AGRI 2425.

AGRI 3415 Meat Science (3: 2 lecture, 1 lab) Principles of meat processing, inspection, grading, sanitation, preservation and storage with an overview of muscle composition, structure, function, and nutritive value. Only offered Spring semester.

AGRI 3420 Animal Nutrition (3) Basic principles of animal nutrition – study of the digestive tract anatomy, basic nutrients, factors affecting nutrient utilization, and feed formulation, including classification and composition of feedstuffs. Only offered Fall semester. Prerequisite: AGRI 1420.

AGRI 4410 General Veterinary Science (3) Anatomy, physiology, disease control, parasitic control, and sanitation of farm animals. Only offered Spring semester. Prerequisites: AGRI 1420 and CHEM 1104.

AGRI 4415 Reproduction of Farm Animals (3) Reproductive physiology of farm animals with practice in evaluation of semen, artificial insemination, and methods of pregnancy diagnosis. Only offered Fall semester. Prerequisites: AGRI 1420 and AGRI 3410.

AGRI 4430 Animal Science: Beef (3) Systems of beef production. Includes breeding, feeding, and management of commercial and purebred beef. Only offered Spring semester. Prerequisite: AGRI 1420.

AGRI 4435 Animal Science: Pork (3) Systems of pork production. Includes breeding, feeding, and management of commercial and purebred swine. Only offered Spring semester. Prerequisites: AGRI 1420.

Horticulture

AGRI 1600 Introductory Horticulture Science (3: 3 lecture, 0 lab)

Coverage includes commercial and home production and maintenance of vegetables, fruits, ornamentals, herbs/spices, pharmaceuticals, turfgrass, greenhouses, nurseries, landscape design, and other areas within the field. An additional fee is associated with this course. Prerequisite: AGRI 1300.

AGRI 1610 Establishment and Care of Greenhouse Plants (3: 3 lecture, 0 lab) Identifying, establishing, maintaining, harvesting and displaying greenhouse plants. An additional fee is associated with this course.

AGRI 3610 Agriculture Pest Management (3) Insect control with emphasis on recognition of destructive forms, general principles of insect habits and classification. An additional fee is associated with this course.

AGRI 3620 Residential Landscape Design (3) Theory and practice of landscaping the home, farmstead, and small properties, including elementary design, soil preparation, selection of plant material, and cultural practices. Only offered Spring semester. An additional fee is associated with this course.

AGRI 3640 Horticultural Propagation Materials (3) Includes materials, types of plants, structure of plants, and methods used in propagation. Only offered Spring semester. An additional fee is associated with this course. Prerequisite: AGRI 1600.

AGRI 4600 Horticultural Plants I: Woody (3: 3 lecture, 0 lab) Identification, description, climatic adaptation, classification, characteristics and best landscape use of woody horticultural trees and shrubs. Only offered Fall semester. An additional fee is associated with this course.

AGRI 4605 Horticultural Plants II: Herbaceous (3: 2 lecture, 1 lab) Identification, description, adaptation, classification, cultural characteristics and best use of herbaceous horticultural plants. Prerequisites: AGRI 1300, AGRI 1600 and AGRI 1610. An additional fee is associated with this course.

AGRI 4610 Turfgrass Science (3: 3 lecture, 0 lab) Selection, identification, establishment and maintenance of turfgrasses. Prerequisites: AGRI 1600 and AGRI 2330. An additional fee is associated with this course.

Professional and Agriculture Education

AGRI 3810 Internship in Agriculture (1-3) Provides experiences for students in cooperating agricultural businesses, agencies and other organizations. *May be repeated for a maximum of 9 semester hours.* Prerequisite: consent.

AGRI 4800 Topics in Agriculture (1-3) Individual investigation of a special problem in agriculture in the student's major field not available under regular classes. *May be accomplished by reports, surveys, discussions, bibliographies, experiments, and library research. May be repeated for a maximum of 3 semester hours.* Prerequisite: consent.

AGRI 4820 Agricultural Safety (3) The history of and need for agricultural safety, operating guidelines for machines and chemical handling and application. A review of occupational health laws and how they relate to the agricultural workforce. Only offered Fall semester. Prerequisites: junior standing and AGRI 1200 or AGRI 3200.

AGRI 4900 Planning and Conducting Programs in Agricultural Education (3) Development and organization of vocational agriculture programs at the secondary level to meet the needs of local schools and community.

AGRI 4910 Supervised Agriculture Experience Programs in Agricultural Education (2) Understandings and competencies required to establish, administer, and evaluate supervised agricultural experience programs. Prerequisite: AGRI 4930.

AGRI 4920 Lab Management in Agricultural Education (2) The selection and organization of teaching materials for agriculture labs, planning facilities, selection of supplies essential in establishing and teaching agriculture labs. Prerequisite: AGRI 4900.

AGRI 4930 Methods of Teaching Agricultural Education (3) Fundamentals of Agricultural Education including: Foundations of Agricultural Education, methods of teaching Ag Ed, teaching special populations, and evaluation of the learning process. Prerequisite: admission to Teacher Education Program.

AGRI 4940 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Only offered Spring semester. Prerequisites: admission to Teacher Education Program; should be taken concurrently with AGRI 4930 during the Professional semester. *Not available for graduate credit

Integrative Studies Capstone

ICAP 4101 Agricultural Capstone Experience* (3) Integration of agricultural knowledge and problem solving skills using case studies in a seminar forum. Prerequisites: 24 semester hours of agriculture courses and senior standing. *Not available for graduate credit.

Aviation

Department of Aviation Statement of Policy

Department of Aviation requires a 2.25 GPA for all AVIA prefixed courses in the Aviation Technology major. Students pursuing flight training in their program must hold a 1st, 2nd or 3rd Class FAA Medical Certificate prior to starting flight lessons

AIRPORT MANAGEMENT

Major, Bachelor of Science Degree (43-552)

The graduate with a Bachelor of Science degree in Airport Management will use the knowledge and skills obtained in the program to:

- Understand the overall structure of the airport operations including domestic and international facilities.
- Describe the various airport business components, such as infrastructure, local, regional, and national relationships, internal and external customers, maintenance, environmental compliance, etc., with methods of interconnection as well as silo issues and methods of flattening organizations consistent with the private sector.
- Discuss domestic and international regulatory agencies individually and how they are interconnected.
- Analyze the nature of airport, airline and aviation industry finance including economics, revenue management, cost structuring and control.
- Survey aviation law, litigation, and liability along with labor and international law as it pertains to air transport industry.
- Evaluate aviation safety and security needs and make recommendations.
- Prepare strategic and tactical airport plans.
- Compare airport management models including domestic and international facilities.
- Examine organization behavior, change, and leadership as it relates to airport operations.
- Complete an internship or research project in airport management.

Sem. Hours

MAJOR REQUIREMENTS 87

AVIA	1020	Aeronautics	2
AVIA	1320	Private Flight A	1
AVIA	4010	Aerodynamics	3
AVIA	4040	Aviation Management	3
AVIA	4045	Airport Management	3
AVIA	4090	Aviation Law	3
AVIA	4310	Air Traffic Control	2
AVIA	4330	Sport Aviation	2
AVIA	4420	Air Transportation	3
AVIA	4500	Aviation Safety	3
ACCT	2100	Survey of Accounting	3
BLAW	2720	Legal Environment of Business.	3
COMM	2620	Introduction to Public Relations	3
CTE	3060	Technical Writing	3
ECON	1010	Principles of Macroeconomics	3
FIN	2801	Business Statistics I	3
FIN	3850	Principles of Finance	3
GEOG	4265	Urban Geography	3
GRAP	1105	Basic AutoCAD	1
GRAP	1110	Fundamentals of Drafting	2
GRAP	2170	Intro. to Computer Aided Drafting	2
HRM	3920	Human Resource Management.	3
ICAP	4113	Air Operations Management	3
MATH	1111	College Algebra	3
MATH	1131	Applied Calculus	3
MKT	3405	Marketing Policy	3
PR&T	3010	Transportation Systems	3
PHYS	1104	Intro. to the Sciences: Physics	4
SAFE	3000	Prin. of Accident Prevention & Causation	3
SOT	3022	Internship	3
BTE	1210	Essentials of Managing Information, 2 or	
LIS	1600	Univ. Library & Research Skills, 2	2

MGT 3315	Management of Organizations, 3 or	
INDM 4210	Industrial Management, 3	3

GENERAL EDUCATION REQUIREMENTS (page 41)

In the major MATH 1111 applies to Div. I C, PHYS 1104 applies to Div. II A, BTE 1210 applies to Div. II A, LIS 1600 applies to Div. II A, ECON 1010 applies to Div. II B, ICAP 4113 applies to Div. IV B. 33

MINIMUM TOTAL 120

AVIATION MAINTENANCE MANAGEMENT 2+2

Major, Bachelor of Science Degree
(43-562)

This "2+2" program is designed to build upon an Associate Degree.

The graduate with a Bachelor of Science degree in Aviation Maintenance Management 2+2 major transfer program will use the knowledge and skills obtained in the program to:

- Demonstrate an accurate understanding of the principles of Aviation Maintenance Management.
- Apply the skills necessary to implement required management principles for an Aviation Maintenance Manager.
- Demonstrate proficient skills required of conceptualizing and undertaking of projects related to Aviation Maintenance Management.
- Demonstrate effective skills required to balance technical, operational, and commercial factors related to Aviation Maintenance Management.
- Demonstrate the skills, knowledge, and personal traits required for employment and advancement in the Aviation Maintenance Management field.
- Demonstrate that they have the skills and knowledge required to function as an aviation maintenance technician.
- Communicate effectively both written and orally.
- Apply general education skills required to become a productive member of the profession, society and country.

Sem. Hours

MAJOR REQUIREMENTS	93
Associate Degree Technical Courses	42

A technology related Associate in Aviation Maintenance from an accredited community college or technical institute in this field of study will be accepted. Forty-two hours of the degree transferred should apply towards the major and the remainder towards General Education. The General Education requirements transferred must be equivalent to UCM's requirements.

Requirements	30
AVIA 4500 Aviation Safety	3
AVIA 4090 Aviation Law	3
AVIA 4042 Aviation Maintenance Management	3
AVIA 4430 Corporate Aviation Management	3
MGT 3315 Management of Organizations, 3 or	
INDM 4210 Industrial Management, 3	3
T&OE 3060 Technical Report Writing, 3 or	
*MGT 3325 Business Communications, 3	3
MATH 1131 Applied Calculus	3
Choose 3 courses from the following list.	9
AVIA 4010 Aerodynamics	3
AVIA 4080 Non-Destructive Testing	3
*ACCT 2100 Survey of Accounting	3
*BLAW 2720 Legal Environment of Business.	3
*HRM 3920 Human Resource Management, 3 or	
INDM 4260 Organizational Dynamics, 3	3

*Need to contact the department for permission.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major MATH 1111 applies to Div. I C, PHYS 1104 applies to Div. II A, BTE 1210 applies to Div. II A, LIS 1600 applies to Div. II A, ECON 1010 applies to Div. II B, GEOG 3201 applies to Div. II D, COMM 3010 applies to Div. III, ICAP 4113 applies to Div. IV B 21

REMAINING GENERAL EDUCATION REQUIREMENTS 27

MINIMUM TOTAL 120

FLIGHT OPERATIONS MANAGEMENT

Major, Bachelor of Science Degree
(43-553)

The graduate with a Bachelor of Science degree in Flight Operations Management will use the knowledge and skills obtained in the program to:

- Understand the overall structure of flight operations, including regulations (Part 91, 91K, Part 135, Part 121), domestic and international interactions.
- Describe the various components involved in the management of a flight operation: finance, marketing, training, standardization, safety management systems, project management and human resources.
- Be familiar with environmental and business practices associated with a flight operation.
- Be familiar with safety management systems, risk management tools, crisis management planning.
- Be able to co-ordinate the developments and implementations of strategic and tactical plans and allocations of flight operation assets.

Sem. Hours

MAJOR REQUIREMENTS	85
AVIA 1020 Aeronautics	2
AVIA 1310 FAA Private Requirements.	4
AVIA 1320 Private Flight A	1
AVIA 1321 Private Flight B	1
AVIA 3313 Instrument Flight A	1
AVIA 3314 Instrument Flight B	1
AVIA 3325 FAA Instrument Requirements	4
AVIA 4010 Aerodynamics	3
AVIA 4040 Aviation Management	3
AVIA 4090 Aviation Law	3
AVIA 4310 Air Traffic Control	2
AVIA 4380 Flight Operations Management	3
AVIA 4420 Air Transportation	3
AVIA 4430 Corporate Aviation Management	3
AVIA 4500 Aviation Safety	3
AVIA 4350 Aviation Weather, 3 or	
EASC 3114 Meteorology, 3	3
ACCT 2100 Survey of Accounting	3
BLAW 2720 Legal Environment of Business.	3
CTE 3060 Technical Writing	3
ECON 1010 Principles of Macroeconomics	3
FIN 2801 Business Statistics I	3
FIN 3850 Principles of Finance	3
HRM 3920 Human Resource Management.	3
ICAP 4113 Air Operations Management	3
MATH 1111 College Algebra	3
MATH 1131 Applied Calculus	3
MKT 3405 Marketing Policy	3
PR&T 3010 Transportation Systems	3
PHYS 1104 Intro. to the Sciences: Physics	4
BTE 1210 Essentials of Managing Information, 2 or	
LIS 1600 Univ. Library & Research Skills, 2	2
MGT 3315 Management of Organizations, 3 or	
INDM 4210 Industrial Management, 3	3

GENERAL EDUCATION REQUIREMENTS (page 41)

In the major MATH 1111 applies to Div. I C, PHYS 1104 applies to Div. II A, BTE 1210 applies to Div. II A, LIS 1600 applies to Div. II A, ECON 1010 applies to Div. II B, ICAP 4113 applies to Div. IV B. 33

FREE ELECTIVE 2

MINIMUM TOTAL 120

PROFESSIONAL PILOT

Major, Bachelor of Science Degree
(43-554)

The graduate with a Bachelor of Science degree in Professional Pilot will use the knowledge and skills obtained in the program to:

- Demonstrate an ability to apply knowledge of mathematics, science, and applied sciences as a professional pilot.
- Analyze and interpret data relating to aviation.
- Function on multi-disciplinary teams as a professional pilot.
- Exhibit an understanding of ethical and professional responsibility of aviation professionals.
- Communicate effectively, including both written and verbal forms.
- Recognize the need for, and an ability to engage in, life-long learning.
- Exhibit knowledge of contemporary issues relating to professionals in the aviation field.
- Demonstrate an ability to use the techniques, skills, and modern technology necessary for professional aviators.
- Analyze the national and international aviation environment.
- Apply pertinent knowledge in identifying and solving problems confronting professional pilots.

Sem. Hours

MAJOR REQUIREMENTS 85

AVIA 1020	Aeronautics	2
AVIA 1310	FAA Private Requirements.	4
AVIA 1320	Private Flight A	1
AVIA 1321	Private Flight B	1
AVIA 2310	Propulsion Systems	3
AVIA 3305	FAA Commercial Requirements	3
AVIA 3310	Commercial Flight A	1
AVIA 3311	Commercial Flight B	1
AVIA 3312	Commercial Flight C	1
AVIA 3313	Instrument Flight A	1
AVIA 3314	Instrument Flight B	1
AVIA 3315	Commercial Flight D	1
AVIA 3316	Commercial Flight E	1
AVIA 3317	Commercial Flight F	1
AVIA 3325	FAA Instrument Requirements	4
AVIA 3330	Multi-Engine Certification.	1
AVIA 3340	Aircraft Systems & Component.	3
AVIA 4010	Aerodynamics	3
AVIA 4040	Aviation Management	3
AVIA 4090	Aviation Law	3
AVIA 4220	Transport Aircraft Systems	2
AVIA 4320	Physiology & Flying	2
AVIA 4370	Advanced Flight Crew Management	3
AVIA 4390	FAR Part 135 Flight Operations	3
AVIA 4420	Air Transportation	3
AVIA 4500	Aviation Safety	3
AVIA 4350	Aviation Weather, 3 or	
EASC 3114	Meteorology, 3	3
CTE 3060	Technical Writing	3
ECON 1010	Principles of Macroeconomics	3
ICAP 4113	Air Operations Management	3
MATH 1111	College Algebra	3
MATH 1131	Applied Calculus	3
PR&T 4032	Hydraulics & Pneumatics	3
PHYS 1104	Intro. to the Sciences: Physics	4
BTE 1210	Essentials of Managing Information, 2 or	
LIS 1600	Univ. Library & Research Skills, 2	2
MGT 3315	Management of Organizations, 3 or	
INDM 4210	Industrial Management, 3	3

GENERAL EDUCATION REQUIREMENTS (page 41)

In the major MATH 1111 applies to Div. I C, PHYS 1104 applies to Div. II A, BTE 1210 applies to Div. II A, LIS 1600 applies to Div. II A, ECON 1010 applies to Div. II B, ICAP 4113 applies to Div. IV B. **33**

FREE ELECTIVE 2

MINIMUM TOTAL 120

AVIATION

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(157)

Sem. Hours

MINOR REQUIREMENTS 21

AVIA 1020	Aeronautics, 2 or	
AVIA 1310	FAA Private Requirements, 4	2-4
**	Approved electives in aviation	17-19

**Must include a minimum of 3 s.h. of upper-level (3000/4000) courses.

AVIATION TECHNOLOGY

Major, Bachelor of Science Degree

(43-159)

This program has been placed in abeyance. See the Department Chair for more information.

Air Force Reserve Officer Training Corps (AFROTC) Program

University of Central Missouri offers an Air Force Reserve Officer Training Corps (AFROTC) program in cooperation with the University of Missouri - Columbia. Students enroll in one course per semester at UCM and participate in the program one day per week on the University of Missouri - Columbia campus. Credits earned in the program can count as elective credit toward any degree program at UCM. Courses are taught by active duty Air Force officers assigned as ROTC faculty on the University of Missouri - Columbia campus. All undergraduate and graduate students are eligible to enroll in Air Force ROTC courses. For additional information contact the Aviation Department Chair.

General and Professional

AERO 1010 Foundations of the US Air Force I (2) Introduces the Air Force and Air Force ROTC focusing on professional appearance, military customs, courtesies, core values and officer opportunities.

AERO 1020 Foundations of the US Air Force II (2) Continues introduction of the Air Force and Air Force ROTC focusing on Air Force origins, organizations, major commands, installations and sister services. Prerequisite: AERO 1010.

AERO 2010 Evolution of USAF Air and Space Power I (2) Explores Air Force heritage, leaders, air power doctrine, origins, organizations, major commands, installations and sister services. Facilitates ROTC Cadet transition to ROTC officer candidate. Prerequisite: AERO 1020.

AERO 2020 Evolution of USAF Air and Space Power II (2) Continues transition from Air Force ROTC Cadet to Air Force ROTC officer candidate. Expands leadership skills through use of group leadership problems. Prerequisite: AERO 2010.

AERO 3010 Air Force Leadership Studies I (3) Integrated leadership and management skills facilitate development of Air Force leaders. Prerequisite: AERO 2020.

AERO 3020 Air Force Leadership Studies II (3) Expand quality Air Force principles to include ethical decision making, personal core values and character development. Prerequisite: AERO 3010.

AERO 4010 National Security Affairs I* (3) Examines the national security process, regional studies and Air Force and Joint Doctrine. *Not available for graduate credit. Prerequisite: AERO 3020.

AERO 4020 National Security Affairs II* (3) Examines civilian control of military, officership, military justice system and current issues affecting military professionalism. *Not available for graduate credit. Prerequisite: AERO 4010.

General and Professional

AVIA 1020 Aeronautics (2) An overview of aviation and aerospace related industries. Consideration is given to the development of aviation and resulting social and economic factors, theory of flight, problems of weather and navigation, occupational opportunities, and government interest, promotion and regulation.

AVIA 3020 Digital Control of Power Systems (3) The impact of digital technology on aircraft and automotive power systems. Emphasis will be placed on the methods of controlling these systems. Prerequisite: ET 1010 or ET 1026.

AVIA 4000 Special Projects in Aviation Technology (1-3) Investigation of contemporary problems and issues in power and transportation by selected individuals or groups. *May be repeated for a maximum of 6 semester hours.*

AVIA 4010 Aerodynamics* (3) Theories of flight and factors affecting aircraft in flight, including drag, velocity, lift, thrust and wing loading. Comparative analysis of design features in modern aircraft. *Not available for graduate credit.

AVIA 4040 Aviation Management (3) Aviation/airport management and administrative functions, issues, and problems involving both large and small airports, heliports, sea plane bases and related fixed base operations.

AVIA 4042 Aviation Maintenance Management* (3) Introduces fundamental duties/responsibilities of a typical maintenance manager for FAR Part 91, 135 charter, 145 repair station, corporate, and airline operations. *Not available for graduate credit.

AVIA 4045 Airport Management (3) Airport operations and management principles and applications. Personnel, security, budgeting, contracts, maintenance and public relations.

AVIA 4060 Aerospace Education (2-3) Basic aerospace information dealing with the social, scientific, and technological importance of aviation and space with special applications for teachers who desire to utilize such information in the elementary and secondary school.

AVIA 4070 Aviation History (3) Major events, people, and changing technologies in the development of the present day air transportation system.

AVIA 4080 Nondestructive Inspection and Testing (3: 3 lecture, 0 lab) Magnetic particle, eddy current, dye penetrant, ultrasonic vibration analysis, acoustics, radiographic, infrared, and liquid crystal methods of nondestructive inspection. Prerequisites: PHYS 1104 or PR&T 1010 or AVIA 1200 (for A&P students).

AVIA 4090 Aviation Law (3) Legal foundations and the federal and state regulatory functions which influence aviation and those who work in the industry.

AVIA 4095 International Aviation (3) Aviation issues in international aviation including ICAO regulations and other factors related to the operation of airplanes in a global environment.

Aviation Maintenance

AVIA 1200 General Mechanics (3) Power mechanics, measurement and transmission. Theory of internal combustion engines. Principles of simple machines, sound, fluid and heat dynamics. Fabrication of fluid lines and fittings. Disassembly, repair and reassembly of a small reciprocating engine.

AVIA 1210 Aircraft Reciprocating Power Plants (3) Aircraft reciprocating power plants, construction, operation, overhaul, and engine logs. Laboratory experience in disassembling, cleaning, inspection, and assembling.

AVIA 1215 General A&P Applications (3) General A&P related course and laboratory material necessary to transition from military to civilian applications. Prerequisite: Release from the Federal Aviation Administration (FAA sign-off) for General, Airframe, and Powerplant or permission of instructor.

AVIA 1216 Airframe Applications (3) Airframe related course and laboratory material necessary to transition from military to civilian applications. Prerequisite: Release from the Federal Aviation Administration (FAA sign-off) for General, Airframe, and Powerplant or permission of instructor.

AVIA 1217 Powerplant Applications (3) Powerplant related course and laboratory material necessary to transition from military to civilian applications. Prerequisite: Release from the Federal Aviation Administration (FAA sign-off) for General, Airframe, and Powerplant or permission of instructor.

AVIA 1218 Federal Aviation Regulations & Records Keeping Applications (3) Federal aviation regulations and records keeping related course and laboratory material necessary to transition from military to civilian applications. Prerequisite: Release from the Federal Aviation Administration (FAA sign-off) for General, Airframe, and Powerplant or permission of instructor.

AVIA 1255 Basic Airframe Maintenance (3) Selecting airframe materials, repairing, rigging, and caring for fabric covered airframes. Prerequisite: ENGT 1120.

AVIA 2220 Aircraft Carburetion and Lubrication Systems (4) Operation of fuel, induction and lubrication systems. Type, composition and characteristics of various fuels and oils. Inspection, maintenance, and overhaul of fuel, induction and lubrication systems' components.

AVIA 2230 Aircraft Electrical Systems (3) The theory, operation, and repair of aircraft electrical systems and components.

AVIA 2232 FCC Certification (3) This course is designed to prepare the students to pass the general FCC element 1 and 3 examinations for the general radio-telephone operator's license.

AVIA 3210 Aircraft Hydraulic Systems (3) Theory and practice in the operation, maintenance, and overhaul of hydraulic systems and components.

AVIA 3215 Gas Turbine Engines (3) Application, design, construction, operation, and overhaul of gas turbine power plants. Laboratory experiences in disassembling, inspection and assembling.

AVIA 3220 Aircraft Engine Testing (3) Theory and practice in installing, trouble shooting, testing, and repairing of aircraft engines.

AVIA 3225 Propellers and Components (3) Propellers, governors, and de-icing systems. Inspection, servicing, and overhaul of propellers.

AVIA 3230 Aircraft Ignition-Starting Systems (3) Theory and practice in the operation, maintenance, and overhaul of ignition and starting systems and their components.

AVIA 3240 Aircraft Air Conditioning and Pressurization Systems (2) Theory and practice with pneumatic, anti-icing, cabin pressurization, and air conditioning systems.

AVIA 3250 Complex Aircraft Systems (3) Theory, operation and repair of complex aircraft fuel systems, position and warning systems, ice and rain protection systems. Prerequisite: AVIA 2230.

AVIA 3255 Metal Airframe Processing (3) Theory and practice in the construction and repair of metal airframes.

AVIA 3260 Aircraft Radio Installation and Operation (1) Theory and practice with communication and navigation radio equipment. Prerequisite: AVIA 2230.

AVIA 3262 Aircraft Communication/Navigation Systems (4) Theory, operation, maintenance and repair of aircraft communication and navigation systems. Course includes lectures, demonstrations, and mandatory laboratory activities. Prerequisite: ET 1026.

AVIA 3264 Aircraft Pulse and Related Systems (4: 4 lecture, 0 lab) Theory, operation, maintenance and repair of aircraft pulse and related systems. Course includes lectures, demonstrations, and mandatory laboratory activities. Prerequisite: ET 1026.

AVIA 4210 Aircraft Inspection, Weight and Balancing* (3) Theory and practice of repairing, maintaining, ground handling, jacking, weighing aircraft, and performing inspection. *Not available for graduate credit.

AVIA 4220 Transport Aircraft Systems* (2: 2 lecture, 0 lab) Comparison studies of systems on major types of transport category aircraft and the in-flight management of those systems. Field trips to major airlines are included in the instructional sequence of the course. Prerequisite: AVIA 3340. *Not available for graduate credit.

AVIA 4230 Aircraft Instrument Systems* (3) Theory and practice of installing, operating, marking, adjusting, and interpreting aircraft instruments. *Not available for graduate credit.

AVIA 4240 Aircraft Engine Instruments and Systems* (3) Theory and practice in the operation and repair of aircraft engine instruments, fire detection and extinguishing systems, engine cooling systems and exhaust systems. *Not available for graduate credit.

Aviation Flight

Aircraft user charges are based on flying time and vary with the type of aircraft. Advance deposits of \$500 or more for each course are required. Contact the Department of Power and Transportation or Chief Flight Instructor for current hourly flight fee rates. Additional federal financial aid may be received by students who incur documented costs for aviation flight training.

AVIA 1310 FAA Private Requirements (4) Basic ground school in support of flight training to prepare for the FAA examination for the Private Pilot Certificate. A fee is charged for pilot supplies and ground school materials.

AVIA 1320 Private Flight A (1) Increase student's knowledge and experience to operate aircraft in solo flight and night conditions. Third class medical required before class begins. Approximately 20 flight hours required.

AVIA 1321 Private Flight B (1) Increase the student's knowledge and aeronautical experience to operate an airplane on dual and solo cross-country flights. Third class medical required. Student should plan to fly approximately 20 hours. Prerequisite: AVIA 1320.

AVIA 2310 Propulsion Systems (3) Operation and theory of aircraft propellers and both reciprocating and gas turbine engines. Laboratory activity includes testing and troubleshooting major functional components and systems.

AVIA 3305 FAA Commercial Requirements (3) Commercial ground school subjects in support of flight training to prepare for FAA examination for Commercial Pilot Certificate. Prerequisite: AVIA 3314.

AVIA 3310 Commercial Flight A (1) Increase the student's knowledge and aeronautical experience in dual and solo cross country flying in both day and night conditions. Student should plan to fly approximately 20 hours. Prerequisite: AVIA 1321 or Private Pilot Certificate.

AVIA 3311 Commercial Flight B (1) Increase the student's knowledge and aeronautical experience in solo and cross country flying. Student should plan to fly approximately 20 hours. Prerequisite: AVIA 3310.

AVIA 3312 Commercial Flight C (1) Increase the student's knowledge and aeronautical experience in solo cross country flying. Student should plan to fly approximately 20 hours. Prerequisite: AVIA 3311.

AVIA 3313 Instrument Flight A (1) Increase the student's knowledge and aeronautical experience in maneuvering the aircraft solely by reference to the flight instruments. Includes the use of full and partial panel reference. The student should plan to fly approximately 20 hours. Prerequisite: AVIA 3312.

AVIA 3314 Instrument Flight B (1) Increase the student's knowledge and aeronautical experience in IFR cross-country and emergency procedures. Student should plan to fly approximately 20 hours. Prerequisite: AVIA 3313.

AVIA 3315 Commercial Flight D (1) Increase the student's knowledge and the skill necessary to safely fly a complex aircraft. Student should plan to fly approximately 20 hours. Prerequisite: AVIA 3314.

AVIA 3316 Commercial Flight E (1) Increase the student's knowledge and provide the skill necessary to safely fly a complex aircraft. Additionally, the commercial flight maneuvers are introduced. Student should plan to fly approximately 20 hours. Prerequisite: AVIA 3315.

AVIA 3317 Commercial Flight F (1) Increase the student's knowledge and provide the aeronautical skill necessary for the issuance of the Commercial Pilot Certificate. Student should plan to fly approximately 20 hours. Prerequisite: AVIA 3316.

AVIA 3325 FAA Instrument Requirements (4) Instrument ground school subjects in support of flight training to prepare for FAA examination for instrument rating. Prerequisite: AVIA 1321.

AVIA 3330 Multi-Engine Certification (1) Classroom and laboratory instruction to provide aeronautical knowledge and skills for multi-engine pilot certification. Prerequisite: AVIA 3314.

AVIA 3340 Aircraft Systems and Components (3) Design, construction and operation of aircraft mechanical, electrical hydraulic, and pneumatic systems with emphasis on trouble analysis, servicing methods, and safety precautions. Prerequisite: AVIA 2310.

AVIA 3360 Flight Instructor--Airplane (3: 3 lecture, 0 lab) Combines classroom and flight laboratory experience to prepare for FAA written examination and flight test for flight instructor rating. Prerequisite: AVIA 3317.

AVIA 3362 Flight Instructor - Instrument (1) Instruction, flight training and practice teaching to obtain the aeronautical skills and knowledge necessary for FAA Certified Flight Instructor, Instruments. Prerequisite: AVIA 3360.

AVIA 3364 Flight Instructor - Multi-Engine (1) Instruction, flight training and practice teaching to obtain the aeronautical skills and knowledge necessary for FAA Certified Flight Instructor, Multi-Engine. Prerequisites: AVIA 3330 and AVIA 3360.

AVIA 3390 Turboprop Familiarization (2) Systems operation and flying procedures for multi-engine turboprop aircraft with particular emphasis on current complex aircraft. Class will involve both ground school and flying a minimum of five hours. Prerequisites: AVIA 3317 and AVIA 3330.

AVIA 4310 Air Traffic Control (2) Purposes, activities and operational procedures of air traffic control centers, towers and flight service stations. Study will include both standard and emergency services available from ATC/FSS systems.

AVIA 4320 Physiology and Flying (2) Physiological factors related to flying, including those related to changes in pressure, supply of oxygen, spatial disorientation, and both positive and negative effects of chemicals in the body. An additional fee is associated with this course.

AVIA 4330 Sport Aviation (2: 2 lecture, 0 lab) Sailplanes, hot air balloons, and related sport aircraft. Students will have flying experience in either sailplanes or hot air balloons. Flight fees are required to cover expenses of flight instruction. Principles of organizing fly-ins, air shows, and contests.

AVIA 4350 Aviation Weather (3) Meteorology for pilots with information for understanding and interpreting aviation weather reports and forecasts, weather hazards including windshear, turbulence, icing and visibility restrictions. Prerequisite: AVIA 1310

AVIA 4370 Advanced Flight Crew Management (3) Advanced flight crew operations with emphasis on the transition of the professionally qualified pilot into a highly skilled member of a flight management team with knowledge of cockpit resource management, high speed and high altitude flight techniques, turbine-powered operations and advanced avionics systems. Prerequisite: AVIA 3317.

AVIA 4380 Flight Operations Management (3) Airline flight operations management principles and applications.

AVIA 4390 Part 135 Flight Operations (3) Emphasis is placed on the operating systems of a Beechcraft King Air A90 along with the knowledge required to operate in a Part 135 Flight Operation as Second-In-Command. Prerequisites: AVIA 3330, AVIA 3317, and AVIA 3314.

Transportation

AVIA 4420 Air Transportation (3) Organization and administration of the air transportation industry with attention to airline regulations, rate and route structures, air cargo and freight, scheduled and nonscheduled operations, and contract air transport.

AVIA 4430 Corporate Aviation Management (3) Role, scope and purpose of business aviation. Managerial, administrative and financial business functions related to the use of business aviation aircraft.

Aviation Safety

AVIA 4500 Aviation Safety (3) To develop a knowledge of contributing factors affecting aviation safety and fostering control methods and techniques to reduce accidents related to aircraft and the aviation field.

Integrative Studies Capstone

ICAP 4113 Air Operations Management* (3) Challenges the student to perform as an effective member of an air operations management team using critical thinking, decision making and ethics. Prerequisite: senior standing in aviation technology. *Not available for graduate credit.

Biochemistry, Chemistry and Physics

Biochemistry

BIOCHEMISTRY

Major, Bachelor of Science Degree
(43-295)

The graduate with a Bachelor of Science degree in Biochemistry will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information & higher-order thinking).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within a chemistry framework and be receptive to new ideas and concepts (higher-order thinking).
- Use the language and concepts of chemistry to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).
- Be eligible to apply for jobs in the expanding field of biotechnology and other laboratory sciences.
- Be eligible to apply for entry into professional schools in dentistry, medicine, veterinary medicine and other health related professions.
- Be eligible to apply for graduate programs in the area of biochemistry.

Sem. Hours

MAJOR REQUIREMENTS69-71

CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
CHEM 3212	Quantitative Analysis	3
CHEM 3341	Organic Chemistry I	4
CHEM 3342	Organic Chemistry II	4
CHEM 3421	Intermediate Biochemistry	3
CHEM 3920	Communication Skills in Chem.	2
CHEM 4421	Advanced Biochemistry.	3
CHEM 4431	Biochemistry Laboratory	2
CHEM 4531	Physical Chem.: Thermodyn. & Kinetics	4
BIOL 1110	Principles of Biology	3
BIOL 2511	Genetics	4
BIOL 2512	Cell Biology	3
BIOL 4514	Molecular Biology	3
BIOL 4515	Molecular Technology Lab	2
MATH 1151	Calculus & Analytic Geometry I	5
Electives from the following		8-10
PHYS 1101	College Physics I, 4 and	
PHYS 1102	College Physics II, 4.	8
OR		
PHYS 2123	University Physics I, 4 and	
PHYS 1123	Elementary Physics Lab I, 1 and	
PHYS 2124	University Physics II, 4 and	
PHYS 1124	Elementary Physics Lab II, 1	10
OR		
PHYS 2121	University Physics I, 4 and	
PHYS 2122	University Physics II, 4.	8
Electives from the following (3 hours must be in CHEM).		6
CHEM 3111	Intermed Inorganic Chemistry	4
CHEM 4231	Instrumental Analysis	4
CHEM 4313	Advanced Organic Chemistry	3
CHEM 4532	Physical Chemistry: Quantum Mechanics & Spectroscopy	4
CHEM 4910	Research in Chemistry	2-4
BIOL 3611	Microbiology	4
BIOL 4011	Special Problems In Biology	2-4
BIOL 4311	Parasitology	4
BIOL 4516	Hematology / Virology, 3 and	
BIOL 4517	Serology Laboratory, 1	4

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1151 fulfills 3 s.h. of Div. I C; CHEM 1131, CHEM 1132 and Physics requirement fulfill 7 s.h. of Div. II A	38
FREE ELECTIVES	11-13
MINIMUM TOTAL	120

Chemistry

Chemistry Statement of Policy

All junior and senior chemistry majors are required to attend oral presentations by students who are enrolled in CHEM 4900 and CHEM 4910.

Prior to student teaching, all Bachelor of Science in Education Chemistry majors are required to serve as a lab assistant or lab preparation assistant for one semester in partial fulfillment of CHEM 4900.

***Students must attend the first scheduled lab period to avoid being dropped from the lab to accommodate students on the wait list.**

Accreditation

The Chemistry programs are accredited by the American Chemical Society. The American Chemical Society is located at 1155 Sixteenth St, N.W., Washington, DC 20036; phone 800-227-5558; webpage <http://www.chemistry.org>.

CHEMISTRY

Major, Bachelor of Arts Degree
(42-391)

The graduate with a Bachelor of Arts degree in Chemistry will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information & higher-order thinking).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within a chemistry framework and be receptive to new ideas and concepts (higher-order thinking).
- Use the language and concepts of chemistry to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).

Sem. Hours

MAJOR REQUIREMENTS46-47

CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
CHEM 3111	Intermediate Inorganic Chemistry	4
CHEM 3212	Quantitative Analysis	3
CHEM 3341	Organic Chemistry I	4
CHEM 3342	Organic Chemistry II	4
CHEM 3920	Communication Skills in Chem.	2
CHEM 3421	Intermediate Biochemistry	3
CHEM 4531	Physical Chem.: Thermodyn. & Kinetics	4
PHYS 1101	College Physics I	4
MATH 1151	Calculus & Analytic Geometry I	5
Elective from the following		3-4
*CHEM 4111	Advanced Inorganic Chemistry.	3
*CHEM 4231	Instrumental Analysis	4
*CHEM 4313	Advanced Organic Chemistry	3
*CHEM 4421	Advanced Biochemistry	3
CHEM 4532	Physical Chemistry: Quantum Mechanics & Spectroscopy	4
CHEM 4910	Research in Chemistry	3-4

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, CHEM 1131, CHEM 1132 fulfill 4 s.h. of Div. II A; the Modern Language Requirement fulfills 3 s.h. of Div. II C; MATH 1151 fulfills 3 s.h. of Div. I C	38
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MODERN LANGUAGE REQUIREMENT 3-9

Refer to Bachelor's Degree Requirements section for fulfillment options.

FREE ELECTIVES 26-33**MINIMUM TOTAL 120**

*Course has prerequisite(s) not listed in the program.

CHEMISTRY**Major, Bachelor of Science Degree**

(43-393)

The graduate with a Bachelor of Science degree in Chemistry will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information & higher-order thinking).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within a chemistry framework and be receptive to new ideas and concepts (higher-order thinking).
- Use the language and concepts of chemistry to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).

Sem. Hours

MAJOR REQUIREMENTS 67-69

CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
CHEM 3111	Intermediate Inorganic Chemistry	4
CHEM 3212	Quantitative Analysis	3
CHEM 3341	Organic Chemistry I	4
CHEM 3342	Organic Chemistry II	4
CHEM 3421	Intermediate Biochemistry	3
CHEM 3920	Communication Skills in Chemistry	2
CHEM 4231	Instrumental Analysis	4
CHEM 4531	Phys. Chem.: Thermodynamics & Kinetics	4
CHEM 4532	Physical Chemistry: Quantum Mechanics & Spectroscopy	4
CHEM 4910	Research in Chemistry	4
PHYS 1101	College Physics I	4
PHYS 1102	College Physics II	4
MATH 1151	Calculus & Analytic Geometry I	5
MATH 1152	Calculus & Analytic Geometry II	5
*Elective from the following		3-5
CHEM 4111	Advanced Inorganic Chemistry	3
CHEM 4313	Advanced Organic Chemistry	3
CHEM 4421	Advanced Biochemistry	3
CHEM 4431	Biochemistry Laboratory	2

*Four semester hours required for ACS-CPT approved degree.

GENERAL EDUCATION REQUIREMENTS (page 41) In the

major, MATH 1151 fulfills 3 s.h. of Div. I C;

CHEM 1131, CHEM 1132, PHYS 1101 and PHYS 1102

are allowed to fulfill 7 s.h. of Div. II A) **38****FREE ELECTIVES 13-15****MINIMUM TOTAL 120****CHEMISTRY****Major, Bachelor of Science in Education Degree**

[Certification to teach chemistry in grades 9-12]

(41-485)

The graduate with a Bachelor of Science in Education degree in Chemistry will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information & higher-order thinking).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within a chemistry framework and be receptive to new ideas and concepts (higher-order thinking).

- Use the language and concepts of chemistry to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).
- Manage a secondary education program in chemistry that has a laboratory emphasis, with confidence, enthusiasm, efficiency, and safety.

Sem. Hours

MAJOR REQUIREMENTS 63

CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
CHEM 3111	Intermediate Inorganic Chemistry	4
CHEM 3212	Quantitative Analysis	3
CHEM 3341	Organic Chemistry I	4
CHEM 3421	Intermediate Biochemistry	3
CHEM 4050	Science Teaching Methods	3
CHEM 4531	Phys. Ch.: Thermodyn. & Kinetics, 4 or	
CHEM 4532	Physical Chemistry: Quantum Mechanics & Spectroscopy, 4	4
BIOL 1005	Intro. to Environmental Science	3
BIOL 1110	Principles of Biology, 3 or	
*BIOL 1111	Plant Biology, 4	3-4
EASC 1004	Intro. to the Sciences: Geology	4
MATH 1151	Calculus & Analytic Geometry I	5
CTE 2000	Technology & Society	3
PHYS 1101	College Physics I, 4 or	
PHYS 2121	University Physics I, 5 or	
PHYS 2123	University Physics I, 4	
and		
PHYS 1123	Elementary Physics Lab I, 1	4-5
Electives in science from the following list. Hours of electives must bring the total in the major to 63 hours		8-10
CHEM 3342	Organic Chemistry II	4
CHEM 4231	Instrumental Analysis	4
CHEM 4421	Advanced Biochemistry	3
CHEM 4431	Biochemistry Lab	2
CHEM 4531 or 4532	Physical Chemistry	4
(CHEM 4531 and 4532 together satisfy 8 hours in the major including 4 elective hours)		
CHEM 4910	Research in Chemistry	1-4
*BIOL 1112	Animal Biology	4
BIOL 2511	Genetics	3
BIOL 2512	Cell Biology	3
BIOL 3712	Field Natural History	4
EASC 3010	Environmental Geology	3
EASC 3112	Astronomy	3
*EASC 3114	Meteorology	3
EASC 3320	Mineralogy	4
*EASC 4010	Special Problems in Geology	1
*PHYS 1102	College Physics II, 4 or	
*PHYS 2122	University Physics II, 5 or	
*PHYS 2124	University Physics II, 4	
AND		
*PHYS 1124	Elementary Physics Lab II, 1	4-5
PHYS 3080	Advanced Physics Lab	1-2
PHYS 3511	Modern Physics I	3
PHYS 3611	Optics	3
PHYS 4312	Electricity & Magnetism	3

UNIFIED SCIENCE CERTIFICATION - The starred (*) courses above must be taken as part of the core and elective credits for Unified Science certification in chemistry - certification to teach any of the beginning sciences (i.e., Biology I, Physics I, etc.) and all levels of chemistry, grades 9-12.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1151 fulfills 3 s.h. of Div. I C, EASC 1004 fulfills 4 s.h. of Div. II A, BIOL 1005 fulfills 3 s.h. of Div. II A; CTE 2000 fulfills 2 s.h. of Div. II A; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B **33**

HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
PSY 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. of Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110)
 CHEM 4080 (3 s.h.) fulfills 2 s.h. of Special Methods in major field and 1 s.h. of Secondary Field Experience II in major field **28**

MINIMUM TOTAL **124**

CHEMISTRY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (478)

MINOR REQUIREMENTS	Sem. Hours	21
CHEM 1131 General Chemistry I	5	
CHEM 1132 General Chemistry II	5	
CHEM 3341 Organic Chemistry I	4	
CHEM 3342 Organic Chemistry II	4	
Upperlevel elective in Chemistry	3	

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, CHEM 1131 and CHEM 1132 are allowed to fulfill 4 s.h. of Div. II A.

FORENSIC CHEMISTRY

Major, Bachelor of Science Degree
 (43-294)

The graduate with a Bachelor of Science degree in Forensic Chemistry will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information & higher-order thinking).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within a chemistry framework and be receptive to new ideas and concepts (higher-order thinking).
- Use the language and concepts of chemistry to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).
- Be eligible to apply for jobs in the expanding field of forensic chemistry and other laboratory sciences.
- Be eligible to apply for graduate programs in the area of chemistry and forensic chemistry.

MAJOR REQUIREMENTS	Sem. Hours	77-80
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CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
CHEM 3111	Intermed Inorganic Chemistry	4
CHEM 3212	Quantitative Analysis	3
CHEM 3341	Organic Chemistry I	4
CHEM 3342	Organic Chemistry II	4
CHEM 3421	Intermediate Biochemistry	3
CHEM 4231	Instrumental Analysis	4
CHEM 4531	Physical Chemistry: Thermodynamics & Kinetics, 4 or	
CHEM 4532	Physical Chemistry: Quantum Mechanics & Spectroscopy, 4	4
MATH 1151	Calculus & Analytic Geometry I	5
BIOL 1110	Principles of Biology	3
BIOL 2010	Human Biology, 3 or	
BIOL 2401	Anatomy and Physiology I, 4	3-4
BIOL 3410	Forensic Science	3
BIOL 2511	Genetics	4
BIOL 4514	Molecular Biology	3
BIOL 4013	Introduction to Experimental Design and Analysis	3

CJ 1000	Introduction to Criminal Justice	3
CJ 4302	Criminal Evidence	3
Electives from the following		8-10
PHYS 1101	College Physics I, 4 and	
PHYS 1102	College Physics II, 4	8
or		
PHYS 2121	University Physics I, 5 and	
PHYS 2122	University Physics II, 5	10
Electives from the following		3
CHEM 4313	Advanced Organic Chemistry	3
CHEM 4421	Advanced Biochemistry	3
CHEM 4431	Biochemistry Laboratory	2
CHEM 4531	Physical Chem.: Thermodyn. & Kinetics	4
CHEM 4532	Physical Chemistry: Quantum Mechanics & Spectroscopy	4
CHEM 4910	Research in Chemistry	3-4

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1151 fulfills 3 s.h. of Div. I C; CHEM 1131, CHEM 1132 and Physics requirement fulfill 7 s.h. of Div. II A **38**

FREE ELECTIVES **2-5**
MINIMUM TOTAL **120**

FORENSIC SCIENCE

Minor for a Bachelor's Degree
 (491)

	Sem. Hours	
MINOR REQUIREMENTS		22-27

Biology Major Track **26-27**

BIOL 2010	Human Biology, 3 or	
BIOL 2401	Anatomy & Physiology I, 4	3-4
BIOL 3410	Forensic Science	3
CHEM 1131	Chemistry I	5
CHEM 1132	Chemistry II	5
CJ 1000	Intro. To Criminal Justice	3
CJ 3400	Criminal Investigation	3
CJ 4302	Criminal Evidence	3

Chemistry Major Track **22-23**

BIOL 1110	Principles of Biology	3
BIOL 2010	Human Biology, 3 or	
BIOL 2401	Anatomy & Physiology I, 4	3-4
BIOL 2511	Genetics	4
BIOL 3410	Forensic Science	3
CJ 1000	Intro. To Criminal Justice	3
CJ 3400	Criminal Investigation	3
CJ 4302	Criminal Evidence	3

Criminal Justice Major Track **25-26**

BIOL 1111	Plant Biology	4
BIOL 2010	Human Biology, 3 or	
BIOL 2401	Anatomy & Physiology I, 4	3-4
BIOL 2511	Genetics	4
BIOL 3410	Forensic Science	3
CHEM 1131	Chemistry I	5
CHEM 1132	Chemistry II	5

Criminal Justice majors must take CJ 3400 and CJ 4302 as departmentally approved electives in the major. This program is also listed in the Biology department.

CHEM 1103 Introduction to the Sciences: Chemistry (3) Introduction to the basic concepts of chemistry and scientific methodology, emphasizing the connections between chemistry, technology, and all things in a modern world. Not available to those with credit in CHEM 1104.

CHEM 1104 Introduction to the Sciences: Chemistry (4: 4 lecture, 0 lab) Introduction to the basic concepts of chemistry and scientific methodology, emphasizing the connections between chemistry, technology, and all things in a modern world. Laboratory included. Not available to those with credit in CHEM 1103. An additional fee is associated with this course.

CHEM 1131 General Chemistry I (5: 5 lecture, 0 lab) A first course in chemistry for those expecting to major or minor in chemistry, teach chemistry, or take pre-professional curricula. Includes laboratory experience. Prerequisite: a score of 17 on the mathematics section of the ACT, or 550 on the mathematics section of the SAT, or a passing score on a mathematics examination approved by the Department of Biochemistry, Chemistry and Physics or a grade of C or better in MATH 1111. An additional fee is associated with this course.

CHEM 1132 General Chemistry II (5: 5 lecture, 0 lab) A continuation of CHEM 1131. Includes laboratory experience. Prerequisite: CHEM 1131. An additional fee is associated with this course.

CHEM 1603 Elementary Organic and Biochemistry (3) An introduction to organic chemistry and biochemistry for those who need no additional chemistry training. Laboratory not included. Not available for those with credit in CHEM 1604. Prerequisite: CHEM 1103 or CHEM 1104 or high school chemistry.

CHEM 1604 Elementary Organic and Biochemistry (4: 4 lecture, 0 lab) A brief introductory course in organic chemistry and fundamental concepts of biochemistry with emphasis on physiological, nutritional, and comparative aspects. Includes laboratory experience. May not be used for credit in chemistry major and minor programs on the Bachelor of Arts and Bachelor of Science degrees. Prerequisite: CHEM 1104. An additional fee is associated with this course.

CHEM 3111 Intermediate Inorganic Chemistry (4: 4 lecture, 0 lab) An intermediate level inorganic course with emphasis on main group and organometallic chemistry. Laboratory included. Prerequisites: CHEM 1132 and CHEM 3341. An additional fee is associated with this course.

CHEM 3212 Quantitative Analysis (3) Application of chemical principles to the separation and determination of elements and compounds. Laboratory practice in basic techniques of gravimetric, volumetric, and instrumental analysis. Prerequisite: CHEM 1132. An additional fee is associated with this course.

CHEM 3341 Organic Chemistry I (4: 4 lecture, 0 lab) A lecture and laboratory course in the chemistry of carbon compounds. Prerequisite: CHEM 1132 or concurrently. An additional fee is associated with this course.

CHEM 3342 Organic Chemistry II (4: 4 lecture, 0 lab) A continuation of CHEM 3341. Prerequisite: CHEM 3341. An additional fee is associated with this course.

CHEM 3421 Intermediate Biochemistry (3) Provides a foundation in biochemistry. Topics covered include amino acids, proteins, lipids, membranes, carbohydrates, enzyme kinetics and mechanisms, and carbohydrate metabolism. Prerequisite: CHEM 3341 with a grade of C or better.

CHEM 3920 Communication Skills in Chemistry (2) Techniques for searching the chemical literature, writing scientific reports and papers, and making effective oral presentations using audiovisual aids to effectively convey technical ideas and information. Prerequisite: a minimum of 17 semester hours of chemistry. Students are encouraged to enroll during their junior year.

CHEM 4010 Special Topics in Chemistry (1-4) Topics of contemporary significance not given in-depth coverage in regularly offered courses. *May be repeated as the topic is changed.* Prerequisite: consent of instructor.

CHEM 4050 Science Teaching Methods* (3) Provides the teacher education candidate with skills and resources for the teaching of science. Students will learn a variety of strategies for both laboratory and classroom instruction. (Cross listed as BIOL 4050, EASC 4050, PHYS 4050 - equivalents). *Not available for graduate credit. Prerequisite: admission to teacher education program.

CHEM 4080 Teaching Secondary Science* (3) Provides additional teaching strategies, pedagogy, and resources to make teaching more effective. Includes 25 hours of field experience. (Cross listed as BIOL 4080, EASC 4080, PHYS 4080 - equivalents). *Not available for graduate credit. Prerequisite: admission to teacher education program; must be taken concurrently with FLDX 4595.

CHEM 4111 Advanced Inorganic Chemistry (3) An advanced study of inorganic compounds with a focus on the transition elements and current issues. Prerequisite: CHEM 3111. An additional fee is associated with this course.

CHEM 4231 Instrumental Analysis (4: 4 lecture, 0 lab) A study, including applications, of instrumental methods of chemical analysis. Prerequisites: PHYS 2121, PHYS 2123, or PHYS 1101. An additional fee is associated with this course.

CHEM 4313 Advanced Organic Chemistry (3) A lecture survey of general topics not covered in the CHEM 3341-2 sequence, and an extension to topics of current interest in organic chemistry. Prerequisite: CHEM 3342. An additional fee is associated with this course.

CHEM 4421 Advanced Biochemistry (3) Catabolic and anabolic metabolism of biomolecules, catalytic mechanisms and regulation of enzymes, nucleic acid structure and function, and computer resources. Prerequisites: CHEM 3342 and CHEM 3421 with a grade of C or better. An additional fee is associated with this course.

CHEM 4431 Biochemistry Laboratory (2) Introduction to biochemical literature, computer based resources, and experimental techniques used to purify and characterize biomolecules. Corequisite: CHEM 4421.

CHEM 4531 Physical Chemistry: Thermodynamics and Kinetics (4: 4 lecture, 0 lab) Kinetic-molecular theory of gases, thermodynamics, chemical equilibria, and chemical kinetics. Laboratories are project-based and include calorimetry and spectroscopy. Laboratory included. Prerequisites: PHYS 2123, PHYS 2121, or PHYS 1101; MATH 1151 and CHEM 3212. An additional fee is associated with this course.

CHEM 4532 Physical Chemistry: Quantum Mechanics and Spectroscopy (4: 4 lecture, 0 lab) Quantum mechanics, atomic and molecular structure, spectroscopy, electrical and magnetic properties of molecules. Laboratories include atomic and molecular spectroscopy, molecular modeling, and mathematical modeling. Laboratory included. Prerequisite: CHEM 2123, PHYS 2121, or PHYS 1101; MATH 1151 and CHEM 3212.

CHEM 4900 Chemical Research for Teachers* (1-2) Faculty supervised project terminating in a written and oral report. One semester assisting in or preparing materials for a chemistry laboratory course, prior to student teaching, also recommended. Prerequisites: CHEM 3212 and consent of instructor. *Not available for graduate credit.

CHEM 4910 Research in Chemistry (1-5) Individual work on a chemical research project under supervision of a staff member. Project will terminate in a written and oral presentation. *May be repeated for a maximum of 10 semester hours.* Prerequisite: Consent of instructor and department.

CHEM 4911 Special Problems in Chemistry (1-3) Individual work under supervision of a staff member. *May be repeated for a maximum of 3 semester hours.* Prerequisite: consent.

Physics

PHYSICS

Major, Bachelor of Arts Degree
(42-396)

The graduate with a Bachelor of Arts degree in Physics will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information & higher-order thinking).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within a physics framework and be receptive to new ideas and concepts (higher-order thinking).
- Use the language and concepts of physics to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).

Sem. Hours

MAJOR REQUIREMENTS64-65

PHYS 2121	University Physics I	5
PHYS 2122	University Physics II	5
PHYS 3012	Elec. Measurements Laboratory	2
PHYS 3080	Advanced Physics Lab	2-3
PHYS 3211	Analytical Mechanics I	3
PHYS 3311	Electric Circuit Theory	3
PHYS 3511	Modern Physics I	3
PHYS 4212	Analytical Mechanics II	3
PHYS 4411	Thermodynamics	3
CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
MATH 1151	Calculus & Analytic Geometry I	5
MATH 1152	Calculus & Analytic Geometry II	5
MATH 2153	Calculus & Analytic Geometry III	3
MATH 3151	Differential Equations	3
CS 1100	Computer Programming I	3
Electives from the following		6
PHYS 2020	Analytical Methods for Physics and Engineering	3
PHYS 3512	Modern Physics II	3
PHYS 4312	Electricity & Magnetism	3
PHYS 4512	Intro. to Quantum Mechanics	3
PHYS 4513	Solid State Physics	3
PHYS 3611	Optics	3
PHYS 4711	Atomic & Nuclear Physics	3

Students whose high school preparation is inadequate should take PHYS 1101 during their first year at UCM.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1151 fulfills 3 s.h. of Div. I C; PHYS 2121, PHYS 2122, CHEM 1131, and CHEM 1132 are allowed to fulfill 7 s.h. of Div. II A; the Modern Language Requirement fulfills 3 s.h. of Div. II C **35**

MODERN LANGUAGE REQUIREMENT Refer to Bachelor's Degree Requirements section for fulfillment options. **3-9**

FREE ELECTIVES **11-18**

MINIMUM TOTAL **120**

PHYSICS

Major, Bachelor of Science Degree
(43-397)

The graduate with a Bachelor of Science degree in Physics will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information & higher-order thinking).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within a physics framework and be receptive to new ideas and concepts (higher-order thinking).

- Use the language and concepts of physics to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).

Sem. Hours

MAJOR REQUIREMENTS67-68

PHYS 2121	University Physics I	5
PHYS 2122	University Physics II	5
PHYS 3012	Elec. Measurements Laboratory	2
PHYS 3080	Advanced Physics Lab	2-3
PHYS 3211	Analytical Mechanics I	3
PHYS 3311	Electric Circuit Theory	3
PHYS 3511	Modern Physics I	3
PHYS 3512	Modern Physics II	3
PHYS 4212	Analytical Mechanics II	3
PHYS 4312	Electricity & Magnetism	3
PHYS 4411	Thermodynamics	3
CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
MATH 1151	Calculus & Analytic Geometry I	5
MATH 1152	Calculus & Analytic Geometry II	5
MATH 2153	Calculus & Analytic Geometry III	3
MATH 3151	Differential Equations, 3 or	
MATH 3160	Advanced Applied Calc., 3	3
Electives from the following		6
PHYS 2020	Analytical Methods for Physics and Engineering	3
PHYS 3611	Optics	3
PHYS 4512	Intro. to Quantum Mechanics	3
PHYS 4513	Solid State Physics	3
PHYS 4711	Atomic & Nuclear Physics	3

Students whose high school preparation is inadequate should take PHYS 1101 during their first year at UCM.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1151 fulfills 3 s.h. of Div. I C; PHYS 2121, PHYS 2122, CHEM 1131 and CHEM 1132 are allowed to fulfill 7 s.h. of Div. II A **38**

FREE ELECTIVES **14-15**

MINIMUM TOTAL **120**

PHYSICS

Minor, Bachelor of Science Degree

UCM does not confer teacher certification for this minor. Students choosing this minor must also complete MATH 1151, MATH 1152 and MATH 2153 or equivalents as prerequisites for courses in the minor. (479)

Sem. Hours

MINOR REQUIREMENTS21-22

PHYS 2121	University Physics I	5
PHYS 2122	University Physics II	5
PHYS 3080	Advanced Physics Lab	2-3
PHYS 3511	Modern Physics I	3
Departmentally approved electives from the following		6
PHYS 3512	Modern Physics II	3
PHYS 3611	Optics	3
PHYS 4312	Electricity & Magnetism	3
PHYS 4411	Thermodynamics	3
PHYS 4512	Intro. to Quantum Mechanics	3
PHYS 4513	Solid State Physics	3
PHYS 4711	Atomic & Nuclear Physics	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, PHYS 2121 and PHYS 2122 are allowed to fulfill 4 s.h. of Div. II A

PHYSICS**Major, Bachelor of Science in Education Degree**

Certification to teach physics in grades 9-12.

(41-486)

The graduate with a Bachelor of Science in Education degree in Physics will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information & higher-order thinking).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within a physics framework and be receptive to new ideas and concepts (higher-order thinking).
- Use the language and concepts of physics to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).
- Manage a secondary education program in physics, that has a laboratory emphasis, with confidence, enthusiasm, efficiency, and safety.

Sem. Hours

MAJOR REQUIREMENTS64-68

PHYS 2121	University Physics I	5
PHYS 2122	University Physics II	5
PHYS 3080	Advanced Physics Lab	1-3
PHYS 3511	Modern Physics I	3
PHYS 4050	Science Teaching Methods	3
CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
BIOL 1005	Intro. to Environmental Science	3
BIOL 1110	Principles of Biology, 3 or	
BIOL 1111	Plant Biology, 4	3-4
*EASC 1004	Intro. to the Sciences: Geology, 4 or	
*EASC 3114	Meteorology, 3	3-4
MATH 1151	Calculus & Analytic Geometry I	5
MATH 1152	Calculus & Analytic Geometry II	5
MATH 2153	Calculus & Analytic Geometry III	3
CS 1100	Computer Programming I	3
CTE 2000	Technology & Society	3
Electives from the following 9		
PHYS 3211	Analytical Mechanics I	3
*PHYS 3512	Modern Physics II	3
*PHYS 3611	Optics	3
PHYS 4312	Electricity & Magnetism	3
*PHYS 4411	Thermodynamics	3

UNIFIED SCIENCE CERTIFICATION - The starred (*) courses above and the courses listed below must be completed for Unified Science certification in physics - certification to teach any of the beginning sciences (i.e., Biology I, Chemistry I, etc.) and all levels of physics, grades 9-12.

*BIOL 1112 Animal Biology 4

*EASC 4010 Special Problems in Geology 1

(NOTE: Both EASC 1004 and EASC 3114 must be taken for Unified Science certification. 3 hours of PHYS 3080 and 12 hours of physics electives must be completed for Unified Science certification.)

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1151 fulfills 3 s.h. of Div. I C; PHYS 2121, PHYS 2122, CHEM 1131, and CHEM 1132 are allowed to fulfill 7 s.h. of Div. II A; CTE 2000 fulfills 2 s.h. of Div. II A; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B 33

HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
PSY 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. of Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) PHYS 4080 fulfills 2 s.h. of Special Methods in the major field and 1 s.h. of Secondary Field Experience II in the major field 28

MINIMUM TOTAL 125

COOPERATIVE ENGINEERING 3-2**Major, Bachelor of Arts Degree**

(42-395)

The University of Central Missouri offers cooperative five-year engineering programs leading to a Bachelor of Arts degree in physics from UCM and a Bachelor of Science degree in engineering from any school listed by the Accreditation Board for Engineering and Technology (ABET) upon satisfactory completion of the program at the ABET institution. Any student electing to enter the five-year program must apply for a degree audit at the close of the sophomore year indicating upon application plans to complete the cooperative plan at another institution and name the institution. For details, consult the Chair of the Biochemistry, Chemistry and Physics Department. For the first three years, students should complete the following program.

Sem. Hours

MAJOR REQUIREMENTS 65

PHYS 2121	University Physics I	5
PHYS 2122	University Physics II	5
PHYS 3012	Elec. Measurements Laboratory	2
PHYS 3211	Analytical Mechanics I	3
PHYS 3311	Electric Circuit Theory	3
PHYS 4212	Analytical Mechanics II	3
PHYS 4411	Thermodynamics	3
CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
COMM 1000	Public Speaking	3
MATH 1151	Calculus & Analytic Geometry I	5
MATH 1152	Calculus & Analytic Geometry II	5
MATH 2153	Calculus & Analytic Geometry III	3
MATH 3151	Differential Equations	3
CS 1100	Computer Programming I	3
GRAP 1105	Basic AutoCAD	1
GRAP 1110	Fundamentals of Drafting	2
ECON 1010	Principles of Macroeconomics	3
ECON 1011	Principles of Microeconomics	3

Students whose high school preparation is inadequate should take PHYS 1101 during their first year at UCM. Depending upon major engineering area, the student should consider taking PHYS 3511, PHYS 3611, PHYS 4513, PHYS 4312 and/or PHYS 4711.

Students should check major requirements of the transfer university.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, COMM 1000 fulfills 3 s.h. of Div. I B; MATH 1151 fulfills 3 s.h. of Div. I C; PHYS 2121, PHYS 2122, CHEM 1131, and CHEM 1132 are allowed to fulfill 7 s.h. of Div. II A; ECON 1010 fulfills 3 s.h. of Div. II B; the Modern Language Requirement fulfills 3 s.h. of Div. II C). 29

MODERN LANGUAGE REQUIREMENT 3-9

Refer to Bachelor's Degree Requirements section for fulfillment options.

MINIMUM TOTAL AT UCM 97

PHYS 1101 College Physics I (4: 4 lecture, 0 lab) Properties of matter, mechanics, sound, and heat. Laboratory required. Prerequisites:

MATH 1111 or consent of the instructor. PHYS 1104 is recommended for students whose background in science and/or mathematics is limited.

PHYS 1102 College Physics II (4: 4 lecture, 0 lab) Electricity, magnetism, light, and atomic and nuclear physics. Laboratory required. Prerequisite: PHYS 1101.

PHYS 1103 Introduction to the Sciences: Physics (3) An introduction to physics. Topics include mechanics, energy, heat, sound, electricity, magnetism, light, atomic and nuclear physics, relativity, and astrophysics. Laboratory not included. Not available to those with credit in PHYS 1104.

PHYS 1104 Introduction to the Sciences: Physics (4: 4 lecture, 0 lab) An introduction to physics. Topics include mechanics, energy, heat, sound, electricity, magnetism, light, atomic and nuclear physics, relativity, and astrophysics. Laboratory included. Not available to those with credit in PHYS 1103.

PHYS 1123 Elementary Physics Laboratory I (1) Laboratory experiments in mechanics, heat, and waves. Does not fulfill requirements for any physics degree. Prerequisite: PHYS 2123 or concurrently.

PHYS 1124 Elementary Physics Laboratory II (1) Laboratory experiments in electricity, magnetism, optics, and radioactivity. Does not fulfill requirements for any physics degree. Prerequisite: PHYS 2124 or concurrently.

PHYS 2020 Analytic Methods for Physics and Engineering (3) Technique development in and application of topics necessary to describe physical problems in the physics and pre-engineering curricula including coordinate systems, vectors and vector operators, series expansions, complex numbers, partial derivatives, special functions, and ordinary differential equations. Prerequisite: PHYS 2121.

PHYS 2121 University Physics I (5: 5 lecture, 0 lab) Kinematics, dynamics, statics, rotational motion, elasticity, periodic motion, fluids, and heat. Laboratory required. Prerequisites: PHYS 1101 or consent of department, and MATH 1151.

PHYS 2122 University Physics II (5: 5 lecture, 0 lab) Wave motion, sound, electricity and magnetism, electromagnetic waves, and optics. Laboratory required. Prerequisites: PHYS 2121 and MATH 1152.

PHYS 2123 University Physics I (4) Kinematics, dynamics, statics, rotational motion, elasticity, periodic motion, fluids, and heat. Laboratory not included. Does not fulfill requirements for any physics degree. Prerequisites: PHYS 1101 or consent of department, and MATH 1151.

PHYS 2124 University Physics II (4) Wave motion, sound, electricity and magnetism, electromagnetic waves, and optics. Laboratory not included. Does not fulfill requirements for any physics degree. Prerequisites: PHYS 2121 or PHYS 2123; MATH 1152.

PHYS 3012 Electrical Measurements Laboratory (2) Basic electrical and magnetic measurements from DC to radio frequencies, including electric transients and calibration procedures. Introductory experiments using analog and digital circuits. Corequisite: PHYS 3311.

PHYS 3020 Special Topics in Physics (1-4) Study, interpretation, and discussion of special topics and problems in physics. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of instructor.

PHYS 3040 Practicum in Physics Laboratory Management (1.5) The student will assist with all aspects of an undergraduate physics laboratory at the appropriate level, including answering student questions, preparing equipment, and grading. The student will also be expected to prepare and present two or three introductory lectures for the laboratory, critique materials and methods presently in use, and suggest, design, and produce written materials for a new experiment. *May be repeated for a maximum of 3 semester hours.* Prerequisite: consent of department.

PHYS 3080 Advanced Physics Laboratory (1-3) Experimental activities in optics, solid state, atomic, and nuclear physics. Modern instrumentation and analysis methods. *May be repeated for a maximum of 6 semester hours.* Prerequisite: PHYS 2122.

PHYS 3211 Analytical Mechanics I (3) Cartesian and curvilinear coordinate systems, vector operations, conditions of equilibrium, equivalent force systems, moments, couples, centroids, trusses, shear force and bending moment, friction. Prerequisites: PHYS 2121 and MATH 1152.

PHYS 3311 Electric Circuit Theory (3) The basic principles of circuit analysis including Kirchhoff's laws, network theorems, equivalent circuits, transients, and AC circuits. Prerequisite: PHYS 2122.

PHYS 3511 Modern Physics I (3) Special and general relativity; quantized nature of energy and matter; structure and properties of the atom; matter waves; uncertainty principle; Schroedinger equation and its applications. Prerequisites: PHYS 2122 and MATH 2153 or concurrently. Corequisite: PHYS 3080.

PHYS 3512 Modern Physics II (3) Applications of basic and intermediate level quantum physics to atoms, molecules, nuclei, solids, and elementary particles. Includes quantum statistical physics. Prerequisites: PHYS 3511 and MATH 2153. Corequisite: PHYS 3080.

PHYS 3611 Optics (3) Wave optics, including the principles of superposition, interference, diffraction, polarization, and dispersion. Introduction to quantum optics. Prerequisites: PHYS 2122 and MATH 2153. Corequisite: PHYS 3080.

PHYS 4050 Science Teaching Methods* (3) Provides the teacher education candidate with skills and resources for the teaching of science. Students will learn a variety of strategies for both laboratory and classroom instruction. (Cross listed as BIOL 4050, CHEM 4050, EASC 4050 - equivalents). *Not available for graduate credit. Prerequisite: admission to teacher education program.

PHYS 4080 Teaching Secondary Science* (3) Provides additional teaching strategies, pedagogy, and resources to make teaching more effective. Includes 25 hours of field experience. (Cross listed as BIOL 4080, CHEM 4080, EASC 4080 - equivalents) *Not available for graduate credit. Prerequisite: Admission to Teacher Education program. Corequisite: FLDX 4595.

PHYS 4212 Analytical Mechanics II (3) Using a vector analysis, a study is made of kinematics; motion of a particle; kinetics of rigid bodies; work and energy, impulse and momentum; impact. Prerequisites: PHYS 3211 and MATH 2153.

PHYS 4312 Electricity and Magnetism (3) Electric and magnetic fields using vector analysis, dielectrics, vector potential, Coulomb's law, Gauss' law, Laplace's equation, and Maxwell's equations. Prerequisites: PHYS 2122 and MATH 2153.

PHYS 4411 Thermodynamics (3) Properties of gases, kinetic theory of gases; laws of thermodynamics; entropy and introduction to statistical thermodynamics. Prerequisites: PHYS 2122 and MATH 2153 or concurrently.

PHYS 4512 Introduction to Quantum Mechanics (3) Experimental basis; fundamental postulates; Schrodinger wave equation; superposition of states; calculation of energy, position, momentum; hydrogen atom; identical particles; perturbation theory. Prerequisites: PHYS 3511 and MATH 2153.

PHYS 4513 Solid State Physics (3) Crystal structure and diffraction in solids. Thermal dielectric properties. Free electron model of metals. Band theory of solids. Brillouin zones. Corequisites: PHYS 3512; PHYS 3080.

PHYS 4711 Atomic and Nuclear Physics (3) Designed to use introductory quantum concepts and techniques as applied to the analysis of atoms and nuclei. Prerequisite: PHYS 3512.

PHYS 4911 Special Problems in Physics (1-3) Individual work under supervision of a staff member. Problems may be undertaken in any phase of physics. *May be repeated for a maximum of 6 semester hours.*

Integrative Studies General

IGEN 4236 Science and Religion: From Conflict to Dialogue* (3) A clarification of the historical and philosophical issues that arise in the relationship between science and religion. The course emphasizes a variety of interpretive viewpoints. *Not available for graduate credit.

Biology and Earth Science

Biology

NOTE: Careers in professional specialties in biology generally require preparation through at least the masters degree. The biology programs at UCM provide preparation for students who plan professional work in the following biological specialties:

- Biomedical Sciences
- Entomology
- Environmental Biology
- Fisheries and Estuarine Ecology
- Forest Biology
- Marine Biological Sciences
- Oceanography
- Plant Science
- Systematic Botany
- Wildlife Conservation

BIOLOGY

Major, Bachelor of Arts Degree

(42-379)

The graduate with a Bachelor of Arts degree in Biology will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Develop demonstrations and experiments that illustrate biological concepts or develop new concepts. Think logically within the scientific parameters of professional biologists (higher-order thinking).
- Use the language and concepts of Biology to communicate effectively in oral and written form; to follow instructions precisely and to function in independent and collaborative settings (communicating and interacting).
- Read scientific texts in a language other than English (communicating).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society (valuing).
- Be eligible to apply for jobs in many commercial laboratories, quality control positions, and related (technology, interacting).
- Be eligible to apply for graduate programs in the area of biology represented by the student's major interest and coursework (technology, interacting).
- Be eligible to apply for entry into professional schools in medicine, dentistry, veterinary medicine and related paramedical professions (technology, interacting).

Sem. Hours

MAJOR REQUIREMENTS	37
BIOL 1000 The Discipline of Biology	1
BIOL 1110 Principles of Biology	3
BIOL 1111 Plant Biology, 4 or	4
BIOL 1112 Animal Biology, 4	3
BIOL 2020 General Ecology	3
BIOL 2512 Cell Biology	1
BIOL 4000 Biology Colloquium	3
BIOL 4102 Evolution	3
ICAP 4222 The Biological Perspective	3
Upper-level electives in biology	16
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, BIOL 1111 and BIOL 1112 are allowed to fulfill 4 s.h. of Div. II A; the Modern Language Requirement fulfills 3 s.h. of Div. II C; ICAP 4222 fulfills 3 s.h. of Div. IV B	38
MODERN LANGUAGE REQUIREMENT	3-9
Refer to Bachelor's Degree Requirements section for fulfillment options.	
FREE ELECTIVES	36-42
MINIMUM TOTAL	120

BIOLOGY

Major, Bachelor of Science Degree

(43-380)

The graduate with a Bachelor of Science degree in Biology will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Develop demonstrations and experiments that illustrate biological concepts or develop new concepts. Think logically within the scientific parameters of professional biologists (higher-order thinking).
- Use the language and concepts of Biology to communicate effectively in oral and written form; to follow instructions precisely and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society (valuing).
- Be eligible to apply for jobs in many commercial laboratories, quality control positions, and related (technology, interacting).
- Be eligible to apply for graduate programs in the area of biology represented by the student's major interest and coursework (technology, interacting).
- Be eligible to apply for entry into professional schools in medicine, dentistry, veterinary medicine and related paramedical professions (technology, interacting).

Sem. Hours

MAJOR REQUIREMENTS	45
CORE	8
BIOL 1000 The Discipline of Biology	1
BIOL 1110 Principles of Biology	3
BIOL 4000 Biology Colloquium	1
ICAP 4222 The Biological Perspective	3
Elect one of the 6 areas	39-53
Area 1	
General Biology	39
BIOL 1111 Plant Biology	4
BIOL 1112 Animal Biology	4
BIOL 2020 General Ecology	3
BIOL 2511 Genetics	4
BIOL 3712 Field Natural History	4
BIOL 4013 Intro. to Exp. Design & Analysis	3
BIOL 4102 Evolution	3
BIOL 3431 Animal Physiology, 4 or	
BIOL 4411 Plant Physiology, 4	4
CHEM 1131 General Chemistry I	5
CHEM 1132 General Chemistry II	5
Area 2	
Ecology and Evolutionary Biology	46
BIOL 1111 Plant Biology	4
BIOL 1112 Animal Biology	4
BIOL 2020 General Ecology	3
BIOL 4013 Intro. to Exp. Design & Analysis	3
BIOL 4102 Evolution	3
BIOL 4709 Plant Ecology	4
BIOL 4711 Animal Ecology	4
CHEM 1131 General Chemistry I	5
CHEM 1132 General Chemistry II	5
Electives from the following	8
BIOL 3711 Plant Identification	4
BIOL 4210 Ichthyology	4
BIOL 4221 Mammalogy	4
BIOL 4223 Ornithology	4
BIOL 4232 Herpetology	4
BIOL 4312 Entomology	4
BIOL 4953 Field Ecology	1-6
Elective from the following	3
AGRI 2330 Introduction to Soils	3
CTE 3060 Technical Writing	3
GEOG 4220 Geographic Info. Systems I	3
GEOG 4291 Conservation of Nat. Resources	3
AGRI 4150 Natural Resource Economics, 3, or	
ECON 4020 Natural Resource Economics, 3	3

Area 3		
Wildlife and Natural Resource Conservation		44
BIOL 1111 Plant Biology	4	
BIOL 1112 Animal Biology	4	
BIOL 2020 General Ecology	3	
BIOL 3711 Plant ID	4	
BIOL 4013 Intro. to Exp. Design & Analysis	3	
BIOL 4102 Evolution	3	
Physical Science Electives (9 hours from 2 disciplines)	9	
CHEM 1131 General Chemistry I	5	
EASC 1004 Introduction to Geology	4	
EASC 3111 Geomorphology	3	
PHYS 1101 College Physics I	4	
AGRI 2330 Introduction to Soils	3	
Wildlife Management and Conservation	6	
BIOL 3721 Wildlife Management	3	
BIOL 4722 Conservation Biology	3	
GEOG 4291 Conservation of Natural Resources	3	
Wildlife and Habitat Biology	8	
BIO 3712 Field and Natural History	4	
BIOL 4210 Ichthyology	4	
BIOL 4221 Mammalogy	4	
BIOL 4223 Ornithology	4	
BIOL 4232 Herptology	4	
BIOL 4709 Plant Ecology	4	
Area 4		
Organismal Biology	42-43	
BIOL 1111 Plant Biology	4	
BIOL 1112 Animal Biology	4	
BIOL 2511 Genetics	4	
BIOL 4514 Molecular Biology	3	
CHEM 1131 General Chemistry I	5	
CHEM 1132 General Chemistry II	5	
PHYS 1101 College Physics I	4	
BIOL 3431 Animal Physiology, 4, or		
BIOL 4411 Plant Physiology, 4	4	
Electives from the following	9-10	
BIOL 2512 Cell Biology	3	
BIOL 3211 Comparative Anatomy	4	
BIOL 3213 Embryology of Vertebrates	3	
BIOL 3413 Immunology	3	
BIOL 3414 Histology	3	
BIOL 3611 Microbiology	4	
BIOL 3711 Plant ID	4	
BIOL 4013 Intro. to Exp. Design & Analysis	3	
BIOL 4102 Evolution	3	
BIOL 4311 Parasitology	4	
BIOL 4403 Environmental Physiology	4	
BIOL 4517 Serology Lab	1	
Area 5		
Biomedical/Cellular and Molecular Biology	44-45	
BIOL 2511 Genetics	4	
BIOL 2512 Cell Biology	3	
BIOL 3611 Microbiology	4	
BIOL 4514 Molecular Biology	3	
CHEM 1131 General Chemistry I	5	
CHEM 1132 General Chemistry II	5	
PHYS 1101 College Physics I	4	
BIOL 1111 Plant Biology, 4		
and		
BIOL 4411 Plant Physiology, 4	8	
OR		
BIOL 1112 Animal Biology, 4		
and		
BIOL 3431 Animal Physiology, 4	8	
Electives from the following	8-9	
BIOL 3413 Immunology	3	
BIOL 4311 Parasitology	4	
BIOL 4515 Molecular Technology Lab	2	
BIOL 4516 Hematology/Virology	3	
BIOL 4517 Serology Lab	1	

Area 6		
Pre-Med., Pre-Dental, Pre-Vet.		53
BIOL 1112 Animal Biology	4	
BIOL 2511 Genetics	4	
BIOL 2512 Cell Biology	3	
BIOL 3211 Comparative Anatomy	4	
BIOL 3431 Animal Physiology	4	
BIOL 3611 Microbiology	4	
CHEM 1131 General Chemistry I	5	
CHEM 1132 General Chemistry II	5	
CHEM 3341 Organic Chemistry I	4	
CHEM 3342 Organic Chemistry II	4	
PHYS 1101 College Physics I	4	
Electives from the following	8	
BIOL 3213 Embryology of Vertebrates	3	
BIOL 3413 Immunology	3	
BIOL 3414 Histology	3	
BIOL 4013 Intro. to Exp. Design & Analysis	3	
BIOL 4102 Evolution	3	
BIOL 4311 Parasitology	4	
BIOL 4400 Endocrinology	2	
BIOL 4514 Molecular Biology	3	
BIOL 4515 Molecular Biology Lab	2	
BIOL 4516 Hematology/Virology	3	
BIOL 4517 Serology Lab	1	
CHEM 4421 Advanced Biochemistry	3	
PHYS 1102 College Physics II	4	

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, combinations fulfill 7 s.h. of Div. II A; ICAP 4222 fulfills 3 s.h. of Div. III B **38**

FREE ELECTIVES, MINOR OR AREA OF EMPHASIS **21-32**

MINIMUM TOTAL **120**

BIOLOGY

Major, Bachelor of Science in Education Degree
 Unified science certification to teach any of the beginning sciences, i.e., Physics I, Chemistry I, etc., and all levels of biology, grades 9-12. (41-487)

- The graduate with a Bachelor of Science in Education degree in Biology will use the knowledge and skills obtained in the program to:
- Collect, analyze and apply information to solve problems (managing information & higher-order thinking).
 - Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
 - Think logically within a Biology framework and be receptive to new ideas and concepts (higher-order thinking).
 - Use the language and concepts of Biology to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
 - Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).
 - Manage a secondary education program in Biology that has a laboratory emphasis, with confidence, enthusiasm, efficiency, and safety.

Sem. Hours

MAJOR REQUIREMENTS		60
BIOL 1000 The Discipline of Biology	1	
BIOL 1111 Plant Biology	4	
BIOL 1112 Animal Biology	4	
BIOL 2020 General Ecology	3	
BIOL 2511 Genetics	4	
BIOL 2512 Cell Biology	3	
BIOL 3611 Microbiology	4	
BIOL 3431 Animal Physiology, 4 or		
BIOL 4411 Plant Physiology, 4	4	
BIOL 3712 Field Natural History	4	
EASC 1004 Intro. to the Sciences: Geology	4	
CHEM 1131 General Chemistry I	5	

*PHYS 1101	College Physics I, 4 or	
PHYS 1104	Intro. to Sciences (Physics), 4 or	
PHYS 2121	University Physics I, 5	4-5
CTE 2000	Technology & Society	3
Electives (selected from courses listed below).		
Hours of electives taken must bring the total in the major to 60 hours		
PSY 4520	Stat. for Behavioral Sciences	3
*CHEM 1132	General Chemistry II	5
CHEM 1604	Elem. Org. & Biochemistry	4
CHEM 3212	Quantitative Analysis	3
CHEM 3341	Organic Chemistry I	4
CHEM 3342	Organic Chemistry II	4
CHEM 4421	Advanced Biochemistry	3
EASC 3010	Environmental Geology	3
EASC 3112	Astronomy	3
*EASC 3114	Meteorology	3
EASC 3320	Mineralogy	4
*EASC 4010	Special Problems in Geology	1
*PHYS 1102	College Physics II, 4 or	
PHYS 2121	University Physics I, 5	4-5
PHYS 3511	Modern Physics I	3
PHYS 3611	Optics	3
PHYS 4312	Electricity & Magnetism	3
PHYS 3080	Adv. Physics Laboratory	1-2
Departmentally approved electives in Biology		
UNIFIED SCIENCE CERTIFICATION - The starred (*) courses above must be taken as part of the elective credits for Unified Science certification in biology - certification to teach any of the beginning sciences (i.e., Chemistry I, Physics I, etc.) and all levels of biology, grades 9-12.		
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, EASC 1004 fulfills 4 s.h. of Div. II A; two courses in biology are allowed to fulfill 3 s.h. of Div. II A; CTE 2000 fulfills 2 s.h. of Div. IIA; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B		
HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
PSY 4230	Psychology of Adolescence	3
Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. of Div. III.		
PROFESSIONAL EDUCATION REQUIREMENTS (page 110) BIOL 4080 (3 s.h.) fulfills 2 s.h. of Special Methods in major field and 1 s.h. of Secondary Field Experience II in major field		
MINIMUM TOTAL		124

BIOLOGY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (476)

	Sem. Hours	
MINOR REQUIREMENTS	23	
BIOL 1110	Principles of Biology	3
BIOL 2020	General Ecology	3
BIOL 2511	Genetics	4
BIOL 2512	Cell Biology	3
BIOL 1111	Plant Biology, 4 or	
BIOL 1112	Animal Biology, 4	4
CHEM 1104	Intro. to Sci.: Chemistry, 4 or	
CHEM 1131	General Chemistry I, 5	4-5
Upper-level elective in Biology		
		1-2

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, BIOL 1111 or BIOL 1112 are allowed to fulfill 4 s.h. of Div II A.

CONSERVATION ENFORCEMENT

Major, Bachelor of Science Degree

(43-383)

The graduate with a Conservation Enforcement Major, Bachelor of Science Degree will use the knowledge and skills obtained in the program to achieve various student learning outcomes depending upon the options selected in this program. There are three emphasis areas; Biomedical emphasis, Ecology/Environment emphasis and Conservation Enforcement emphasis. Students in this program will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information).
- Use various field and laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Develop demonstrations and experiments, and plan and lead field trips that illustrate biological concepts or develop new concepts. Think logically within the scientific parameters of professional biologists (higher-order thinking).
- Use the language and concepts of Biology to communicate effectively in oral and written form; to follow instructions precisely and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society (valuing).
- Students emphasizing the Biomedical option will be eligible to apply for entry into professional schools in medicine, dentistry, veterinary medicine and related paramedical professions (technology, interacting).
- Students emphasizing the Ecology/Environment option will be eligible to apply to advanced degree programs in environmental, ecological and related programs, and to apply for positions in the EPA, MO Dept of Conservation, Department of Natural Resources, and other such agencies. There are also many private businesses and testing laboratories working on ecological/environmental projects to which our graduates may apply (technology, communicating).
- Students emphasizing the Conservation Enforcement option will be eligible for internships and positions with the Missouri Department of Conservation, Department of Natural Resources and be eligible to apply for jobs in federal and state environmental agencies. They will also be eligible for positions in businesses interacting with these environmental agencies (technology, communicating, interacting).

Sem. Hours

MAJOR REQUIREMENTS	51-58	
BIOL 1000	The Discipline of Biology	1
BIOL 1110	Principles of Biology	3
BIOL 1111	Plant Biology	4
BIOL 1112	Animal Biology	4
BIOL 2020	General Ecology	3
BIOL 3711	Plant Identification	4
BIOL 4000	Biology Colloquium	1
ICAP 4222	The Biological Perspective	3
Elective from the following		
BIOL 3712	Field Natural History	4
BIOL 4210	Ichthyology	4
BIOL 4221	Mammology	4
BIOL 4223	Ornithology	4
BIOL 4232	Herpetology	4
BIOL 4312	Entomology	4
Electives from the following		
BIOL 4102	Evolution	3
BIOL 4722	Conservation Biology	3
BIOL 2511	Genetics, 4 and	
CHEM 1104	Intro. to Sci.: Chemistry, 4	
OR		
BIOL 2511	Genetics, 4 and	
CHEM 1131	General Chemistry I, 5	8-9
Elective from the following		
BIOL 3721	Wildlife Management	3
BIOL 4709	Plant Ecology	4
BIOL 4711	Animal Ecology	4
COMM 2620	Public Relations	3
CJ 1000	Introduction to Criminal Justice	3
CJ 2300	Criminal Law	3

CJ	3303	Criminal Procedure	3
CJ	4302	Criminal Evidence	3
CTE	3060	Technical Writing	3

GENERAL EDUCATION REQUIREMENTS (page 41) BIOL 1111 and BIOL 1112 fulfill 4 s.h. of Div. II A; ICAP 4222 fulfills 3 s.h. of Div. IV B **41**

FREE ELECTIVES (includes Minor/Emphasis) **21-28**

MINIMUM TOTAL **120**

MEDICAL TECHNOLOGY

Major, Bachelor of Science Degree (43-384)

The graduate with a Medical Technology Functional Major, Bachelor of Science Degree will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems. (managing information)
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety. (technology)
- Think logically within the scientific parameters of professional biologists. (higher-order thinking)
- Use the language and concepts of Biology to communicate effectively in oral and written form; to follow instructions precisely and to function in independent and collaborative settings. (communicating and interacting)
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society. (valuing)
- Challenge the licensure exam of the National Accrediting Agency for Clinical Laboratory Scientists (NAACLS) to become a certified Medical Technologist (ASCP) or Clinical Laboratory Scientist (ASCP) after completing a 12-month clinical rotation at an affiliated hospital.
- Be eligible to apply for graduate/professional training in nearly all medical fields.

	Sem. Hours
MAJOR REQUIREMENTS	64-65

BIOL 1000	The Discipline of Biology	1
BIOL 1110	Principles of Biology	3
BIOL 2401	Anatomy & Physiology I	4
BIOL 2402	Anatomy & Physiology II	4
BIOL 2511	Genetics	4
BIOL 2512	Cell Biology	3
BIOL 3413	Immunology	3
BIOL 3611	Microbiology	4
BIOL 4000	Biology Colloquium	1
BIOL 4311	Parasitology	4
BIOL 4514	Molecular Biology	3
BIOL 4515	Molecular Biology Lab	2
CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
CHEM 3212	Quantitative Analysis	3
CHEM 3341	Organic Chemistry I	4
CHEM 3421	Intermediate Biochemistry	3
MATH 1111	College Algebra	3
MATH 1112	College Trigonometry, 2 or	
PSY 4520	Stat. for Behavioral Sciences, 3	2-3
ICAP 4222	The Biological Perspectives	3

MEDICAL TECHNOLOGY CREDIT **30**

Courses in various accredited medical technology programs may vary from hospital to hospital. Courses offered and the credit hours counted towards the B.S. are:

BIOL 4015	Clinical Immunohematology	4
BIOL 4016	Clinical Urinalysis	2
BIOL 4017	Clinical Microbiology	7
BIOL 4018	Clinical Immunology	5
BIOL 4019	Clinical Biochemistry	7
BIOL 4020	Clinical Hematology	4
BIOL 4021	Clinical Special Topics	1

These courses are part of the Medical Technology functional major required by affiliation agreement for this program. They are not offered on campus or open to students in other programs. Credit for these courses is allowed for work taken at one of our affiliated hospitals in Kansas City (North Kansas City Hospital, Saint Luke's Hospital or K.U. in Kansas City, Kansas); in Springfield (Lester E. Cox Medical Center); in Joplin (St. John's Regional Medical Center); in Wichita (Wichita State University Medical Technology Program) or any fully accredited hospital medical technology training program which must be accredited by the American Medical Association Council on Medical Education. Admission and fees for the hospital portions of this program are the prerogative of the hospital and thus cannot be guaranteed by the University. Licensure to practice is dependent upon state regulations and professional examinations and thus cannot be guaranteed by the University or hospital. For additional information on this program and for entry into clinical programs, students are urged to see the program advisor at their earliest convenience. Because of complexities of affiliation agreements and variations in clinical programs, all pertinent information cannot be presented in this catalog.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1111 fulfills 3 s.h. of Div. I C; BIOL 1112, BIOL 2511, CHEM 1131, and CHEM 1132 are allowed to fulfill 7 s.h. of Div. II A; ICAP 4222 fulfills 3 s.h. of Div. IVB **35**

MINIMUM TOTAL **129-130**

FORENSIC SCIENCE

Minor for a Bachelor's Degree (491)

Sem. Hours

MINOR REQUIREMENTS **22-26**

Biology Major Track **25-26**

BIOL 2010	Human Biology, 3 or	
BIOL 2401	Anatomy & Physiology I, 4	3-4
BIOL 3410	Forensic Science	3
CHEM 1131	Chemistry I	5
CHEM 1132	Chemistry II	5
CJ 1000	Intro. To Criminal Justice	3
CJ 3400	Criminal Investigation	3
CJ 4302	Criminal Evidence	3

Chemistry Major Track **22-23**

BIOL 1110	Principles of Biology	3
BIOL 2010	Human Biology, 3 or	
BIOL 2401	Anatomy & Physiology I, 4	3-4
BIOL 2511	Genetics	4
BIOL 3410	Forensic Science	3
CJ 1000	Intro. To Criminal Justice	3
CJ 3400	Criminal Investigation	3
CJ 4302	Criminal Evidence	3

Criminal Justice Major Track **23-24**

BIOL 1110	Principles of Biology	3
BIOL 2010	Human Biology, 3 or	
BIOL 2401	Anatomy & Physiology I, 4	3-4
BIOL 2511	Genetics	4
BIOL 3410	Forensic Science	3
CHEM 1131	Chemistry I	5
CHEM 1132	Chemistry II	5

Criminal Justice majors must take CJ 3400 and CJ 4302 as departmentally approved electives in the major. This program is also listed in the Chemistry department.

BIOL 1000 The Discipline of Biology (1) An introduction to biology as an academic endeavor including consideration of the subdisciplines of biology, requirements of students, and professional opportunities. Prerequisite: declaration of major in biology.

BIOL 1003 Introduction to the Sciences: Ecology (3) Introduction to biological science with emphasis on scientific methodology, ecological concepts regarding populations, communities and ecosystems and the impact of humans on the natural world. No laboratory included. Not available to those with credit in BIOL 1004.

BIOL 1004 Introduction to the Sciences: Ecology (4: 3 lecture, 1 lab) Introduction to biological science with emphasis on scientific methodology, ecological concepts regarding populations, communities and ecosystems and the impact of humans on the natural world. Laboratory included. Not available to those with credit in BIOL 1003.

BIOL 1005 Introduction to Environmental Science (3) Environmental science as an integrative study of human interaction with the environment that seeks to meet the needs of students with little background in science.

BIOL 1110 Principles of Biology (3) Examination of basic biological principles including the scientific method, biological molecules, cellular function and structure, photosynthesis, respiration, metabolism, cell mitosis, genetics, evolution, diversity, and ecology.

BIOL 1111 Plant Biology (4: 3 lecture, 1 lab) Examination of basic biological principles including the scientific method; macromolecules of life; cellular structure, function, and replication; and plant form, function and diversity. Laboratory included. An additional fee is associated with this course.

BIOL 1112 Animal Biology (4: 3 lecture, 1 lab) Introduction to the evolution and classification of the metazoa with emphasis on the form and function of selected invertebrate and vertebrate animals. An additional fee is associated with this course.

BIOL 2010 Human Biology (3) An overview of human biology, emphasizing physiology, development, health, interpersonal and environmental interactions. Not open to Biology majors or minors.

BIOL 2020 General Ecology (3) An introduction to the major concepts of ecology in the context of evolution and the ecology of populations, communities, and ecosystems. Prerequisite: BIOL 1110 and BIOL 1111 or BIOL 1112.

BIOL 2401 Anatomy and Physiology I (4: 3 lecture, 1 lab) A functional study of cellular and metabolic processes and cardiovascular, lymphatic, respiratory and digestive systems integrated with a study of pertinent structures. Prerequisite: CHEM 1103 or CHEM 1104 or CHEM 1131. An additional fee is associated with this course.

BIOL 2402 Anatomy and Physiology II (4: 3 lecture, 1 lab) A functional study of temperature, water and electrolyte balances and skeletal, muscular, neural, endocrine and reproductive systems integrated with a study of pertinent structures. Prerequisite: BIOL 2401. An additional fee is associated with this course.

BIOL 2511 Genetics (4: 3 lecture, 1 lab) Hereditary principles and their application to classical and molecular genetics. Laboratories emphasize inquiry-based learning applied to exercises using Mendelian genetics and DNA technology. Prerequisites: BIOL 1110 or BIOL 1111 or BIOL 2401; CHEM 1104 or CHEM 1131; and MATH 1111 or MATH 1150 or MATH 1151 or MATH 1620. An additional fee is associated with this course.

BIOL 2512 Cell Biology (3) A study of cellular macromolecules, DNA replication, transcription, and translation; cellular organelles, cytoskeleton, energetics, division; and the biology of the cancer cell. Prerequisite: BIOL 1110 or 1112.

BIOL 3211 Comparative Anatomy (4: 2 lecture, 2 lab) Comparative morphology of the early development and evolution of the organ systems of vertebrates. Laboratory study of representative vertebrates. Prerequisites: BIOL 1110 and BIOL 1112. An additional fee is associated with this course.

BIOL 3213 Embryology of Vertebrates (3: 2 lecture, 1 lab) Germ cells, fertilization, and development of systems, organs, and tissues of vertebrate embryos. Only offered Fall semester. Prerequisites: BIOL 1110 and BIOL 1112 or BIOL 2402; and CHEM 1104 or CHEM 1131. An additional fee is associated with this course.

BIOL 3215 Medical Terminology (2, 3) The language of medical and paramedical practices. Terminology related to organ systems of the body is presented with emphasis on Latin and Greek roots. May not be repeated for credit. Prerequisites: One biology course.

BIOL 3410 Forensic Science (3) Theoretical and hands-on applications of forensic science including types of deaths, taphonomy, toxicology, body fluid and blood analysis, ballistics and trace evidence determinations. Prerequisites: BIOL 2010 or BIOL 2401, and CHEM 1132.

BIOL 3413 Immunology (3) A survey of the field of immunology including the types of immune responses, antibody synthesis, antigen-antibody interactions, hypersensitivity, immunity to infection, and the design of laboratory techniques for immunological screening. Only offered Spring semester. Prerequisite: BIOL 2401 or BIOL 3431. Corequisite: BIOL 4517, unless previously taken (Medical Technology Majors do not need concurrent enrollment in BIOL 4517).

BIOL 3414 Histology (3: 2 lecture, 1 lab) The functional morphology of selected tissues at the light microscopic level. Laboratory involves practice in slide reading. Only offered Fall semester. Prerequisite: BIOL 3211 or BIOL 2402 or BIOL 3431. An additional fee is associated with this course.

BIOL 3431 Animal Physiology (4: 2 lecture, 2 lab) Animal functions in terms of their needs for oxygen, food, energy, temperature, water, movement, information, and integration. Prerequisites: BIOL 1110 and 1112 or AGRI 3410; and CHEM 1104 or CHEM 1131. An additional fee is associated with this course.

BIOL 3610 Basic Microbiology (3) A lecture-only introduction to the basic microbial concepts including various microbial classes, genetics, habitats, cell structure, metabolism, modes of transmission, and control methods. Not available for Biology majors or minors.

BIOL 3611 Microbiology (4: 3 lecture, 1 lab) An introduction to the major groups of microorganisms including their cell structure, metabolism, genetics, and ecology. Emphasis is placed upon the bacteria and viruses. Prerequisites: BIOL 1110 or BIOL 2402; and CHEM 1104 or CHEM 1131. An additional fee is associated with this course.

BIOL 3711 Plant Identification (4: 2 lecture, 2 lab) A basic course in plant identification, using classification, nomenclature, collection and preservation techniques. Involves much field and lab work. Prerequisites: BIOL 1111 or AGRI 1300.

BIOL 3712 Field Natural History (4: 2 lecture, 2 lab) Provides basic experience in field and laboratory identification of local plants and animals and an introduction to environmental awareness. This is a background course for all courses in field biology and is especially useful to teachers and pre-professional students. Only offered Fall semester. Prerequisites: BIOL 1110, BIOL 1111, BIOL 1112 and BIOL 2020. An additional fee is associated with this course.

BIOL 3721 Wildlife Management (3) Wildlife resources of North America and their importance in our economic and cultural life; biological methods of preservation, restoration and management. Prerequisites: BIOL 1110 and BIOL 2020.

BIOL 4000 Biology Colloquium* (1) Investigation of professional opportunities in biology. Evaluation of the program by students and assessment of student progress in biology. Prerequisite: 24 semester hours of biology or consent of department chair. *Not available for graduate credit.

BIOL 4011 Special Problems in Biology (1-4) Individual work under supervision of a staff member. Problems may be undertaken in any field of biology. *May be repeated for a maximum of 4 semester hours.* Prerequisite: consent of instructor.

BIOL 4012 Special Projects in Biology (1-8) *May be repeated for a maximum of 9 semester hours.* With permission of the Department Chair, majors in medical technology may repeat for a maximum of 30 semester hours. Prerequisite: consent of instructor.

BIOL 4013 Introduction to Experimental Design and Analysis (3) This course covers the conceptualization, implementation, analysis, and communication of research in biology. Prerequisites: BIOL 1110; MATH 1111 or MATH 1150 or consent of instructor.

BIOL 4014 Internship in Biology (1- 9) Practical experience working within the various components of the Biology discipline. Only 4 credit hours total may be used to satisfy Approved Biology Electives. Prerequisite: must be a major in the Department of Biological Sciences with at least 60 hours of credit.

BIOL 4015 Clinical Immunohematology* (4) Clinical Immunohematology, a component of the Medical Technology Clinical Internship as part of the last year of the degree. Only offered Summer semester. Prerequisite: Acceptance into an affiliated Clinical Laboratory Science/Medical Technology Program. *Not available for graduate credit.

BIOL 4016 Clinical Urinalysis* (2) Clinical Urinalysis, a component of the Medical Technology Clinical Internship as part of the last year of the degree. Only offered Summer semester. Prerequisite: Acceptance into an affiliated Clinical Laboratory Science/Medical Technology Program. *Not available for graduate credit.

BIOL 4017 Clinical Microbiology* (7) Clinical Microbiology, a component of the Medical Technology Clinical Internship as part of the last year of the degree. Only offered Fall semester. Prerequisite: Acceptance into an affiliated Clinical Laboratory Science/Medical Technology Program. *Not available for graduate credit.

BIOL 4018 Clinical Immunology* (5) Clinical Immunology, a component of the Medical Technology Clinical Internship as part of the last year of the degree. Only offered Fall semester. Prerequisite: Acceptance into an affiliated Clinical Laboratory Science/Medical Technology Program. *Not available for graduate credit.

BIOL 4019 Clinical Biochemistry* (7) Clinical Biochemistry, a component of the Medical Technology Clinical Internship as part of the last year of the degree. Only offered Spring semester. Prerequisite: Acceptance into an affiliated Clinical Laboratory Science/Medical Technology Program. *Not available for graduate credit.

BIOL 4020 Clinical Hematology* (4) Clinical Hematology, a component of the Medical Technology Clinical Internship as part of the last year of the degree. Only offered Spring semester. Prerequisite: Acceptance into an affiliated Clinical Laboratory Science/Medical Technology Program. *Not available for graduate credit.

BIOL 4021 Clinical Special Topics* (1) Clinical Special Topics, a component of the Medical Technology Clinical Internship as part of the last year of the degree. Only offered Spring semester. Prerequisite: Acceptance into an affiliated Clinical Laboratory Science/Medical Technology Program. *Not available for graduate credit.

BIOL 4050 Science Teaching Methods* (3) Provides the teacher education candidate with skills and resources for the teaching of science. Students will learn a variety of strategies for both laboratory and classroom instruction. (Cross listed as CHEM 4050, EASC 4050, PHYS 4050 - equivalents). *Not available for graduate credit. Prerequisite: admission to teacher education program.

BIOL 4080 Teaching Secondary Science* (3) Provides additional teaching strategies, pedagogy, and resources to make teaching more effective. Includes 25 hours of field experience. (Cross listed as CHEM 4080, EASC 4080, PHYS 4080 - equivalents). *Not available for graduate credit. Prerequisite: Admission to Teacher Education program. Corequisite: FLDX 4595.

BIOL 4102 Evolution (3) Lecture and discussion of current and historical evolutionary theory. The process of scientific investigation will be contrasted with non-scientific methods. Prerequisites: BIOL 1110 and EASC 1004 or instructor's consent.

BIOL 4210 Ichthyology (4: 2 lecture, 2 lab) A thorough examination of the biology of the fish with special emphasis on the fish of Missouri. Students will be expected to develop a detailed knowledge of the literature on ichthyology. Field trips at additional expense to the student are part of this course. An additional fee is associated with this course. Prerequisites: BIOL 1110 and BIOL 1112.

BIOL 4221 Mammalogy (4: 2 lecture, 2 lab) A thorough examination of the Class Mammalia. Students will be expected to develop a detailed knowledge of the literature on mammalogy. Only offered Fall semester. Prerequisites: BIOL 1110 and BIOL 1112. An additional fee is associated with this course.

BIOL 4223 Ornithology (4: 2 lecture, 2 lab) An examination of the biology of birds with special emphasis on the field study of locally occurring species. Prerequisites: BIOL 1110 and BIOL 1112.

BIOL 4232 Herpetology (4: 2 lecture, 2 lab) A thorough examination of the classes Amphibia and Reptilia, including systematics, evolution and ecology of these groups with special attention to identification of local forms. An additional fee is assessed for this course. Prerequisite: BIOL 1110 and BIOL 1112.

BIOL 4311 Parasitology (4: 2 lecture, 2 lab) Animal parasites, with emphasis on identification, morphology, biology, life histories, and host-parasite relationships. Only offered Fall semester. Prerequisite: BIOL 1112. An additional fee is associated with this course.

BIOL 4312 Entomology (4: 2 lecture, 2 lab) An introduction to the systematics, morphology, physiology, evolution, and ecology of insects. Only offered Fall semester. Prerequisites: BIOL 1110 and BIOL 1112. An additional fee is associated with this course.

BIOL 4400 Endocrinology (2) Examination of the physiology of endocrine glands and the roles of each hormone in the regulation of growth, metabolism, and reproduction. Examples will be selected from humans and domestic species. Prerequisite: BIOL 3431.

BIOL 4403 Environmental Physiology (4: 3 lecture, 1 lab) Physiological responses and adaptations to alterations in natural and man-generated environmental factors such as temperature, light cycles, pressure, water, ions, radiation, vibration, chemicals, microorganisms, and exercise. Prerequisite: BIOL 2402 or BIOL 3431. An additional fee is associated with this course.

BIOL 4411 Plant Physiology (4: 2 lecture, 2 lab) Life processes occurring in plants, the factors affecting these processes, their measurement, and the significance of these processes to the growth of the plant. Prerequisites: BIOL 1111 or AGRI 1300; and CHEM 1104 or CHEM 1131. An additional fee is associated with this course.

BIOL 4511 Cytogenetics (4: 2 lecture, 2 lab) Examination of cellular and molecular mechanisms in cell division and their role in evolution and human health. Laboratory exercises include techniques for experimentally manipulating chromosomes and use of computer and video techniques. Prerequisites: BIOL 2512; and CHEM 1104 or CHEM 1131. An additional fee is associated with this course.

BIOL 4514 Molecular Biology (3) This course emphasizes how biological molecules interact to express cellular phenotypes. Transcriptional and translational controls of gene expression and the latest biotechnological advances are discussed. Prerequisite: BIOL 2511 and CHEM 1132.

BIOL 4515 Molecular Technology Laboratory (2) This course emphasizes the proper use of laboratory equipment, molecular techniques, experimental design, and data analysis. Questions and experiments encountered in molecular biology are addressed. Prerequisite: BIOL 4514 or concurrent enrollment and CHEM 1132. An additional fee is associated with this course.

BIOL 4516 Hematology/Virology (3) The study of blood and viruses. Topics include hematopoiesis, coagulation, viral replication, host responses to viruses, and normal and diseased host responses. Prerequisites: BIOL 2511 and BIOL 2512.

BIOL 4517 Serology Laboratory (1) A combined immunology, hematology, and virology laboratory emphasizing cellular components and identification and differentiation by technological methodologies. Corequisite: BIOL 3413 or BIOL 4516. An additional fee is assessed for this course.

BIOL 4709 Plant Ecology (4: 2 lecture, 2 lab) Concepts and methods pertaining to the collection and analysis of ecological data. Fundamental principles of interactions between plants and their environment will be addressed. Prerequisites: BIOL 1111; BIOL 2020; BIOL 3711 or equivalent; or instructor's consent.

BIOL 4711 Animal Ecology (4: 2 lecture, 2 lab) Ecological principles and concepts pertaining to populations, communities, and ecosystems with special emphasis on animals. Both field work with local examples and laboratory work are part of this course. Prerequisites: BIOL 1110 and BIOL 1112 and BIOL 2020. An additional fee is associated with this course.

BIOL 4722 Conservation Biology (3) This is a synthetic course applying the multidisciplinary approaches of ecology, biogeography, evolution, genetics and economics to the global biodiversity crisis. Prerequisites: BIOL 1110, and BIOL 2020 and BIOL 2511.

BIOL 4953 Ecology Field Course (1-6)* Advanced field methods and analysis of the physical, chemical, and ecological aspects of diverse marine ecosystems. On a rotating basis, the field course may focus on marine, northern temperate woods, and alpine systems. *May be repeated for credit as topics vary.* Prerequisite: consent of instructor. *Not available for graduate credit.

Integrative Studies Capstone

ICAP 4222 The Biological Perspective* (3) An examination of current issues from a biological perspective including the impact of biology on history and culture. For biology majors. Prerequisite: 22 semester hours of biology. *Not available for graduate credit.

Earth Science

EARTH SCIENCE

Major, Bachelor of Arts Degree
(42-386)

The graduate with a Bachelor of Arts degree in Earth Science will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information)
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within an earth science framework and be receptive to new ideas and concepts (higher-order thinking).
- Use the language and concepts of earth science to communicate effectively in oral and written form, to follow instructions precisely and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society (valuing).

	Sem. Hours
MAJOR REQUIREMENTS	39
EASC 1004 Intro. to the Sciences: Geology	4
EASC 3010 Environmental Geology	3
EASC 3110 Structural Geology	4
EASC 2200 Historical Geology	4
EASC 3320 Mineralogy	4
EASC 3501 Invertebrate Paleontology	4
Elective from the following	3
GEOG 4210 Remote Sensing and Image Inter.	3
GEOG 4220 Geographic Info. Systems I	3
*AGRI 2330 Intro. to Soil Science	3
Electives in Earth Science.	13
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, EASC 1004 fulfills 4 s.h. of Div. II A; the Modern Language Requirement fulfills 3 s.h. of Div. II C	41
MODERN LANGUAGE REQUIREMENT	3-9
Refer to Bachelor's Degree Requirements section for fulfillment options.	
FREE ELECTIVES	31-37
MINIMUM TOTAL	120

*Course has prerequisite(s) not listed in the program.

EARTH SCIENCE

Major, Bachelor of Science in Education Degree

(Certification to teach Earth Science in grades 9-12.
(41-280)

The graduate with a Bachelor of Science in Education degree in Earth Science will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information and higher-order thinking).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically within an Earth Science framework and be receptive to new ideas and concepts (higher-order thinking).
- Use the language and concepts of Earth Science to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (valuing).
- Manage a secondary education program in Earth Science that has a laboratory emphasis, with confidence, enthusiasm, efficiency, and safety.

	Sem. Hours
MAJOR REQUIREMENTS	60
EASC 1004 Intro. to the Sciences: Geology	4
EASC 2200 Historical Geology	4
EASC 3010 Environmental Geology	3

EASC 3112 Astronomy	3
EASC 3114 Meteorology	3
EASC 3115 Oceanography	3
EASC 3320 Mineralogy	4
EASC 3501 Invertebrate Paleontology	4
EASC 4050 Science Teaching Methods	3
BIOL 1112 Animal Biology	4
BIOL 4102 Evolution	3
CHEM 1131 General Chemistry I	5
PHYS 1101 College Physics I, 4 or	
PHYS 1104 Intro. to the Sciences: Physics, 4 or	
PHYS 2121 University Physics I, 5	4-5
CTE 2000 Technology & Society	3
Electives (selected from courses listed below. Hours of electives taken must bring the total in the major to 60 hours	9-10
*CHEM 1132 General Chemistry II.	5
CHEM 1604 Elem. Organic & Biochemistry	4
CHEM 3111 Intern. Inorganic Chemistry	4
CHEM 4910 Research in Chemistry	1-2
*BIOL 1111 Plant Biology	4
BIOL 2511 Genetics	4
BIOL 2512 Cell Biology	3
BIOL 3712 Field Natural History	4
EASC 3110 Structural Geology	4
EASC 3111 Geomorphology	3
EASC 2100 Engineering Geology, 4 or	
EASC 3400 Groundwater Geology, 3	3-4
EASC 4010 Special Problems in Geology	1-2
EASC 4420 Sedimentary Petrology & Stratigraphy	5
*PHYS 1102 College Physics II, 4 or	
*PHYS 2122 University Physics II, 5	4-5
PHYS 3511 Modern Physics I	3
PHYS 3611 Optics	3
PHYS 4312 Electricity & Magnetism	3
PHYS 3080 Adv. Physics Laboratory.	1-2

UNIFIED SCIENCE CERTIFICATION - The starred (*) courses above must be taken as part of the elective credits for Unified Science certification in Earth Science - certification to teach any of the beginning sciences (i.e., Chemistry I, Physics I, etc.) and all levels of Earth Science, grades 9-12.

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, EASC 1004 fulfills 4 s.h. of Div. II A; two courses in biology are allowed to fulfill 3 s.h. of Div. II A; CTE 2000 fulfills 2 s.h. of Div. II A; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B	36
HIST 1350 Div. II B or	
HIST 1351 Div. II B (required)	3
POLS 1510 Div. II B (required)	3
PSY 4230 Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110) EASC 4080 (3 s.h.) fulfills 2 s.h. of Special Methods in major field and 1 s.h. of Secondary Field Experience II in major field

MINIMUM TOTAL	124
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EARTH SCIENCE

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(477)

	Sem. Hours
MINOR REQUIREMENTS	20
EASC 1004 Intro. to the Science: Geology	4
EASC 2200 Historical Geology	4
Electives in earth science	12

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, EASC 1004 fulfills 4 s.h. of Div. II A

GEOLOGY

Major, Bachelor of Science Degree
(43-388)

The graduate with a Major Bachelor of Science degree in Geology will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information).
- Use various field and laboratory techniques and/or instruments with understanding, accuracy, precision and safety (technology).
- Think logically and apply knowledge within a geological framework to develop maps and cross-sections of the Earth. Be receptive to new ideas and concepts (higher-order thinking).
- Use the language and concepts of geology to communicate effectively in oral and written form, to follow detailed instructions and to function in independent and collaborative settings (communicating and interacting).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society (valuing).

Sem. Hours

MAJOR REQUIREMENTS68-75

EASC 1004	Intro. to the Sciences: Geology	4
EASC 2200	Historical Geology	4
EASC 3110	Structural Geology	4
EASC 3320	Mineralogy	4
EASC 4325	Petrology	4
EASC 4420	Sedimentary Petrology & Stratigraphy	5
GEOG 4220	Geographic Information Systems I	3
CHEM 1131	General Chemistry I	5
CHEM 1132	General Chemistry II	5
	Summer field course at an approved university	6
	Elect three courses from the following	9-11
EASC 2100	Engineering Geology	4
EASC 3010	Environmental Geology	3
EASC 3111	Geomorphology	3
EASC 3213	Quaternary & Glacial Geology	3
EASC 3400	Groundwater Geology	3
EASC 3501	Invertebrate Paleontology	4
EASC 4320	Geochemistry	3
	Electives from the following choices	8-10
PHYS 1101	College Physics I, 4 and	
PHYS 1102	College Physics II, 4	8
	or	
PHYS 2121	University Physics I, 5	
PHYS 2122	University Physics II, 5	10
	Electives from the following choices	7-10

Choice 1

recommended for those students planning to attend graduate school:

MATH 1151	Calc. & Analytical Geometry I	5
MATH 1152	Calc. & Analytical Geometry II	5

Choice 2

	Required courses	4-5
MATH 1111	College Algebra	3
MATH 1112	College Trigonometry	2

or

MATH 1150	Pre-calculus Mathematics	4
	One course from the following	3
MATH 1131	Applied Calculus	3
MATH 1152	Calc. & Analytical Geometry I	5
PSY 4520	Statistics for Behavioral Sciences	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH electives may be allowed to fulfill 3 s.h. of Div. I C; EASC 1004 fulfills 4 s.h. of Div. II A; two chemistry courses are allowed to fulfill 3 s.h. of Div. II A **38**

FREE ELECTIVES7-14

MINIMUM TOTAL120

EASC 1004 Introduction to the Sciences: Geology (4: 4 lecture, 0 lab)

Fundamental principles of geology. Minerals, rocks, plate tectonics, volcanoes, earthquakes, fossils & evolution of life on Earth, landscape formation by streams, glaciers, and underground water. Laboratory included. An additional fee is associated with this course.

EASC 2100 Engineering Geology (4) The study of physical geology as applied in engineering practice. Emphasis is on surficial geology and soils, employing both field and laboratory investigation methods. Topics include refraction, seismic and electrical resistivity surveys, hydrogeology, waste disposal, slope stability, engineering properties of soil and rock, mapping, site characterization, and report writing. Prerequisite: EASC 1004 or equivalent or consent of instructor. An additional fee is associated with this course.

EASC 2200 Historical Geology (4) The history of the earth will be studied in light of shifting continents, advances and retreats of seas, periods of mountain building and the evolution of life through the great expanse of geologic time. Laboratory will include local and regional field trips. Prerequisite: EASC 1004. An additional fee is associated with this course.

EASC 3010 Environmental Geology (3) The relationships between humans and their geological surroundings with an emphasis on environmental problems. The main topics are mineral and energy resources, population, earthquake and volcanic hazards, medical problems related to the environment, floods, and coastal processes.

EASC 3110 Structural Geology (4) Structures of the Earth on maps, cross-sections, and aerial photographs and in field exercises. Folding and faulting are emphasized. Also discussed are plate tectonic mechanisms that are responsible for Earth structures. Prerequisite: EASC 1004. An additional fee is associated with this course.

EASC 3111 Geomorphology (3) The processes which shape the Earth's surface and form surficial deposits. The interaction of people with their environment is emphasized. Topics include soil formation, engineering properties of soil and rock, surface water, ground water, and environmental planning. Prerequisite: EASC 1004 or EASC 3010.

EASC 3112 Astronomy (3) The fundamental principles and theories pertaining to planetary astronomy, stellar evolution, and origin of the galaxies. Observational techniques are discussed and nighttime viewing sessions are held using departmental telescopes.

EASC 3114 Meteorology (3) Principles and theories of weather, climate, and other atmospheric phenomena. Included is the study of energy exchanges, winds, cloud types, precipitation forms, severe weather, and the generation and movement of tornadoes and other cyclonic storms.

EASC 3115 Oceanography (3) Beginning course intended for students with a limited science background. Relationship of continents and ocean basins, sea floor spreading, waves, tides, currents, circulation of the atmosphere and ocean, marine biology and geology, and global environmental implications.

EASC 3213 Quaternary and Glacial Geology (3) Glacier formation and movement, glacial erosion and deposition, changes in sea level and in river channels, climate change and the causes of the ice ages, and changes in northern hemisphere animal and plant populations during the past two million years. Prerequisite: EASC 1004.

EASC 3320 Mineralogy (4: 4 lecture, 0 lab) An introduction to crystallography and a systematic study of the mineral groups including the native elements, sulfides, sulfates, oxides, halides, carbonates, and silicates. Laboratory work stresses identification by physical and chemical properties. Prerequisite: EASC 1004. An additional fee is associated with this course.

EASC 3400 Groundwater Geology (3) Principles of how fluids move within the crust of the Earth. Groundwater concepts are reviewed and applied to modern day resource and conservation problems. Prerequisites: EASC 1004, PHYS 1101 and MATH 1111.

EASC 3501 Invertebrate Paleontology (4) Principles and methods used in collecting, identifying, and utilizing fossils to determine the distribution and environment of ancient lands and seas. Further, fossils will be studied as tools of geologic time determination. Laboratory will include local and regional field trips. Prerequisite: EASC 2200 or consent of instructor. An additional fee is associated with this course.

EASC 4010 Special Problems in Geology (1-3) Individual work under supervision of a staff member. Problems may be undertaken in any area of geology. *May be repeated for a maximum of 9 semester hours.* Prerequisite: adequate preparation in that field and consent.

Mathematics and Computer Science

Department of Mathematics and Computer Science Statement of Policy

A course with a grade lower than a "C" will not be allowed to fulfill a major or minor requirement in any program offered by the Department of Mathematics and Computer Science.

A student may enroll in a course offered by the Department of Mathematics and Computer Science only if a grade of at least "C" is earned in each of the course's prerequisites taken.

Mathematics

ACTUARIAL SCIENCE AND MATHEMATICS

Major, Bachelor of Science Degree
(43-475)

A graduate with a Bachelor of Science degree in Actuarial Science and Mathematics will use the knowledge and skills obtained in the program to:

- Integrate and apply knowledge in the areas of mathematics, statistics, finance, and economics.
- Develop an aptitude for problem solving and apply mathematical, statistical, and financial models in the actuarial area.
- Develop critical thinking skills and the ability to study independently.
- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Think logically, develop algorithms, implement the algorithms in an appropriate computer language, and solve problems with the algorithms.
- Value mathematics and actuarial science for their diverse and related contributions to mathematically based disciplines.
- Achieve a score of at least 3 on the Society of Actuaries Course P exam and prepare for Course FM and part of Courses MFE and MLC and Course C.
- Establish a career in actuarial science, mathematics, or related fields and prepare for entry-level positions in business, industry, government, or public education.
- Prepare for graduate study in mathematics, actuarial science, or related fields.

NOTE: Candidates for this degree must: (1) achieve a score of 3 or above in Course P of the Actuarial Examination Series and (2) possess a 3.00 grade-point average overall and in the major.

Sem. Hours

MAJOR REQUIREMENTS 62-63

MATH	1151	Calculus & Analytic Geometry I	5
MATH	1152	Calculus & Analytic Geometry II	5
MATH	2153	Calculus & Analytic Geometry III	3
MATH	3321	Applied Statistics	3
MATH	3311	Introduction to Mathematical Statistics	3
MATH	4312	Probability Models	3
MATH	2410	Discrete Mathematics	3
MATH	4501	Actuarial Exam Review Problem Set I	1
MATH	4510	Mathematics of Finance	3
MATH	4511	Actuarial Exam Review Problem Set II	1
MATH	4520	Life Contingencies	3
MATH	4530	Actuarial Modeling	3
MATH	3710	Linear Algebra	3
CS	1100	Computer Programming I	3
CS	2800	Interactive Systems Design	3
ECON	3010	Intermediate Macroeconomics	3
FIN	3861	Financial Management I	3
FIN	4803	Principles of Insurance	3
FIN	4817	Managing Fin. Derivatives	3

Electives from the following	5-6
MATH 3151 Differential Equations	3
MATH 3160 Advanced Applied Calculus	3
MATH 3720 Algebraic Structures I	2
CS 4420 Sys. Simulation & Modeling	3
ECON 3030 Intermediate Microeconomics	3
FIN 3850 Principles of Finance	3
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1151 is allowed to fulfill 3 s.h. of Div. I C	45
ECON 1010 Div. II B (required)	3
ICAP 4245 Div. IV B (required)	3
FREE ELECTIVES	12-13
MINIMUM TOTAL	120

MATHEMATICS

Major, Bachelor of Arts Degree
(42-453)

A graduate with a Bachelor of Arts degree in Mathematics will use the knowledge and skills obtained in the program to:

- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Apply a variety of mathematical models in the solution of problems and applications.
- Think logically, develop algorithms, implement the algorithms in a computer language, and solve problems with the algorithms.
- Value mathematics and computer science for their diverse and related contributions to mathematically based disciplines.
- Communicate his/her mathematical thinking coherently, analyze and evaluate the mathematical thinking of others, and use the language of mathematics to express mathematical ideas precisely.
- Use representations to model and interpret physical, social, and mathematical phenomena.
- Understand how mathematical ideas interconnect and build on one another to produce a coherent whole and apply mathematics in contexts outside of mathematics.
- Establish a career in a mathematical science and prepare for entry-level positions in business, industry, government, or education.
- Prepare for graduate study in mathematics or a related field.

MAJOR REQUIREMENTS	39
MATH 1151 Calculus & Analytic Geometry I	5
MATH 1152 Calculus & Analytic Geometry II	5
MATH 2153 Calculus & Analytic Geometry III	3
MATH 2410 Discrete Mathematics	3
MATH 3151 Differential Equations	3
MATH 3311 Intro. Mathematical Statistics	3
MATH 3710 Linear Algebra	3
MATH 3720 Algebraic Structures I	2
MATH 4180 Advanced Calculus	3
CS 1100 Computer Programming I	3
Electives from the following	6
MATH 2221 Foundations of Geometry	3
MATH 3221 College Geometry	3
MATH 4211 Topology I	3
MATH 4312 Probability Models	3
MATH 4450 Introduction to Graph Theory	3
MATH 4510 Mathematics of Finance	3
MATH 4520 Life Contingencies	3
MATH 4710 Algebraic Structures II	2
MATH 4711 Introduction to Modern Algebra I	3
MATH 4741 Intro. to Theory of Numbers	3
MATH 4910 Special Problems Mathematics	1-3
MATH 4912 Internship in Mathematical Sciences	3-8
CS 1110 Computer Programming II	3
CS 2800 Interactive Systems Design	3

CS 3310 Introduction to Combinatorics	3
CS 4310 Theory of Computation	3
CS 4400 Numerical Analysis I	3
CS 4420 System Simulation and Modeling	3
GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1151 is allowed to fulfill 3 s.h. of Div. I C; the Modern Language Requirement fulfills 3 s.h. of Div. II C	42
ICAP 4233 Div. IV B (required)	3
MODERN LANGUAGE REQUIREMENT	3-9
Refer to Bachelor's Degree Requirements section for fulfillment options	
FREE ELECTIVES	30-36
MINIMUM TOTAL	120

MATHEMATICS

Major, Bachelor of Science Degree
(43-454)

A graduate with a Bachelor of Science degree in Mathematics will use the knowledge and skills obtained in the program to:

- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Apply a variety of mathematical models in the solution of problems and applications.
- Think logically, develop algorithms, implement the algorithms in a computer language, and solve problems with the algorithms.
- Value mathematics and computer science for their diverse and related contributions to mathematically based disciplines.
- Communicate his/her mathematical thinking coherently, analyze and evaluate the mathematical thinking of others, and use the language of mathematics to express mathematical ideas precisely.
- Use representations to model and interpret physical, social, and mathematical phenomena.
- Understand how mathematical ideas interconnect and build on one another to produce a coherent whole and apply mathematics in contexts outside of mathematics.
- Establish a career in a mathematical science and prepare for entry-level positions in business, industry, government, or education.
- Prepare for graduate study in mathematics or a related field.

MAJOR REQUIREMENTS	44
MATH 1151 Calculus & Analytic Geometry I	5
MATH 1152 Calculus & Analytic Geometry II	5
MATH 2153 Calculus & Analytic Geometry III	3
MATH 2410 Discrete Mathematics	3
MATH 3151 Differential Equations	3
MATH 3311 Intro. Mathematical Statistics	3
MATH 3710 Linear Algebra	3
MATH 3720 Algebraic Structures I	2
MATH 4180 Advanced Calculus	3
MATH 4710 Algebraic Structures II	2
CS 1100 Computer Programming I	3
Electives from the following	9
MATH 2221 Foundations of Geometry	3
MATH 3221 College Geometry	3
MATH 4211 Topology I	3
MATH 4312 Probability Models	3
MATH 4450 Introduction to Graph Theory	3
MATH 4510 Mathematics of Finance	3
MATH 4520 Life Contingencies	3
MATH 4711 Introduction to Modern Algebra I	3
MATH 4741 Intro. to Theory of Numbers	3
MATH 4910 Special Problems Mathematics	1-3
MATH 4912 Internship in Mathematical Sciences	3-8
CS 1110 Computer Programming II	3
CS 2800 Interactive Systems Design	3
CS 3310 Introduction to Combinatorics	3

CS 4310	Theory of Computation	3
CS 4400	Numerical Analysis I	3
CS 4420	System Simulation and Modeling	3
GENERAL EDUCATION REQUIREMENTS (page 41) In the major,		
MATH 1151	is allowed to fulfill 3 s.h. of Div. I C	45
ICAP 4233	Div. IV B (required)	3
FREE ELECTIVES		31
MINIMUM TOTAL		120

MATHEMATICS

Major, Bachelor of Science in Education Degree

Certification to teach mathematics in grades 9-12: (41-459)

A graduate with a Bachelor of Science in Education degree in Mathematics will use the knowledge and skills obtained in the program to:

- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Apply a variety of mathematical models in the solution of problems and applications.
- Think logically, develop algorithms, implement the algorithms in an appropriate computer language, and solve problems with the algorithms.
- Value mathematics and computer science for their diverse and related contributions to mathematically based disciplines.
- Communicate his/her mathematical thinking coherently, analyze, and evaluate the mathematical thinking of others, and use the language of mathematics to express mathematical ideas precisely.
- Use representations to model and interpret physical, social, and mathematical phenomena.
- Understand how mathematical ideas interconnect and build on one another to produce a coherent whole and apply mathematics in contexts outside of mathematics.
- Understand the appropriate use of technology as tools for representing ideas, investigating patterns, testing conjectures, and representing data.
- Teach mathematics to a diverse population of 9 - 12 learners by applying relevant learning theories, using a variety of teaching strategies, and incorporating materials, technology, and resources.
- Prepare for graduate study in mathematics or mathematics education.

Sem. Hours

MAJOR REQUIREMENTS 38.5

MATH 1151	Calculus & Analytic Geometry I	5
MATH 1152	Calculus & Analytic Geometry II	5
MATH 1850	Orientation Seminar	0.5
MATH 2221	Foundations of Geometry	3
MATH 2410	Discrete Mathematics	3
MATH 3710	Linear Algebra	3
MATH 3720	Algebraic Structures I	2
MATH 3850	Strategies in Teaching Secondary Mathematics	3
MATH 4710	Algebraic Structures II	2
MATH 4851	Prob. & Stat. for Mid/HS Math	3
MATH 4861	Adv. Perspectives on HS Math	3
CS 1100	Computer Programming I	3
ICAP 4233	The Scientific, Historical, and Sociological Impact of Mathematics	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the major, MATH 1151 is allowed to fulfill 3 s.h. of Div. I C; in the professional education requirements, ICAP 4468 fulfills 3 s.h. of Div. IV B 42

Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

HIST 1350	Div. II B or	
HIST 1351	Div. II B (required)	3
POLS 1510	Div. II B (required)	3
PSY 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute PSY 4230 to fulfill 3 s.h. in Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS (page 110)	28
FREE ELECTIVES	11.5
MINIMUM TOTAL	120

MATHEMATICS

Minor, Bachelor of Science in Education Degree

Certification to teach mathematics in grades 5-9 with a middle school-junior high major.

Elementary education majors 1-6 may use this as an area of concentration. (480)

A graduate with a Mathematics Minor for a Bachelor of Science in Education degree will use the knowledge and skills obtained in the program to:

- Teach mathematics to a diverse population of 5-9 learners by applying relevant learning theories, using a variety of teaching strategies, and incorporating materials, technology, and resources.
- Understand the appropriate uses of technology as tools for representing mathematical ideas, investigating patterns, testing conjectures, and representing data.
- Communicate his/her mathematical thinking coherently, analyze and evaluate the mathematical thinking of others, and use the language of mathematics to express mathematical ideas precisely.
- Use representations to model and interpret physical, social, and mathematical phenomena.
- Understand how mathematical ideas interconnect and build on one another to produce a coherent whole and apply mathematics in contexts outside of mathematics.

Sem. Hours

MINOR REQUIREMENTS 25

*MATH 1800	Introduction to Teaching Elementary & Middle School Mathematics	2
MATH 2802	Concepts & Methods in Middle School Mathematics	3
MATH 3840	Strategies in Teaching Middle School Mathematics	3
MATH 4821	Elements of Algebra	3
MATH 4822	Elements of Geometry	3
MATH 4823	Introduction to Infinite Processes	5
MATH 4851	Prob & Stat for Mid/HS Math	3
MATH 4871	Algebraic Concepts for Teachers	3

*Course has prerequisite(s) not listed in the program.

MATHEMATICS

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. Recommended for majors in business, economics, physical science, social sciences and related fields. (482)

Sem. Hours

MINOR REQUIREMENTS 24

MATH 1151	Calculus & Analytic Geometry I	5
MATH 1152	Calculus & Analytic Geometry II	5
MATH 2410	Discrete Mathematics	3
MATH 3710	Linear Algebra	3
MATH 3720	Algebraic Structures I	2
Electives from the following or as approved by department . . . 6		
MATH 2153	Calc. & Analytic Geometry III	3
MATH 3311	Intro. to Math. Statistics	3
CS 1100	Computer Programming I	3

GENERAL EDUCATION REQUIREMENTS (page 41) In the minor, MATH 1151 is allowed to fulfill 3 s.h. of Div. I C.

Analysis

MATH 1101 Intermediate Algebra (3) The properties of real numbers, polynomials, rational exponents, radicals, functions, and systems of equations. Prerequisite: high school credit in basic algebra or AE 1030. Placement according to University policy applies.

MATH 1111 College Algebra (3) Continuation of algebra including such topics as linear and quadratic equations, linear and quadratic inequalities, second degree relations and functions, systems of equations and inequalities, and exponential and logarithmic functions. Prerequisite: high school program including advanced algebra or MATH 1101.

MATH 1112 College Trigonometry (2) Elementary trigonometric functions, identities, trigonometric equations, multiple angle formulas, and general triangle solutions. Prerequisite: a high school program including advanced algebra and one unit of geometry; or MATH 1111 or concurrently.

MATH 1131 Applied Calculus (3) The fundamental skills and concepts of calculus with an emphasis on applications in engineering, science and technology. Prerequisite: a high school program including one unit of advanced algebra and one unit of geometry, or MATH 1111.

MATH 1150 Pre-Calculus Mathematics (4) Pre-calculus concepts in algebra and trigonometry for the student with an above average preparation in high school mathematics. Prerequisite: a high school program including advanced algebra, one unit of geometry, and one-half unit of trigonometry. Placement according to University policy applies.

MATH 1151 Calculus and Analytic Geometry I (5) A combined course in calculus and analytic geometry. Prerequisite: a high school program including advanced algebra, one unit of geometry, and one-half unit of trigonometry; or MATH 1112 or MATH 1150.

MATH 1152 Calculus and Analytic Geometry II (5) A continuation of MATH 1151. Prerequisite: MATH 1151.

MATH 2153 Calculus and Analytic Geometry III (3) A continuation of MATH 1152. Prerequisite: MATH 1152.

MATH 3151 Differential Equations (3) Presents techniques of solving ordinary differential equations with applications to physics and engineering. Prerequisite: MATH 2153.

MATH 3160 Advanced Applied Calculus (3) Differential and integral calculus of functions of several variables, vector differential and integral calculus, and Fourier series. Prerequisite: MATH 3710 or consent of Chairperson and MATH 2153.

MATH 4180 Advanced Calculus (3) A rigorous approach to the fundamental concepts of differential calculus, integral calculus, and infinite series. Prerequisites: MATH 2153 and MATH 3710.

Geometry

MATH 2221 Foundations of Geometry (3) An emphasis on the techniques of proof and constructions in geometry, the properties of a set of postulates, a brief review of Euclidean geometry, and the study of other geometries. Prerequisite: One unit of high school geometry.

MATH 3221 College Geometry (3) Modern Euclidean geometry, geometric transformations, advanced Euclidean constructions, constructible numbers, extension fields and the three impossible problems of antiquity. Prerequisite: MATH 2221.

MATH 4211 Topology I (3) Introduces the concept of point set topology. Includes the study of the real number line, the real plane, metric spaces, topological spaces, continuity, connectedness, compactness, product spaces, and separation properties. Prerequisite: MATH 3720.

Statistics

MATH 1300 Basic Statistics (3) A study of elementary statistics. Topics include descriptive statistics, elementary probability theory, inferential statistics, and tests of statistical hypotheses. Prerequisite: high school algebra or MATH 1101.

MATH 3311 Introduction to Mathematical Statistics (3) Basic concepts of probability and statistics. Prerequisite: MATH 1151. Corequisite: MATH 2410 or CS 1400.

MATH 3321 Applied Statistics (3) Applied statistical models and methods with an emphasis on regression analysis, time series analysis and forecasting. Prerequisites: MATH 1152 and MATH 3311.

MATH 4312 Probability Models (3) An in-depth study of probability theory and stochastic processes with their applications in fields such as computer science, management science, social science, and operations research. Prerequisites: MATH 2153 and MATH 3311.

Discrete Mathematics

MATH 2410 Discrete Mathematics (3) Logic and argumentation; mathematical proof techniques; sets, relations and mappings; counting and the natural numbers; modular arithmetic; permutations, combinations, and discrete probabilities; etc. Prerequisite: MATH 1150 or MATH 1151 or concurrent enrollment in either.

MATH 4400 Combinatorics (3) Principles of enumeration, integer sequences, advanced binomial coefficients, inclusion-exclusion principle, recurrence relations and generating functions, and special counting sequences. Prerequisite: MATH 2410 or CS 2400.

MATH 4450 Introduction to Graph Theory (3) Basic graph theory concepts: connectivity, trees, matchings, graph coloring, Eulerian and Hamiltonian graphs, distance, planarity, and network flows. Prerequisite: MATH 2410 or CS 2400.

Actuarial Science

MATH 4501 Actuarial Exam Review-Problem Set I (1) Problem solving strategies from probability that are uniquely applied to actuarial science. Corequisite: MATH 4312.

MATH 4510 Mathematics of Finance (3) The basic measures of interest, annuities, discounted cash flow analysis, and their applications. Prerequisite: MATH 1152.

MATH 4511 Actuarial Exam Review-Problem Set II (1) Problems from financial mathematics including modern financial analysis. Prerequisite: MATH 4510.

MATH 4520 Life Contingencies (3) Theory and applications of contingency mathematics in the areas of life and health insurance, annuities and pensions. Prerequisites: MATH 4312 and MATH 4510.

MATH 4530 Actuarial Modeling (3) Actuarial concepts, principles, and techniques that are used in insurance modeling including loss distributions, aggregate loss models, credibility theory, and simulations. Prerequisites: MATH 3321 and MATH 4312.

General Education

MATH 1620 Contemporary Mathematics (3) Mathematical concepts, with historical perspectives, from various branches of mathematics including an introduction to statistics, logic, combinatorics, linear programming, number theory, geometry and probability. Prerequisite: a high school program including advanced algebra or MATH 1101. Placement according to University policy applies.

Modern Algebra

MATH 3710 Linear Algebra (3) An introduction to matrices, determinants, vector spaces and linear transformations. Prerequisite: MATH 2410 or CS 2400.

MATH 3720 Algebraic Structures I (2) An introduction to groups, rings and fields rooted in Euclidean geometry and polynomial algebra. Prerequisite: MATH 2410 or CS 2400.

MATH 4710 Algebraic Structures II (2) A study of groups, rings and fields with an emphasis in the study of roots of polynomials. Prerequisite: MATH 3720.

MATH 4711 Introduction to Modern Algebra I (3) A rigorous introduction to the algebraic structures of groups, rings and fields. Prerequisites: MATH 3710 and MATH 4710.

MATH 4741 Introduction to the Theory of Numbers (3) Congruences, quadratic residues, the reciprocity theorem, and Diophantine equations. Prerequisite: MATH 3720.

Mathematics Education

MATH 1800 Introduction to Teaching Elementary and Middle School Mathematics (2) A six-week course focusing on the concepts and methods of teaching mathematics in both elementary and middle school. Prerequisite: MATH 1620.

MATH 1850 Orientation Seminar (0.5) Five 90-minute seminars will acquaint students majoring in secondary mathematics education with courses, portfolio assessment, interview process, standardized tests and professional organizations.

MATH 2801 Concepts and Methods in Elementary School Mathematics (3) A nine-week course focusing on the concepts and methods of teaching mathematics in grades K-5. Corequisite: MATH 1800.

MATH 2802 Concepts and Methods in Middle School Mathematics (3)

A nine-week course focusing on the concepts and methods of teaching mathematics in grades 5-9. Corequisite: MATH 1800.

MATH 3812 Mathematics in the Integrated Middle School Curriculum

(3) An emphasis on integrating mathematics with other subject areas at the middle school level. A focus on relationships between mathematics and other subject areas together with investigation of relevant applications of mathematics outside the classroom. Prerequisites: MATH 1620 and completion of 9 semester hours in minor teaching field.

MATH 3840 Strategies in Teaching Middle School Mathematics (3) An investigation of techniques, problems, and issues involved in the teaching of middle school mathematics. Involves both lecture and field experience. Not applicable to major requirements for secondary majors. Prerequisite: MATH 2802.

MATH 3850 Strategies in Teaching Secondary Mathematics (3) An investigation of instructional strategies, problems and issues relevant to the teaching of secondary school mathematics. Prerequisites: MATH 1152, MATH 2221 and MATH 2410.

MATH 3890 Concepts and Methods of Teaching for Special Education (3)

A survey of concepts and methods for teaching mathematics grades K-12 with particular attention to needs of special education inclusion students. Prerequisite: MATH 1620.

MATH 4820 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with MATH 4870 during the Professional Semester. *Not available for graduate credit.

MATH 4821 Elements of Algebra (3) Basic concepts of algebra adapted to the needs of elementary teachers. May be taken for graduate credit by elementary teachers only. Prerequisite: MATH 2802.

MATH 4822 Elements of Geometry (3) Concepts and relationships of geometry adapted to the needs of elementary/middle school teachers. Available for graduate credit to elementary teachers only. Prerequisite: MATH 2802.

MATH 4823 Introduction to Infinite Processes (5) Transition from the concepts of elementary analysis to the infinite processes which form the foundation for the calculus. Open only to elementary and middle school/junior high education majors in the B.S. in Ed. and Master of Science in Education degrees. Prerequisites: MATH 4821 and MATH 4822.

MATH 4851 Probability and Statistics for Middle/High School Mathematics (3) A course focusing on the concepts and methods of teaching probability and statistics in the middle and high school mathematics program. Not available for graduate credit for M.S. Mathematics. Prerequisites: MATH 4821 and MATH 4822 or MATH 1151.

MATH 4861 Advanced Perspectives on High School Mathematics (3) Investigation of high school mathematics from an advanced standpoint. Prerequisites: Math 1151 and Math 3720.

MATH 4870 Methods of Teaching Mathematics* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with MATH 4820 during the Professional Semester.

*Not available for graduate credit.

MATH 4871 Algebraic Concepts for Teachers (3) The properties and language of sets, functions, groups, rings, integral domains, and fields. Recommended for middle school/junior high school teachers. Will not satisfy requirements on undergraduate programs where MATH 3720 is a requisite. Prerequisite: MATH 4821 or equivalent course in college algebra.

MATH 4890 Mathematics for Special Education (2) Individual and small group investigation of concepts and procedures appropriate for instruction of mathematics to all special needs children. Prerequisite: EDSP 2100; and MATH 2801 or MATH 2802 or MATH 3890.

Research and Special Problems

MATH 4910 Special Problems in Mathematics (1-3) Individual reading and research leading to an acceptable paper on some topic not included in the regular offerings of the department. *May be repeated for a maximum of 3 semester hours.* Prerequisite: mathematics major or MATH 3720 or consent.

MATH 4912 Internship in Mathematical Sciences (3-8) Opportunity for students to gain knowledge in areas of mathematical science, both theoretical and applied, that would not normally be included as a part of the department's curriculum. Internship contract must be completed prior to beginning work/learning experience. *May be repeated for a maximum of 16 semester hours.* A maximum of 8 semester hours may be applied to any one degree. Prerequisite: consent of department Internship Committee and if taken for graduate credit, approval of graduate adviser.

Integrative Studies Capstone

ICAP 4233 The Scientific, Historical, and Sociological Impact of Mathematics* (3) Provides an opportunity to experience and understand the importance of mathematics in human development. Prerequisite: 15 semester hours of college mathematics. *Not available for graduate credit.

ICAP 4245 Actuarial Science Capstone Experience* (3) Integration of actuarial science topics and skills with topics from various other disciplines, including actuarial ethics, social roles, and the Code of Professional Conduct. Prerequisite: MATH 4520. *Not available for graduate credit.

Computer Science

COMPUTER SCIENCE

Major, Bachelor of Science Degree
(43-281)

A graduate with a Bachelor of Science degree in Computer Science will use the knowledge and skills obtained in the program to:

- Design, implement and analyze algorithms in appropriate contemporary computer programming languages (e.g. C/C++, Java, Visual Basic).
- Design and implement basic computing devices using theoretical and applied knowledge of digital logic design techniques.
- Design, implement and analyze computer systems using theoretical and applied knowledge of computer architecture and operating systems.
- Develop and maintain system software using theoretical and applied knowledge of compiler, systems programming and assembly programming languages.
- Develop and maintain medium to large scale application software using theoretical and applied knowledge of software engineering, interactive systems design, programming languages and computer graphics.
- Design, implement and analyze computer and communications networks using theoretical and applied knowledge of web programming, networks and mobile computing (e.g. TCP/IP, network programming techniques).
- Design and implement database systems using theoretical and applied knowledge of discrete structures, data structures and relational database systems (e.g. Oracle, SQL, PHP).
- Design and analyze computer graphic systems using theoretical and applied knowledge of computer graphics (e.g. OpenGL) and apply it to practical applications (e.g. game design).
- Address the needs of society with a sense of professionalism.
- Adapt to a dynamic multidisciplinary technological environment through teamwork, ethical concerns, and effective communication.
- Enter a career in computer science related industry or for graduate study in computer science.
- Stay abreast of advancements in the area of computer science.

Sem. Hours

MAJOR REQUIREMENTS 63

CORE		42
CS 1100	Computer Programming I	3
CS 1110	Computer Programming II	3
CS 3100	Programming Languages	3
CS 2200	Intro. to Computer Organization	3
CS 3200	Computer Architecture	3
CS 2300	Data Structures	3
CS 4300	Algorithm Design & Analysis	3
CS 1400	Discrete Structures I	3
CS 2400	Discrete Structures II	3
CS 4500	Operating Systems	3
CS 4600	Database Theory & Applications	3
CS 4900	Compiler	3
CS 4910	Software Engineering	3
MATH 3311	Introduction to Math. Statistics	3
Select Area 1 or 2		21

Area 1 Computer Technology

CS 2100	Web Programming	3
CS 3110	Object-Oriented Programming	3
CS 4800	Networks & Mobile Computing	3
Electives from the following		12
CS 4020	Internship in CS	3
CS 4420	Systems Simulation & Modeling	3
CS 2500	UNIX Systems Programming	3
CS 4700	Artificial Intelligence	3
CS 2800	Interactive Systems Design	3
CS 3800	Computer Graphics	3
MATH 4450	Introduction to Graph Theory	3

Area 2 Computer Science

MATH 1152	Calculus & Analytic Geometry II	5
MATH 3710	Linear Algebra	3
PHYS 1102	College Physics II	4
Electives from the following		9
CS 4020	Internship in CS	3
CS 2100	Web Programming	3
CS 3110	Object-Oriented Programming	3
CS 4400	Numerical Analysis I	3
CS 4420	Systems Simulation & Modeling	3
CS 2500	UNIX Systems Programming	3
CS 4700	Artificial Intelligence	3
CS 2800	Interactive Systems Design	3
CS 3800	Computer Graphics	3
CS 4800	Networks & Mobile Computing	3
MATH 2153	Calculus & Analytic Geometry III	3
MATH 4450	Introduction to Graph Theory	3

GENERAL EDUCATION REQUIREMENTS (page 41)

BIOL 1004 or CHEM 1104 or EASC 1004 is required to fulfill 3 s.h. of Div. II A Part 1.	48
MATH 1151 Div. I C (required)	5
ICAP 4225 Div. IV B (required)	3
Area 1: PHYS 1104 Div. II A (required)	4
Area 2: PHYS 1101 Div. II A (required)	4
MATH 1151 fulfills 3 s.h. of Div I C. In Area 2, PHYS 1101 and PHYS 1102 together fulfill 4 s.h. of Div II A.	

FREE ELECTIVES	9
MINIMUM TOTAL	120

COMPUTER SCIENCE

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (449)

Sem. Hours

MINOR REQUIREMENTS 21

CS 1100	Computer Programming I	3
CS 1110	Computer Programming II	3
CS 2100	Web Programming	3
CS 2300	Data Structures	3
Electives from the following*		9
CS 3100	Programming Languages	3
CS 3110	Object-Oriented Programming	3
CS 2200	Intro. to Computer Organization	3
CS 3200	Computer Architecture	3
CS 1400	Discrete Structures I	3
CS 2500	UNIX Systems Programming	3
CS 4600	Database Theory & Applications	3
CS 4700	Artificial Intelligence	3
CS 2800	Interactive Systems Design	3

*Other elective options: Any valid Computer Science Major's electives, if the prerequisites are satisfied.

Research and Special Problems

CS 4000 Special Problems in Computer Science (1-3) Individual reading and research on some topics not included in the regular offerings of the department. *May be repeated for a maximum of 3 semester hours.* Prerequisite: CS 2300 or consent.

CS 4020 Internship in Computer Science (3-8) Opportunity for students to gain knowledge in areas of computer science, both theoretical and applied, that would not normally be included as part of the department's curriculum. Internship contract must be completed prior to beginning work/learning experience. *May be repeated for a maximum of 16 semester hours.* A maximum of 8 semester hours may be applied to any one degree. Prerequisites: consent of department Internship Committee and if taken for graduate credit, approval of graduate adviser.

Programming Languages

CS 1100 Computer Programming I (3) An introduction to software design methodology using a modern high-level programming language. Topics include problem-solving techniques, high-level control structures and fundamental algorithms. Prerequisite: three units of high school mathematics or MATH 1101.

CS 1110 Computer Programming II (3) A continuation of CS 1100. Topics include advanced software design methodologies. Prerequisite: CS 1100 or consent of instructor.

CS 2100 Web Programming (3) Introduction to client-side Web Programming: HTML, XHTML, cascading style sheets (css), JavaScript, Web graphics, and Web browsers. Prerequisite: CS 1110 or consent of instructor.

CS 3100 Programming Languages (3) An overview of the main features of major programming languages. Various programming languages will be compared in their handling of variables, types, control structures, and input-output. Prerequisite: CS 2300.

CS 3110 Object-Oriented Programming (3) An introduction to object-oriented programming. Topics include objects, classes, inheritance, class extension, interfaces, polymorphism, and object-oriented design. Prerequisite: CS 1110 or consent of instructor.

Architecture

CS 2200 Introduction to Computer Organization (3) Logical structure of digital computers: representation of information, addressing mechanisms, storage and peripheral hardware, combinational and sequential logic design, assembly and system programming. Prerequisite: CS 1110.

CS 3200 Computer Architecture (3) Design alternatives in computer architecture including instruction set architectures, memory subsystem organization, interfacing concepts, interprocessor communication, datapath and control of a processor, and pipelining. Prerequisite: CS 2200.

Algorithms and Data Structures

CS 2300 Data Structures (3) An introduction to data representations and information structures including a variety of non-numerical algorithms and their applications. Linear lists, arrays, trees, multilinked structures and dynamic storage allocation are investigated. Prerequisite: CS 1110 or consent of instructor.

CS 4300 Algorithm Design and Analysis (3) Techniques needed to analyze algorithms. The application of these techniques to topics such as sorting, graph algorithms, fast Fourier transforms, dynamic programming, and NP-completeness. Prerequisite: CS 2300 and MATH 1151.

CS 4310 Theory of Computation (3) Includes finite-state automata, pushdown automata, and Turing machines. The topics of regular expressions, context-free languages, the halting problem, Post's correspondence problem, P, NP, NP-completeness, and some NP-complete problems will be discussed. Prerequisite: CS 2400 or MATH 2410.

Numerical and Symbolic Computation

CS 1400 Discrete Structures I (3) Basic concepts of sets, mathematical induction, principle of inclusion-exclusion, logic, binary relations, relations and functions, sequences and subsequences, and the pigeon-hole principle. Prerequisites: high school mathematics including algebra or MATH 1111.

CS 2400 Discrete Structures II (3) Basic concepts: analysis of algorithms, graph theory, counting and combinatorics, discrete probability, and recurrence relations. Prerequisites: CS 1400 or MATH 2410.

CS 4400 Numerical Analysis I (3) Finite difference interpolation, numerical differentiation and integration, numerical solution of nonlinear equations, numerical solution of ordinary differential equations. Computational techniques stressed and extensive quantity of problems to be solved on a digital computer. Prerequisites: CS 1110 and MATH 1152.

CS 4410 Operations Research (3) Systems and models, including Random Number Process, (Monte Carlo Process) and Queuing Concepts. Combining these concepts into model building techniques. Prerequisites: CS 1110 and MATH 3311, or CIS 2615 and FIN 2801.

CS 4420 System Simulation and Modeling (3) Model construction and simulation applied to problems taken from finance, statistics, sciences, communication networks and computer systems. Application projects using different simulation languages required. Prerequisites: CS 1100 and MATH 3311.

Operating Systems

CS 2500 UNIX Systems Programming (3) Introduction to UNIX systems programming. Topics include: processes and threads, I/O, files and directories, UNIX special files, signals, concurrency, communication, and shell programming. Prerequisite: CS 1110 or consent of instructor.

CS 4500 Operating Systems (3) An introduction to operating systems. Topics include: processes, threads, CPU scheduling, process synchronization, deadlock, memory management, file systems, mass-storage structure, I/O systems, and case studies. Prerequisites: CS 2200 and CS 2300.

Database and Information Retrieval

CS 4600 Database Theory and Applications (3) An introduction to database theory and design, including relational algebra/calculus, normalization of data, and query optimization. Security, integrity, and concurrent operation issues will be presented. Distributed database systems will also be introduced. Significant application-oriented projects using SQL will be required. Prerequisites: (CS 1400 or MATH 2410) and CS 2300.

Artificial Intelligence and Robotics

CS 4700 Artificial Intelligence (3) An introduction to Artificial Intelligence (AI) and AI languages such as LISP and PROLOG. Specific topics will include knowledge representation, predicate calculus, resolution, pruning, heuristic search techniques, probabilistic reasoning, and expert systems. Prerequisites: (CS 1400 or MATH 2410) and CS 2300.

Human-Computer Communication

CS 2800 Interactive Systems Design (3) Concepts and applications in the field of Human Computer Interaction. Topics include human-computer interaction, GUI design and multimedia systems. Application projects using VB required. Prerequisite: CS 1100 or consent of instructor.

CS 3800 Computer Graphics (3) An introduction to computer graphics. Topics include: basic geometric primitives, transformations, clipping, viewing, color models, animation, and rendering. Programming: using OpenGL and appropriate languages. Prerequisites: CS 2300 and MATH 1151.

CS 4800 Networks and Mobile Computing (3) General principles and concepts of computer networks with emphasis on system-level network technologies, protocols, network programming, wireless networking and mobile computing. Prerequisite: CS 2200.

Software Engineering and Professional Issues

CS 4900 Compiler (3) Includes finite-state machines, top-down and bottom-up parsing, and syntax-directed translation. The topics of regular grammars, lexical analysis, LL(k) grammars, LR(k) grammars, syntax-directed translation schemes, and simple transducers will be discussed. Prerequisite: CS 3100

CS 4910 Software Engineering (3) General principles of software development with emphasis on design of software architectures, translation of high-level specification systems, process modeling, software optimization, formal methods and ethical issues. Prerequisite: CS 3100.

Integrative Studies Capstone

ICAP 4225 Computer Science Capstone Experience* (3) Integration of computer science topics from other disciplines, including studies in computer ethics, the social impact of computing, and the psychological issues of computer/human interfaces. Prerequisite: Senior standing in Computer Science. *Not available for graduate credit.

Military Science and Leadership

Department of Military Science and Leadership Statement of Policy

The Army Reserve Officers' Training Corps (ROTC) develops college-educated officers for the active Army and reserve components. It provides young men and women the opportunity to earn commissions as Army officers and at the same time work toward an academic degree.

There are two programs available, a four-year program and a two-year program, both culminating in a United States Army commission.

The **four-year program** is divided into two phases, Basic Military Science and Advanced Military Science. Basic Military Science is normally taken by students in their freshman and sophomore years. It provides instruction in the basic subject areas needed to establish a firm foundation in military skills. This foundation provides for continued professional development in the areas of leadership and management.

Advanced Military Science is normally taken during the junior and senior years. The program develops the student's ability to express himself/herself clearly and accurately. It teaches leadership by both classroom theory and the practical application of directing individuals and small units in the execution of simulated tactical missions. While enrolled in Advanced Military Science, the student is paid a monthly financial allowance by the U.S. Army.

Freshmen and sophomores who are veterans with a minimum of four months active service, or reserve/national guard personnel who have completed basic training in any of the armed services, may be granted advanced ROTC placement, not to exceed two years, at the discretion of the Professor of Military Science and Leadership.

The **two-year program** is offered for students who have completed two years of college but have not completed a basic military science program or served on active duty with any of the armed services. Students attend a basic five-week summer training program at the end of their sophomore year. After successful completion of the basic camp, students will start Advanced Military Science with all the pay and entitlements of the four-year program cadet.

The **U.S. Army Scholarship program** provides an excellent way for young men and women to obtain assistance in financing a college education. All scholarships cover the cost of tuition, books, certain fees and educational supplies, as well as a monthly financial allowance. Additional scholarship information is available from the Department of Military Science and Leadership.

To qualify for a commission as a Second Lieutenant, a student must comply with all terms of his/her contract; successfully complete Basic Military Science or equivalent; successfully complete MS 3310, MS 3320, MS 3330, MS 3340, MS 4410, MS 4420, MS 4430, MS 4440 and MS 4510; complete all University requirements for a bachelor's degree; meet the physical standards of current U.S. Army regulations and agree to accept an Active Army, Army National Guard or Army Reserve duty assignment. Additionally, candidates for a commission must complete at least one course from each of the following Professional Education subject areas: Written Communications, Computer Literacy and Military History. A list of approved courses for each of the Professional Education subject areas may be obtained from the Department of Military Science and Leadership.

MILITARY SCIENCE

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor (201)

Sem. Hours

MINOR REQUIREMENTS		32-34
MS 3310	Adaptive Tactical Leadership	3
MS 3320	Leadership in Changing Environments	3
MS 3330	Intro. to the Army Physical Fitness Program	2
MS 3340	Concepts in Fitness Training Dev.	2
MS 4410	Developing Adaptive Leaders	3
MS 4420	Leadership in a Complex World	3
MS 4430	Mgt. of the Unit Fitness Program	2
MS 4440	The Army Master Fitness Training Program	2
MS 4510	Advanced Summer Camp	3
Elective from the following		3
MS 2500	History of the US Army	3
HIST 4316	The American Military Experience	3
Equivalent Military History Course (chair approval)		3
Electives from the following		6-8
MS 1110	Leadership & Personal Development	2
MS 1120	Introduction to Tactical Leadership	2
MS 2210	Innovative Team Leadership	2
Departmentally approved elective		3
MS 2220	Found. of Tactical Leadership, 2 or	
MS 2510	Basic Summer Camp, 3	2-3
Departmentally approved electives		3-6
Active duty or reserve forces basic training		3

MS 1110 Leadership and Personal Development (2) Introduce military mountaineering, basic first aid and leadership fundamentals. Students learn how life skills such as goal setting, and physical fitness relate to leadership and the Army profession. Only offered Fall semester.

MS 1120 Introduction to Tactical Leadership (2) Introduce land navigation and compass skills. Overviews leadership fundamentals of problem-solving, listening, briefing, and written and oral communication. Explores leadership values, attributes, skills, and actions through hands-on and interactive exercises. Laboratory is required. Only offered Spring semester. Prerequisites: MS 1110 or consent of Department Chair.

MS 2210 Innovative Team Leadership (2: 2 lecture, 0 lab) Teach rappelling, basic survival techniques, and land navigation. Explores creative and innovative tactical leadership. Develops personal motivation and team building in the context of planning, executing, and assessing team exercises. Laboratory is required. Only offered Fall semester. Prerequisite: MS 1120 or equivalent or consent of the Department Chair.

MS 2220 Foundations of Tactical Leadership (2) Continue skills in rappelling, one-rope bridges, and land navigation. Introduces squad tactics; highlights terrain analysis, patrolling, and operation orders; addresses challenges of leading; and continues exploring adaptive leadership. Laboratory is required. Only offered Spring semester. Prerequisite: MS 2210 or equivalent or consent of the Department Chair.

MS 2500 History of the US Army (3) Integrates the basic knowledge of military history into the education of future Army officers. Prerequisite: departmental consent.

MS 3310 Adaptive Tactical Leadership (3: 3 lecture, 0 lab) Concentrate on the principles and techniques of military operations and leadership through study, practice, and evaluation as students are presented with scenarios related to tactical operations. Focuses on development through self-evaluation and feedback. Only offered Fall semester. Prerequisite: MS 2220. Corequisite: MS 3330.

MS 3320 Leadership in Changing Environments (3) Concentrate on the principles, fundamentals, and techniques of leadership at small unit or organization levels with increasingly intense situational leadership challenges to build cadet awareness and skills in leading tactical operations up to platoon level. Only offered Spring semester. Prerequisites: MS 3310 and MS 3330. Corequisite: MS 3340.

MS 3330 Introduction to the Army Physical Fitness Program (2) Basic components of fitness and an overview of the principles of exercise. Only offered Fall semester.

MS 3340 Concepts in Fitness Training Development (2) Development of the unit physical fitness program with an in-depth analysis of the principles of fitness and exercise. Only offered Spring semester. Prerequisite: MS 3330.

MS 4410 Developing Adaptive Leaders* (3: 3 lecture, 0 lab) Develop proficiency in planning, executing, and assessing operations, staff operations, and leading and counseling subordinates. Teaches risk assessment, making ethical decisions, military justice, and personnel processes helping cadets transition to officers. Only offered Fall semester. Prerequisites: MS 3320 and MS 3340. Corequisite: MS 4430. *Not available for graduate credit.

MS 4420 Leadership in a Complex World* (3) Explore leading in the complex situations in the contemporary operating environment (COE). Teaches customs and courtesies, military law, principles of war, and rules of engagement. Discusses non-government organizations, civilians on the battlefield, and host nation support. Only offered Spring semester. Prerequisites: MS 4410 and MS 4430. Corequisite: MS 4440. *Not available for graduate credit.

MS 4430 Management of the Unit Fitness Program* (2) Alternate athletic activities and risk assessment planning. Only offered Fall semester. Prerequisite: MS 3340. *Not available for graduate credit.

MS 4440 The Army Master Fitness Training Program* (2) Administration of the unit fitness program with emphasis on the regulatory requirements governing the unit fitness program. Only offered Spring semester. Prerequisite: MS 4430. *Not available for graduate credit.

MS 4500 Current Military Trends* (3) Enhance knowledge and proficiency in officership through exploration of military trends and scenarios to produce military officers who are better prepared for their first duty assignment. Prerequisite: MS 4420. *Not available for graduate credit.

MS 4510 Advanced Summer Camp* (3) Five weeks of advanced summer camp experience for advanced military science students. Required for completion of military science program and commissioning. Students receive financial assistance. Prerequisite: MS 3320 and departmental consent. *Not available for graduate credit.

School of Technology

SOT 3022 Internship in Technology (1-9) Provides practical application and experience in cooperating industry and business. Students submit written reports. Evaluation by on-job supervisor and internship coordinator. *May be repeated for a maximum of 12 semester hours.* Prerequisites: 20 semester hours of program offerings, minimum undergraduate GPA 2.00 and permission of department chair.

SOT 4000 Special Projects in Technology (1-3) Investigation of contemporary problems and issues in manufacturing and construction by selected individuals or groups. *May be repeated for a maximum of 6 semester hours.*

AUTOMOTIVE TECHNOLOGY MANAGEMENT

Major, Bachelor of Science Degree
(43-838)

The graduate with a Bachelor of Science degree in Automotive and Power Technology will use the knowledge and skills obtained in the program to:

- Research, prepare and present both oral and written reports on technical or management subjects related to his/her area of specialization.
- Identify, analyze and solve technical or management problems related to his/her field of specialization.
- Function effectively as a participating member of a work group to accomplish a particular goal.
- Demonstrate desirable work habits and professional and conscientious attitudes in his/her particular areas of instruction through participation in professional activities and organizations, and leadership activities both in and out of the classroom.
- Demonstrate a mastery of skill beyond the entry level related to one or more areas of technical, management or marketing specialities in the major area of study.
- Demonstrate technical and general knowledge required in occupational work areas related to the major field of study.

Sem. Hours

MAJOR REQUIREMENTS 77

Students must receive a grade of C or higher in all required courses with the PR&T prefix in order for the course to count toward the major.

Technical Courses:

PR&T	1010	Power Mechanics	3
PR&T	2110	Engine Theory & Maintenance	4
PR&T	3150	Diesel Technology	3
PR&T	2130	Auto. Electrical Systems	4
PR&T	2132	Fuel Systems & Emission Controls	4
PR&T	3134	Advanced Powerplant Systems	4
PR&T	4032	Hydraulics & Pneumatics	3
ET	1026	DC Circuit Analysis	4
PR&T	3130	Computerized Engine Diagnostics	4
GRAP	1105	Basic AutoCAD	1
GRAP	1110	Fundamentals of Drafting	2
ENGT	2530	Machine Tool Technology	3
PR&T	3120	Steering & Suspension Systems	4
PR&T	3124	Automotive Braking Systems	4
TECH	1042	Tech. Math II, 3 or	
MATH	1131	Applied Calculus, 3	3

Management Courses:

SOT	3022	Internship in Technology	3
CTE	3060	Technical Writing	3
INDM	4210	Industrial Management, 3 or	
MGT	3315	Management of Organizations, 3	3
ACCT	2100	Survey of Accounting	3
BLAV	2720	Legal Environment of Business	3
MKT	3400	Principles of Marketing, 3 or	
HRM	3920	Human Resource Mgt, 3	3
		Electives from one of the three areas listed.	9

Area 1 Automotive Technology

PR&T	3140	Transmissions and Drivelines	4
PR&T	3150	Mobile HVAC	3
SOT	3022	Internship in Technology	2

Area 2 Design Technology

GRAP	2170	Intro. Computer Aided Drafting	2
Choose 7 hours from the following courses, 3 of these hours must be upper division:			
CMGT	2020	Mechanics of Materials	3
GRAP	4170	Comp Aided Draft & Design	3
GRAP	4180	Industrial Design	3
ENGT	2040	Engineering Material Science	4
MMGT	4520	Robotics & Automation	3
PR&T	4038	Advanced Hydraulics	3

Area 3 Service Management

Choose 9 hours from the following courses, 3 of these hours must be upper division:			
GRAP	2170	Intro. Computer Aided Drafting	2
HRM	3920	Human Resource Management	3
INDM	4220	Human Factors Engineering	3
INDM	4260	Organizational Dynamics	3
MKT	3400	Principles of Marketing	3
MKT	3420	Principles of Advertising	3
MKT	3430	Professional Sales	3
SOT	3022	Internship in Technology	3

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM	1000	Div. I B (required)	3
MATH	1111	Div. I C (required)	3
CHEM	1103	Div. II A (required)	3
PHYS	1104	Div. II A (required)	4
BTE	1210	Div. II A (required)	2
ECON	1010	Div. II B (required)	3
PSY	1100	Div. II B (required)	3
ICAP	4112	Div. IV B (required)	3

ELECTIVES 3

MINIMUM TOTAL 128

AUTOMOTIVE TECHNOLOGY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor: (265)

Sem. Hours

MINOR REQUIREMENTS 23

PR&T	1010	Power Mechanics	3
PR&T	2110	Eng. Theory & Maintenance	4
PR&T	2130	Auto. Electrical Systems	4
PR&T	2132	Fuel Sys. & Emission Control	4
PR&T	3120	Steering & Susp. Systems	4
PR&T	3124	Automotive Braking Systems	4

General

PR&T 1010 Power Mechanics (3: 2 lecture, 1 lab) Power sources and methods of transferring power. Theory of internal combustion engines. Laboratory experiences with emphasis on small gasoline engines. Each student must disassemble and overhaul at least one engine.

PR&T 3010 Transportation Systems (3) Characteristics and significance of transportation technology as applied to people, their society and economic systems, analyzed through a review of water, highway, rail, air and pipeline transport.

PR&T 4025 Motorcycle Systems Maintenance (3: 2 lecture, 1 lab) Theory, maintenance and repair of motorcycles and systems. Special emphasis on diagnostics, repair, and adjustment procedures. Students will need to provide a motorcycle.

PR&T 4032 Hydraulics and Pneumatics (3: 2 lecture, 1 lab) Fluid power principles with practical application of hydraulics, pneumatics, and fluidics. Prerequisites: MATH 1111 or TECH 1040.

PR&T 4038 Advanced Hydraulics (3) Hydraulic system analysis and troubleshooting along with servo and electronic control theory and application. Prerequisite: PR&T 4032.

Automotive

Each student enrolled in an automotive course is expected to pay a shop fee to cover the cost of consumable supplies which cannot be conveniently charged to a particular project. In addition, each student will provide appropriate vehicle(s) with necessary materials and replacement parts for assigned laboratory experiences.

PR&T 2110 Engine Theory and Maintenance (4: 3 lecture, 1 lab) Examines through practical application the theories of operation, construction, maintenance, disassembly, and assembly of motor vehicle engines and their supporting systems. Emphasis on operating principles and maintenance procedures. Prerequisite: PR&T 1010 or background experience.

PR&T 2130 Automotive Electrical Systems (4: 2 lecture, 2 lab) Procedures for testing, adjusting, repairing, and servicing of electrical components in automotive charging, starting, ignition, and accessory systems. Prerequisite: PR&T 1010 or concurrently.

PR&T 2132 Fuel Systems and Emission Controls (4: 2 lecture, 2 lab) Fuel and related emission control systems. Basic carburation, fuel injection, and emission control devices. Prerequisite: PR&T 2130.

PR&T 2150 Mobile Heating, Ventilating, Air-Conditioning (Mobile HVAC) (3: 2 lecture, 1 lab) Designed to introduce technicians to mobile heating, ventilation, and air-conditioning systems.

PR&T 3110 Automotive Engine Overhaul (4: 1 lecture, 3 lab) Theory and practice of disassembling, cleaning, inspecting, and repairing automotive engines. Removal and overhaul of engine according to accepted industry practice is a required activity for each student in the course. Prerequisite: PR&T 2110 or AGRI 3200.

PR&T 3120 Steering and Suspension Systems (4: 2 lecture, 2 lab) Classroom and laboratory activity in the diagnosis, service and repair of automotive steering and suspension systems. Prerequisite: PR&T 1010 or background experience.

PR&T 3124 Automotive Braking Systems (4: 2 lecture, 2 lab) Classroom and laboratory activity in the diagnosis, service and repair of automotive braking, anti-lock braking, traction control and stability control systems. Prerequisite: PR&T 1010.

PR&T 3130 Computerized Engine Diagnostics (4: 2 lecture, 2 lab) Utilization of computerized diagnostic methods and equipment in testing and servicing computerized engines in conjunction with automotive tune-up. Prerequisite: PR&T 2132.

PR&T 3134 Advanced Powerplant Systems (4: 3 lecture, 1 lab) Engine Performance testing as it relates to the automobile. Includes the study of advanced equipment used to test systems and advanced diagnostic testing procedures. Prerequisite: PR&T 3130.

PR&T 3140 Transmissions and Drivelines (4: 2 lecture, 2 lab) In-depth classroom and laboratory experiences in the diagnosis, service and repair of transmissions and drivelines. Prerequisite: PR&T 1010 or AGRI 3200.

PR&T 3150 Diesel Technology (3: 2 lecture, 1 lab) Survey of diesel engine theory, diagnosis, service and maintenance with emphasis in diesel fuel systems, injection pump designs, construction, operation, and maintenance. Prerequisite: PR&T 2110 or AGRI 3200.

Transportation

PR&T 4410 Intermodal Surface Transportation (3) Surface transportation (motor vehicle, pipeline, rail, and water) in the United States as seen from an integrated, intermodal viewpoint. Major aspects include systems analysis, organization, operations, financing, research and development, training, and regulation. Economic, social, and political factors are considered.

Integrative Studies Capstone

ICAP 4112 Automotive Systems for Contemporary Society* (3) Integration of communication, technology, sociology, economics, and ecology with automotive engineering, management and service, emphasizing their reciprocal effects on each other. Prerequisite: senior standing in automotive technology. *Not available for graduate credit.

COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY

Major, Bachelor of Science Degree (43-231)

The graduate with a Bachelor of Science Degree in Computer-Aided Drafting and Design Technology will use the knowledge and skills obtained in the program to:

- Apply current computer-aided drafting and design concepts and technical knowledge to interpret and develop orthographic, pictorial, and schematic drawings.
- Develop sketching, manual drafting, and computer aided drafting skills to create orthographic, pictorial, and schematic drawings.
- Integrate related technical and scientific support skills and concepts into computer-aided drafting and design technology applications.
- Demonstrate oral, written, graphic and numerical communication skills applicable to individual and group activities utilized in computer-aided drafting and design and related technologies.
- Apply critical and creative thinking as needed for problem solving applicable to computer-aided drafting and design and related technologies.
- Apply principles of management of personnel, equipment, materials, and processes applicable to computer-aided drafting and design and related technologies.
- Display a value system based on personal characteristics and ethical behavior appropriate for professions in computer-aided drafting and design and related technologies.

Sem. Hours

MAJOR REQUIREMENTS 70

GRAP 1100	Orientation to Drafting	1
GRAP 1105	Basic AutoCAD	1
GRAP 1110	Fundamentals of Drafting	2
GRAP 1120	Machine Drafting	3
GRAP 2130	Technical Illustration	3
GRAP 2150	Descriptive Geometry for Engineering Technology	3
GRAP 2160	Structural Drafting	3
GRAP 2170	Intro. to Computer-Aided Drafting	2
GRAP 2171	Introduction to MicroStation	2
GRAP 3140	Seminar In Drafting	2
GRAP 3150	Civil Drafting	3
GRAP 3170	Computer Drafting Systems	3
GRAP 3175	Managing Computer Applications for Drafting	3
GRAP 4170	CADD for Engineering Technology	3
GRAP 4180	Industrial Design	3
SOT 3022	Internship in Technology	1
CTE 3060	Technical Writing	3
CMGT 2020	Mechanics of Materials	3
ENGT 2530	Machine Tool Technology	3
MATH 1112	College Trigonometry	2
Electives from the following		6
MGT 3315	Management of Organizations, 3 and	
HRM 3920	Human Resource Mgt., 3	6
OR		
INDM 4210	Industrial Management, 3 and	
INDM 4260	Organizational Dynamics, 3	6
Electives from one of the following areas		15
Area 1 Mechanical		
Area 2 Architectural		
Area 3 CAD/CAM		
Area 4 Civil/GIS		
Area 5 Computer Graphics		
Area 6 Management & Support		

GENERAL EDUCATION REQUIREMENTS (page 41) 48

MATH 1111	Div. I C (required)	3
PHYS 1104	Div. II A 1 (required)	4
EASC 1004	Div. II A 1 (required for Architectural and Civil/ GIS areas)	4
BTE 1210	Div. II A 2 (required)	2
ART 1800	Div. II C (required)	3
IGEN 3116	Div. IV A (required)	3

FREE ELECTIVES 6

MINIMUM TOTAL 124

Computer-Aided Drafting and Design

GRAP 1100 Orientation to Drafting (1) Orientation to the philosophy, development, and current trends in the professional preparation for careers in drafting.

GRAP 1105 Basic AutoCAD (1) Basic application of AutoCAD to the solution of technical drawing problems for industry. Prerequisite: GRAP 1110 must be taken concurrently or consent of instructor.

GRAP 1110 Fundamentals of Drafting (2) Introduction to the graphic language of technical drawing and communications. Multiview and pictorial technical drawing using freehand, manual and computer-aided drafting techniques. Prerequisite: GRAP 1105 or concurrently or consent of instructor.

GRAP 1120 Machine Drafting (3) Working drawings of machine parts, using tables, tolerancing, sheet metal and welding drawings. Prerequisite: GRAP 1110.

GRAP 2130 Technical Illustration (3) Pictorial representation using various illustrative media. Prerequisite: GRAP 1110.

GRAP 2150 Descriptive Geometry for Engineering Technology (3) A basic course in graphic science for engineers, drafters or drafting teachers. Prerequisite: GRAP 1110.

GRAP 2160 Structural Drafting (3) A study of structural systems utilizing metal, concrete, masonry and wood, including the development of appropriate engineering calculations and working drawings. Prerequisite: GRAP 1110.

GRAP 2170 Introduction to Computer-Aided Drafting (2) Fundamental applications of computer-aided drafting to the solution of two-dimensional drawing problems for industry. Prerequisites: GRAP 1105 and GRAP 1110.

GRAP 2171 Introduction to MicroStation (2) Applications of MicroStation to the solution of technical drawing problems for industry.

GRAP 3124 Production Design Drafting (3) Tool and die, jig and fixture, casting, weldment, and hydraulic/pneumatic plumbing design problems are studied and drawings are developed using manual and computer-aided drafting techniques. Prerequisite: GRAP 1120.

GRAP 3126 Machine Design (3) Drafting problems involving the elements of the designing and/or redesigning of mechanisms and machines. Prerequisites: GRAP 1120 and GRAP 2150.

GRAP 3140 Seminar in Drafting (1) Seminar for study of current topics in drafting through discussions, activities and outside speakers. *May be repeated for a maximum of 3 semester hours.* Prerequisites: GRAP 1100 and GRAP 1110.

GRAP 3145 Seminar in Drafting/Design Engineering Technology (0.5) Seminar for study of current topics in Drafting/Design Engineering Technology through discussions, activities, and outside speakers. *May be repeated for a maximum of 2 semester hours.*

GRAP 3150 Civil Drafting (3) Civil drafting problems using survey data applicable to grading cuts and fills, drainage systems, municipal utilities, plotting and zoning are studied. Drawings are developed using manual and computer-aided drafting techniques. Prerequisite: GRAP 1110.

GRAP 3160 Residential Architectural Drawing (3) Principles of planning residential structures including selection of materials, methods of construction, and development of detailed working drawings. Prerequisite: GRAP 1110.

GRAP 3170 Computer Drafting Systems (3) Computer-aided drafting involving operating systems, programming languages, macros, networks, and customization of software. Prerequisite: GRAP 2170.

GRAP 3175 Managing Computer Applications for Drafting (3) Management of computer-aided drafting and design hardware, applications software, laboratories, and the media and methods of reproducing engineering documents. Prerequisite: GRAP 2170.

GRAP 4114 Advanced Technical Problems in Drafting (1-3) Individual or group work on advanced technical problems in drafting. Provide exploration of content not available through normal course offerings. *May be repeated for a maximum of 6 semester hours.* Prerequisites: 2.5 GPA, written contract/proposal with objectives and written department consent.

GRAP 4124 Geometric Dimensioning and Tolerancing Principles for Engineering Technology (2) Basic theory and application of geometric dimensioning and tolerancing practices applicable to working drawings of machine parts. Prerequisite: GRAP 1120.

GRAP 4162 Commercial Architectural Drawing* (3) Light commercial architectural plans and problems are studied and drawings are developed using manual and computer-aided drafting techniques. Prerequisite: GRAP 3160. *Not available for graduate credit.

GRAP 4170 Computer-Aided Drafting and Design for Engineering Technology (3) Advanced industrial applications of computer-aided drafting systems. Three dimensional modeling and design using interactive graphics techniques and standard design elements. Prerequisite: GRAP 2170.

GRAP 4175 Advanced 3D Analysis and Rapid Prototyping (3) Advanced course which surveys the application of computer drafting and design systems and how they relate to 3D analysis and rapid prototyping. Prerequisites: GRAP 1110, GRAP 2170, GRAP 4170, CMGT 2020.

GRAP 4180 Industrial Design (3) Study and application of the design process and design principles related to industrial products. Prerequisite: GRAP 1110.

GRAP 4570 Computer Graphics (3) Computer generated presentation graphics utilizing a variety of software programs on numerous hardware configurations. Experiences will include production of laser prints, ink-jet prints, transparencies, color slides, and plots.

CONSTRUCTION MANAGEMENT

Major, Bachelor of Science Degree
(43-239)

The graduate with a Bachelor of Science degree with a major in Construction Management will use the knowledge and skills obtained in the program to:

- Apply oral, written, graphic and listening skills as each enhances the behavioral principles or attitude and effective communications.
- Apply scientific knowledge of the mathematical, physical, and construction sciences to the economic utilization of materials and forces of nature affecting construction practice. To implement the various forms of technology necessary to complete the task of construction management, utilizing the computer and electronic data processing through complete word-processing, databases, spreadsheets, applications, and the information highway.
- Apply the principles and philosophy of management systems, cost accounting, and economics to the construction industry, including the interpretation of contracts, the values of team building, and the Construction Code of Conduct established by the industry through the assistance of the American Institute of Constructors.
- To identify the appropriate construction management principles necessary to complete the site plans, evaluating vendors and subcontractors, writing field purchase orders, change orders, subcontract agreements, shop drawings, as built drawings daily logs and job diaries, construction reports and progress payment requests.
- To execute construction safety standards including the ability to interpret the OSHA construction standards, establish safety and health procedures on the job site, and perform hazardous material and process analysis.
- Understand the science of materials and methods of construction as they apply to the Construction Specifications Institute (CSI) Divisions designated for the construction industry including terminology, standard designations, sizes, and quality testing.
- Complete the estimating, cost accounting, and bidding sequence necessary for construction job acquisition and completion. To prepare and complete cost control processes including the ability to establish a budget, prepare cost reports, and forecast expenditures.
- Perform quantity take-off, interpret construction specification, identify appropriate codes, identify site conditions, apply value engineering, and develop detailed project proposals. To prepare a complete construction project schedule, develop a procurement time table, establish a project manual and plan showing the logical sequence of activities and time duration in order to monitor progress and update schedules.

Sem. Hours

MAJOR REQUIREMENTS 81

CMGT 1300	Intro. to Construction Management	2
CMGT 1301	Sem. in Construction Mgt.	2
CMGT 2020	Mechanics of Materials	3
CMGT 2310	Construction Plans & Specs	3
CMGT 2325	Project Cost Estimating	3
CMGT 2340	Surveying & Construction Layout	3
CMGT 3020	Applied Strength of Materials	3
CMGT 3320	Prin. of Construction Mgt.	3
CMGT 3330	Building Codes & Code Adm.	3
CMGT 3350	Building Struct.: Meth & Mat.	3
CMGT 3355	Const. Planning & Sched.	3
CMGT 4310	Construction Safety	3
CMGT 4325	Advanced Est. & Cost Analysis	3
CMGT 4330	Mechanical Systems for Buildings	3
CMGT 4355	Computer-Based Project Control	3
ENGT 2040	Engineering Material Science	4
GRAP 1105	Basic AutoCAD	1
GRAP 1110	Fundamentals of Drafting	2
SOT 3022	Internship in Technology	1
EASC 2100	Engineering Geology	4
MATH 1112	College Trigonometry	2
MATH 1131	Applied Calculus	3
ACCT 2101	Principles of Financial Acct.	3
FIN 2801	Business Statistics I	3
BLAW 2720	Legal Env. of Business	3
GRAP 2160	Structural Drafting, 3 or	

GRAP 3150	Civil Drafting, 3 or	
GRAP 3160	Residential Arch. Drawing, 3	3
MGT 3315	Management of Organizations, 3 or	
INDM 4210	Industrial Management, 3	3
MKT 3400	Principles of Marketing, 3 or	
ACCT 2102	Prin. of Managerial Acct., 3	3
HRM 3920	Human Resource Mgt., 3 or	
INDM 4260	Organizational Dynamics, 3	3

GENERAL EDUCATION REQUIREMENTS (page 41) 48

MATH 1111	Div. I C (required)	3
PHYS 1103	Div. II A (required)	3
EASC 1004	Div. II A (required)	4
BTE 1210	Div. II A (required)	2
ECON 1010	Div. II B (required)	3
ICAP 4109	Div. IV B (required)	3

MINIMUM TOTAL 129

CONSTRUCTION MANAGEMENT

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(258)

Sem. Hours

MINOR REQUIREMENTS 20

CMGT 1300	Introduction to Construction Management	2
CMGT 2310	Construction Plans & Specifications	3
CMGT 2325	Project Cost Estimating	3
CMGT 3320	Principles of Construction Management	3
Electives from the following		9
*CMGT 2340	Surveying & Const. Layout	3
CMGT 3010	Applied Construction Practices	3
CMGT 3330	Bldg. Codes & Code Administration	3
CMGT 3355	Construction Planning & Scheduling	3
CMGT 4310	Construction Safety	3
CMGT 4325	Advanced Estimating & Cost Analysis	3
CMGT 4355	Computer-Based Project Control	3

*Has prerequisite of MATH 1112 not included in the minor program.

Construction Management

CMGT 1300 Introduction to Construction Management (2) General survey of the organization and functioning of the construction industry: legal, ethical, business, and management aspects.

CMGT 1301 Seminar in Construction Management (0.5) Forum to provide students an opportunity to learn about current events in the construction industry using guest speakers, open discussion and field trips. *Must be repeated 4 times; One (1) credit must be generated after student has reached 60 semester hours of study.*

CMGT 2020 Mechanics of Materials (3) An introduction to the basic concepts of strengths of materials, statics and dynamics as they relate to the design and analysis of materials, machines, and structures. Prerequisite: MATH 1112.

CMGT 2310 Construction Plans and Specifications (3) An introductory course to construction management which provides a survey of print reading and specification interpretation for light, civil, heavy highway and utility construction. Only offered Spring semester.

CMGT 2325 Project Cost Estimating (3) A quantitative take-off and survey of materials and productivity standards for industrial projects. Prerequisite: CMGT 2310 or GRAP 1110.

CMGT 2340 Surveying and Construction Layout (3) Theory and practice of plane, topographic, and construction surveying and layout including care and use of instruments, note taking and computations. Prerequisite: MATH 1112.

CMGT 3010 Applied Construction Practices (3: 2 lecture; 1 lab) Theory and practices of the construction industry, methods, and use of materials and tools. Hands-on laboratory activities with jobsite safety support theory content. Not open to construction management majors.

CMGT 3020 Applied Strength of Materials (3) Selection and application of sizes, shapes, and materials required for the construction of a member for a machine or structure in order to resist an applied load in a safe and economical manner. Prerequisites: CMGT 2020 and ENGT 2040.

CMGT 3320 Principles of Construction Management (3) Principles of construction contracting with related information on forms of business ownership, management, land development, labor relations, and project safety.

CMGT 3330 Building Codes and Code Administration (3) In-depth study of national, state, and local regulations applicable to specification and performance of building construction standards. Prerequisite: CMGT 2310, or consent of instructor.

CMGT 3350 Building Structures: Methods & Materials (3: 3 lecture, 0 lab) The types and processes of building structures including the materials and methods as applied to the structures: wood, steel, and concrete. Prerequisites: ENGT 2040, CMGT 2310, and CMGT 2340.

CMGT 3355 Construction Planning and Scheduling (3) Theory and use of construction and production scheduling to control the acquisition, movement, storage, and utilization of workers and/or material with emphasis given to the Critical Path Method (CPM). Computer programming background recommended. Prerequisite: GRAP 1110 or CMGT 2310.

CMGT 4310 Construction Safety (3) Construction safety and health conditions on the job as they relate to workers, supervisors, inspectors, and the public. Prerequisites: CMGT 2310 or junior standing, or consent of instructor.

CMGT 4325 Advanced Estimating and Cost Analysis (3: 3 lecture, 0 lab) An advanced course in construction cost estimating utilizing the computer and associated professional software to assist the estimator. Prerequisites: CMGT 2310 and CMGT 2325.

CMGT 4330 Mechanical Systems for Buildings (3) Mechanical systems integrated with buildings and other equipment. Prerequisites: CMGT 2310 or junior standing.

CMGT 4340 Solar Energy for Building Construction (3) An analysis of solar energy systems and components as they apply to types of structure, sites, and climate regions.

CMGT 4355 Computer-Based Project Control (3) An advanced course in construction project scheduling utilizing the computer and associated professional software to assist the project scheduler. Prerequisites: CMGT 3355.

CMGT 4380 Heavy Equipment (3) Survey of the types, uses, and economics of heavy equipment utilized in the construction industry. Prerequisites: CMGT 2310, MATH 1111.

Integrative Studies Capstone

ICAP 4109 Construction Operations* (3) A detailed study of the knowledge, processes and operational procedures involved in a commercial construction project. Prerequisites: CMGT 2310, CMGT 2325, CMGT 3320 and CMGT 3355 and senior standing. *Not available for graduate credit.

ELECTRONICS ENGINEERING TECHNOLOGY

Major, Bachelor of Science Degree
(43-227)

This program has been placed in abeyance. See the Department Chair for more information.

Electronics Engineering Technology

Some EET courses have a zero-credit laboratory requirement. The majority of the EET courses utilize an open lab system (where the student is expected to complete laboratory work by the instructor's due date on his/her own time, as class schedules and lab equipment availability permit).

EET 2300 Calculus for Electronics Engineering Technology (3) Methods of integration, partial derivatives, double integrals, derivatives and integrals in polar coordinates; empirical curve fitting, power series expansions, first and second-order differential equations; and use of software. Prerequisite: TECH 2040.

EET 2320 Advanced Digital Circuitry (3) Design of sequential networks, iterative networks, sequential networks with MSI integrated circuits, sequential networks using PLDs, state machines, asynchronous sequential networks, use of software for design analysis. Prerequisite: ET 1050.

EET 2330 Transform Analysis (3) Waveform analysis, Laplace transforms and their application to circuit analysis; Fourier analysis, use of z-transforms in discrete-time systems, and analysis software. Prerequisites: TECH 2040 or MATH 1131; and ET 2048.

EET 3034 Electronic Instruments and Measurements (4: 3 lecture, 1 lab) Design, operation and calibration of a variety of test instruments. Emphasis will be upon measurement procedures not normally practiced in introductory electronics courses. Prerequisite: ET 1050 or ET 2048 or concurrently.

EET 3048 Control of Electrical Machinery (4:3 lecture, 1 lab) Analysis and application of electrical and electronic controls for industrial equipment. Programmable Logic Controllers are emphasized as well as techniques in engineering design. Prerequisite: ET 1010 or ET 1027 or consent of instructor.

EET 3310 Microprocessor Systems Design (3) Microprocessor/microcontroller internal architectures and timing; single and multiprocessor bus structures; memory subsystem design, designing polled I/O hardware/firmware, interrupt driven I/O hardware/firmware design, DMA, design of multiprocessor systems, segmentation and memory management, bit-sliced architectures, and use of manufacturer data sheets and application notes. Prerequisites: TECH 2040 and ET 2060.

EET 3320 Introduction to Data Communications (3) Fundamentals of data transmission, data encoding, multiplexing techniques, circuit and packet switching; local area networking, ISDN, frame relay, ATM, local area networking, and protocol analysis. Prerequisites: ET 2060, EET 2330 or concurrently.

EET 3330 Introduction to Communication Systems (3) Signal spectra, noise, AM transmitters, AM superheterodyne receivers, sideband systems, frequency modulation, phase modulation, phase-locked loops, FM transceivers, transmission lines, waveguides, radiowave propagation, antennas, and use of CAE software. Prerequisites: EET 2330 and EET 3310.

EET 3340 Control Systems Design (3) Introduction to analog control systems analysis and design including control system components, models of physical systems, state-variable models, system responses, control system characteristics, stability analysis, and use of CAE software. Prerequisites: ET 2058, EET 2300 or concurrently, and EET 2330.

EET 4300 Special Projects in Electronics Engineering Technology* (1-3) Investigation of contemporary problems and issues in electronics engineering technology by selected individuals or groups. *May be repeated for a maximum of 6 semester hours.* *Not available for graduate credit.

EET 4320 Advanced Control Systems Design* (3) Root-locus analysis and design; frequency response, modern control design, discrete-time systems, sampled-data systems, analysis and design of digital control systems; an introduction to nonlinear system analysis, and use of CAE software for the design, analysis, design, and simulation of control systems. Prerequisite: EET 3310 and EET 3340. *Not available for graduate credit.

EET 4330 Digital Signal Processing Systems Design* (3) An introduction to the engineering fundamentals of digital signal processing. Emphasis is placed on the design, implementation, and testing of finite impulse response filters, infinite impulse response filters, adaptive digital filters, and sampling rate converter-decimators using DSP software design packages. Prerequisites: ET 2065, EET 2320, EET 2330, and EET 3310. *Not available for graduate credit.

ELECTRONICS TECHNOLOGY

Major, Bachelor of Science Degree
(43-221)

The graduate with a Bachelor of Science degree in Electronics Technology will use the knowledge and skills obtained in the program to:

- Research, prepare and present both oral and written reports on technical or management subjects related to his/her area of specialization.
- Identify, analyze and solve technical or management problems related to his/her field of specialization.
- Function effectively as a participating member of a work group to accomplish a particular goal.
- Demonstrate desirable work habits and professional and conscientious attitudes in his/her particular areas of instruction through participation in professional activities and organizations, and leadership activities both in and out of the classroom.
- Demonstrate a mastery of skill beyond the entry level related to one or more areas of technical, management or marketing specialities in the major area of study.
- Demonstrate technical and general knowledge required in occupational work areas related to the major field of study.

Sem. Hours

MAJOR REQUIREMENTS 69

CORE

ET	1026	DC Circuit Analysis	4
ET	1027	AC Circuit Analysis	4
ET	1050	Digital Principles & Applications	4
ET	2048	Active Electronic Devices	4
ET	2060	Microprocessors: Theory & Appl.	4
ET	2065	Computer Programming for Electronics Technology	4
CTE	3060	Technical Writing	3

AND 42 credit hours of courses
from Area 1 AND/OR Area 2

Area 1 Electrical/Electronic Communication Technology

ET	3014	Analog-Digital Circuitry	4
ET	3017	Industrial Electronics	4
ET	3020	Circuit Analysis & Implementation	4
ET	3041	Communication Systems	4
TECH	1042	Technical Mathematics II	3
TECH	2040	Calculus for Technology	3
MGT	3315	Management of Organizations 3, or	
INDM	4210	Industrial Management, 3	3
SOT	3022	Internship in Technology	3
		Electives in Management	3
		Departmentally approved elective	1

OR

Area 2 Computer/Networking Electronics Technology

NET	1060	Introduction to Networking Basics	3
NET	1061	Routers and Routing Basics	3
NET	2058	Computer Technologies	3
NET	2060	Switching Basics & Intermediate Routing	3
NET	2061	WAN Technologies	3
NET	4060	Advanced Network Routing	3
NET	4061	Remote Access	3
NET	4062	Advanced Switching	3
NET	4063	Network Support	3
SOT	3022	Internship in Technology	3
		Departmentally approved electives	3
		Electives from the following:	9
NET	4040	Fundamentals of Network Op. Sys.	3
NET	4042	Network Servers and Service	3
NET	4043	Network Servers and Infrastructure	3
		OR	
NET	3000	Fundamentals of Wireless Networks	3
NET	3062	Network Design	3
NET	4064	Advanced Network Design	3

GENERAL EDUCATION REQUIREMENTS (page 41) 48

COMM	1000	Div. I B (required)	3
MATH	1111	Div. I C (required)	3
CHEM	1104	Div. II A (required)	4
PHYS	1104	Div. II A (required)	4
IGEN	3116	Div. IV A (required) 3, or	
ICAP	4110	Div. IV B (required) 3,	3

FREE ELECTIVES (see statement of policy) 3

MINIMUM TOTAL 120

ELECTRONICS TECHNOLOGY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(220)

Sem. Hours

MINOR REQUIREMENTS 22-24

Area 1

ET	1026	DC Circuit Analysis	4
ET	1027	AC Circuit Analysis	4
ET	1050	Digital Principles & Applications	4
ET	2048	Active Electronic Devices	4
MATH	1112	College Trigonometry ,2 or	
TECH	1042	Technical Mathematics, 3	2-3
		Upperlevel electives in electronics technology	4

Area 2

NET	1060	Introduction to Networking	3
NET	1061	Routers & Router Basics	3
NET	2060	Switching Basics & Intermediate. Routing	3
NET	2061	WAN Technologies	3
NET	4060	Advanced Network Routing	3
NET	4061	Remote Access	3
NET	4062	Advanced Switching	3
NET	4063	Network Support	3

GENERAL EDUCATION REQUIREMENTS (MATH 1111 Div I C is required).

Electronics Technology

Some ET courses have a zero-credit laboratory requirement. Labs are scheduled for ET 1010, ET 1026, ET 1027, ET 1050, ET 2048, ET 2058, ET 2060, ET 2065, ET 3014, ET 3020, and ET 3041. The majority of the remaining ET courses utilize an open lab system (where the student is expected to complete laboratory work by the instructor's due date on his/her own time, as class schedules and lab equipment availability permit).

ET 1010 Applied Electricity (4: 3 lecture, 1 lab) Provides basic theory together with appropriate shop experiences for introductory technical training in electrical principles including basic circuits, Ohm's Law, A.C. and D.C. theory, as well as generation and application of electrical energy.

ET 1020 General Electronics (3) A general overview of several areas of electronics including the study of electronic measurements, active and passive devices, receiver and transmitter theory, basic digital theory, and electronic controls. Prerequisite: Not open to electronics majors or minors.

ET 1026 DC Circuit Analysis (4: 3 lecture, 1 lab) Analysis and application of D.C. principles to passive networks. Laboratory experience in the use of basic test instruments. Prerequisite: TECH 1040 or MATH 1111 may be taken concurrently.

ET 1027 AC Circuit Analysis (4: 3 lecture, 1 lab) Application of alternating current principles to resistive, capacitive, and inductive circuits. Phasor analysis of series-parallel impedance. Resonance and filters are covered. Laboratory experiments using typical test instruments. Prerequisite: ET 1026.

ET 1050 Digital Principles and Applications (4: 3 lecture, 1 lab) Binary numbers, logic gates, Boolean algebra, parity generation and detection, arithmetic circuits, flip-flops and latches, and troubleshooting digital circuits using current industry standard techniques.

ET 2020 Industrial Electricity (3) Electrical practices as applied to modern industrial applications with an emphasis on the National Electrical Code, wiring diagrams, electrical distribution, and electrical/electronic control devices. Prerequisite: ET 1010 or ET 1027 or prior experience and consent of the instructor.

ET 2048 Active Electronic Devices (4: 3 lecture, 1 lab) Theory, operation, and analysis of Integrated Active Devices and Discrete Semiconductor Active Devices. Basic digital and common analog circuit configurations. Prerequisite: ET 1027 or concurrently.

ET 2058 Operational Amplifiers-Theory and Applications (4: 3 lecture, 1 lab) A study of integrated circuit operational amplifiers, their characteristics and a wide range of applications. Construction and testing of numerous circuits. Prerequisite: ET 2048.

ET 2060 Microprocessors: Theory and Application (4: 3 lecture, 1 lab) The fundamental concepts of microprocessors including software development and hardware design. Design of input/output interface circuits together with numerous applications to industrial controls. Prerequisite: ET 1050 or concurrently.

ET 2065 Computer Programming for Electronics Technology (4: 3 lecture, 1 lab) Contemporary computer programming languages for electronics technology. Programming techniques and skills as applied to troubleshooting industry standard computer hardware. *May be repeated. If repeated, a different programming language must be studied.* Prerequisite: ET 1050 or concurrently.

ET 3014 Analog-Digital Circuitry (4: 3 lecture, 1 lab) Counters, shift registers, monostable multivibrators, memories, A/D and D/A converters, phase-locked loops, digital simulation software, and troubleshooting digital circuits using current industry standard techniques. Prerequisite: ET 1050.

ET 3017 Industrial Electronics (4: 3 lecture, 1 lab) Analysis of selected industrial controls and components to include transducers, sensors, time delay circuits, motor controls, and thyristors. Emphasis on commercial programmable logic controller installation and programming. Practical applications of industrial electronic devices and systems and further development of troubleshooting skills. Prerequisite: ET 1010 or ET 1026 or consent.

ET 3020 Circuit Analysis and Implementation (4: 3 lecture, 1 lab) Research, analyze, and construct a variety of circuits using state-of-the-art technologies. Students will use the internet and published materials to construct projects. Prerequisites: ET 2048 or consent of instructor.

ET 3022 AC and DC Machines (4: 3 lecture, 1 lab) Basic principles of alternating and direct current motors and generators including construction, theory of operation, industrial uses and maintenance considerations. Prerequisite: ET 2048 or consent of instructor.

ET 3038 Audio Systems (4: 3 lecture, 1 lab) Principles of sound and acoustics: audio amplifiers, microphones, speakers, mixers, and equalizers; magnetic tape and disc recording; audio measurement techniques. Prerequisite: ET 2048.

ET 3041 Communication Systems (4: 3 lecture, 1 lab) A study of receiver and transmitter circuits and systems. Modulation methods, signal propagation, and antenna design. Practical alignment methods, measurement techniques, and troubleshooting procedures. Preparation for the F.C.C. commercial license. Prerequisite: ET 2048 or concurrently.

ET 4000 Special Projects in Electronics Technology (1-3) Investigation of contemporary problems and issues in electronics technology by selected individuals or groups. *May be repeated for a maximum of 6 semester hours.*

ET 4014 Advanced Technical Problems in Electronics (1-4) Individual/group work on recent developments and advanced technical concepts. Experimentation and technical exploration of content not available through formal course offerings. *May be repeated for a maximum of 8 semester hours.*

ET 4031 Introduction to Process Control* (4: 3 lecture, 1 lab) Implementation, evaluation, tuning and troubleshooting of process control systems. Selection of sensing devices and final control elements. Emphasis on laboratory activities. Application of microprocessor-based systems including programmable controllers. Prerequisites: ET 3017. *Not available for graduate credit.

ET 4044 Video Systems* (4: 3 lecture, 1 lab) Television cameras and the composite video signal. VHF, UHF, cable, and satellite TV distribution systems. Television receiver and monitor circuitry and troubleshooting techniques. Prerequisite: ET 2048. *Not available for graduate credit.

ET 4048 Advanced Communication Systems* (4: 3 lecture, 1 lab) Mobile radio repeater systems and signaling modes; spread spectrum communications; commercial broadcast installations; microwave signal sources; amplifiers; waveguides and cavities; antennas and radar systems. Prerequisite: ET 3041. *Not available for graduate credit.

Networking

NET 1010 Fiber Optics Essentials (4: 3 lecture, 1 lab) Basic fiber optics theory and applications. Areas covered include transmission of data, optical cables, light sources, detectors, splicing, cable installation and test equipment.

NET 1060 Introduction to Networking Basics (3: 2 lecture, 1 lab) Fundamentals including networking and Ethernet fundamentals, media, IP Addressing, routing fundamentals and troubleshooting. Hands-on experiences involving cabling, routers and router configuration.

NET 1061 Routers and Routing Basics (3: 2 lecture 1 lab) Router and routing configuration fundamentals and protocols, access control lists and basic router troubleshooting, hands-on experiences with routers. Prerequisite: NET 1060.

NET 2058 Computer Technologies (3) Introduction to computer architectures and operating systems. Includes PC hardware and DOS/Windows module over basic operating system fundamentals.

NET 2060 Switching Basics and Intermediate Routing (3: 2 lecture, 1 lab) Advanced IP addressing, intermediate routing protocols, switches, Virtual LANs, Spanning Tree and VLAN Trunking Protocols. Prerequisite: NET 1061.

NET 2061 WAN Technologies (3: 2 lecture, 1 lab) Advanced IP addressing, Port address Translation, WAN technology and terminology, management, and introduction to optical networking. Prerequisite: NET 2060.

NET 3000 Fundamentals of Wireless Networks (3) A comprehensive overview of wireless technologies, devices, security, design, and best practices with a particular emphasis on real world applications and skills is covered utilizing Cisco Systems hardware. Prerequisite: NET 2060 or concurrent or instructor consent.

NET 3010 Fiber Optics Advanced (4: 3 lecture, 1 lab) Advanced fiber optics theory and applications. Areas covered include transmission of data, optical cables, light sources, detectors, and troubleshooting. Prerequisite: NET 1010.

NET 3062 Network Design (3) Cisco Systems' design principles, methodology, and structure models for Local Area Networks and Wide Area Networks, including Virtual Private Network and backup design considerations. Prerequisite: NET 2061.

NET 3065 Converged Voice and Data Networks (3) An introduction to Cisco Systems converged voice and data networks as well as the challenges faced by its various technologies and implementing appropriate solutions to those challenges. Prerequisite: NET 2061.

NET 3068 Network Security I (4: 3 lecture 1 lab) Operating system security concepts and techniques. Examines theoretical concepts of security and adopts a practical hands-on approach when examining operating system security techniques. Prerequisite: NET 2058.

NET 3088 Linux Operating Systems (4: 3 lecture, 1 lab) Linux and Open Source Software, as an operating system technology. Installing, configuring, maintaining, and regularly using a Linux operating system. Prerequisite: NET 2065.

NET 4040 Fundamentals of Network Operating Systems (3) Installing, configuring, and administering Network Operating Systems. Prerequisite: NET 2058 or instructor consent.

NET 4042 Network Servers and Services (3) Implementing and Administering of Network Infrastructure and Directory Services Infrastructure. Prerequisite: NET 4040 or instructor consent.

NET 4043 Network Services and Infrastructure (3) Advanced Implementing and Administering of Network Infrastructure and Directory Services Infrastructure. Prerequisite: NET 4042 or instructor consent.

NET 4060 Advanced Routing* (3) Topics in VLSM, private addressing, and NAT to optimize address utilization. OSPF, IS-IS, EIGRP, BGP, optimizing routing, and scalability through route filtering and redistribution utilizing Cisco Systems hardware. Prerequisite: NET 2061 or CCNA certification or instructor consent. *Not available for graduate credit.

NET 4061 Remote Access* (3) Remote access topics in WAN technologies such as analog dialup, ISDN BRI and PRI, Frame Relay, and broadband utilizing Cisco Systems hardware. Prerequisite: NET 4060 or instructor consent. *Not available for graduate credit.

NET 4062 Advanced Switching* (3) Topics related to reliable, scalable, multilayer-switched LANs utilizing VLANs, VTP, STP, inter-VLAN routing, redundancy, QoS, campus LAN security, and transparent LAN services utilizing Cisco Systems hardware. Prerequisite: NET 4061 or instructor consent. *Not available for graduate credit.

NET 4063 Network Support (3) Topics in Local and Wide Area Network documenting, baselining, and troubleshooting methodologies and tools are used to troubleshoot OSI Layers 1 to 7 utilizing Cisco Systems hardware. Prerequisite: NET 4062 or instructor consent.

NET 4064 Advanced Network Design (3) Cisco Systems design considerations for IPv6, popular routing protocols, the Security Ecosystem, and both Traditional and Integrated Voice architectures. Prerequisite: NET 3062 or NET 4100 or instructor consent.

NET 4100 Network Device Configuration (3: 2 lecture, 1 lab) A comprehensive overview of Cisco Systems device configuration. Prerequisites: Required for non-NET specialist. Not open to NET specialist.

NET 4500 Managerial Design for Secure Networks (3) Utilizing Cisco Systems Architecture for Voice, Video and Integrated Data networks to apply modular design practices to ensure the enterprise solution is highly available and optimized for the business and technical needs. Prerequisites: NET 4064 or NET 4100 or instructor consent.

NET 4501 Network Security Management I (3) Utilizing Cisco Systems routers for network and overall security processes focusing on designing and implementing solutions that will reduce the risk of revenue loss and vulnerability. Prerequisites: NET 4100 or instructor consent.

NET 4502 Network Security Management II (3) An emphasis on security policy design and management, security technologies, firewall and secure router design, installation, configuration and maintenance, AAA and VPN implementation using Cisco Systems' routers and firewalls. Prerequisites: NET 4501.

ENGINEERING TECHNOLOGY

Major, Bachelor of Science Degree
(43-282)

The graduate with a Bachelor of Science degree in Engineering Technology will use the knowledge and skills obtained in the program to:

- Creatively identify, analyze and solve engineering related problems and improve processes in both technical and managerial realms.
- Demonstrate mastery of the techniques, skills and modern tools necessary for current engineering technology practices.
- Practice effective personal and technical communication in both oral and written forms.
- Demonstrate lifelong learning by applying current mathematic, scientific, engineering and technical knowledge to problem solving and by adapting to emerging applications in the engineering technology fields.
- Understand and practice professional work habits including a commitment to quality, timeliness, and continuous improvement.
- Understand the professional, ethical and social responsibilities of an engineering technologist.
- Understand the need for working in teams and demonstrate the ability to effectively work in teams as well as lead teams.
- Demonstrate a respect for and knowledge of contemporary professional, societal and global issues.

Sem. Hours

MAJOR REQUIREMENTS	79-80
CORE Required Hours	32-33
ENGT 1000 Principles of Engineering	3
ENGT 1500 Orientation to Engineering Technology	1
ENGT 1501 Seminar in Engineering Technology	2
ET 1050 Digital Principles & Applications	4
GRAP 1110 Fundamentals Of Drafting, 2 or	
CTE 1300 Introduction to Engineering Design, 3	2-3
GRAP 1105 Basic AutoCAD	1
INDM 4260 Organizational Dynamics	3
MATH 1112 College Trigonometry	2

MATH 1131 Applied Calculus	3
ENGT 3520 Engineering Economy	3
MMGT 4580 Quality Systems	3
SOT 3022 Internship in Technology	2
CTE 3060 Technical Writing	3

Each student must select one of the following options:

Option 1 Electronics Engineering Technology -

Required hours	47
ET 1026 DC Circuit Analysis	4
ET 1027 AC Circuit Analysis	4
ET 2048 Active Elect. Devices	4
ET 2060 Micro: Th. & Appl.	4
ET 2065 Computer Programming for Electronics Technology	4
ET 3014 Analog-Digital Circuitry	4
ET 3017 Industrial Electronics	4
ET 3020 Circuit Analysis & Implementation	4
ET 3041 Communication Systems	4
EET 2330 Transform Analysis	3
EET 3034 Electronic Instruments & Measurement	4
EET 3048 Control of Electrical Machinery	4

Option 2 Mechanical Engineering Technology - (Product Design)

Required Hours	47
ET 1010 Applied Electricity	4
EET 3034 Electronic Instruments & Measurement	4
GRAP 1120 Machine Drafting	3
GRAP 2170 Introduction Computer Aided Drafting	2
GRAP 3124 Production Design Drafting	3
GRAP 3126 Machine Design	3
GRAP 4124 Geom. Dim. & Toler. Prin. for ET	2
GRAP 4170 Computer-Aided Draft & Design ET	3
GRAP 4175 Adv. 3D Analysis & Prototyping ET	3
CMGT 2020 Mechanics of Materials	3
CMGT 3020 Applied Strength of Materials	3
ENGT 1510 Intro. to Mfg. Processes	3
ENGT 2040 Engineering Materials Science	4
ENGT 2530 Machine Tool Technology	3
PR&T 4032 Hydraulics And Pneumatics	3
Departmentally approved upper-level electives	1

Option 3 Industrial Engineering Technology -

Required Hours	47
ET 1010 Applied Electricity	4
EET 3034 Electronic Instruments & Measurement	4
INDM 4220 Human Factors Engineering	3
INDM 4240 Facilities Engineering	3
INDM 4280 Industrial Statistics, 3 or	
SAFE 4940 Stat. Analysis for Risk Mgt., 3	3
ENGT 2040 Engineering Materials Science	4
ENGT 2530 Machine Tool Technology	3
ENGT 3510 Engineering Planning & Control	3
ENGT 3530 Inspection & Quality Control	3
ENGT 3562 Computer Numerical Control (CNC)	3
ENGT 4550 Simulation in Engineering Tech.	3
MMGT 4520 Robotics & Automation	3
MMGT 4590 Computer Integrated Manfactrng (CIM)	3
PR&T 4032 Hydraulics and Pneumatics	3
Departmentally approved upper-level electives	2

Option 4 Manufacturing Engineering Technology -

Required Hours	47
ET 1010 Applied Electricity	4
EET 3034 Electronic Instruments & Measurement	4
GRAP 1120 Machine Drafting	3
GRAP 2170 Introduction Computer Aided Drafting	2
GRAP 4124 Geom. Dim. & Toler. Prin. for ET	2
GRAP 4170 Computer-Aided Draft & Design ET	3
ENGT 1510 Intro. to Mfg. Processes	3
ENGT 2040 Engineering Materials Science	4
ENGT 2515 Applied Manufacturing Processes	3
ENGT 2530 Machine Tool Technology	3
ENGT 3530 Inspection & Quality Control	3
ENGT 3562 Computer Numerical Control (CNC)	3

MMGT 4520	Robotics & Automation	3
MMGT 4590	Computer Integrated Manfrng (CIM) . . .	3
PR&T 4032	Hydraulics and Pneumatics	3
	Departmentally approved upper-level electives	1

GENERAL EDUCATION REQUIREMENTS (page 41) In the major,

MATH 1131	fulfills 3 s.h. of Div. I C.	45
PHYS 1104	Div. II A (required)	4
CHEM 1103	Div. II A (required)	3
ECON 1010	Div. II B (required)	3
ENGT 1012	Div. II A (required)	2
COMM3010	Div. III (required)	3
ICAP 4110	Div. IV B (required)	3
MINIMUM TOTAL		124-125

Engineering Technology

ENGT 1000 Principles of Engineering (3) This introductory course explores the wide variety of careers in engineering and technology and covers various technology systems and manufacturing processes.

ENGT 1010 Materials for Manufacturing and Construction (3) Construction materials, including sources, characteristics, uses, and standard sizes and packaging, with relative values of different grades.

ENGT 1012 Global Production Technology (2) Study of production technology along with the problems, successes and challenges of the application of technology globally.

ENGT 1120 Welding (2) Study and practice of four basic welding processes: oxyacetylene, metallic arc, MIG and TIG.

ENGT 1500 Orientation to Engineering Technology (1) An introduction to Engineering Technology as an academic endeavor including the consideration of subdisciplines, program requirements, and professional opportunities.

ENGT 1501 Seminar in Engineering Technology (0.5) Forum to provide students an opportunity to learn about current events in the engineering field through the use of guest speakers, open discussions, and informative field trips. Students should expect to share cost of field trips and professional materials. *Must be repeated for a minimum of 2 semester hours.*

ENGT 1510 Introduction to Manufacturing Processes (3: 3 lecture, 0 lab) An overview of the primary processes and a basic knowledge of secondary manufacturing processes which are classified as separating, casting, forming, conditioning, assembling, and finishing.

ENGT 2040 Engineering Material Science (4: 3 lecture, 1 lab) Study of materials and their testing for construction, engineering and manufacturing: sources, characteristics, applications, standard sizes, packaging, testing theory, inspection and testing per ASTM standards.

ENGT 2210 Finishing and Upholstering (3) Finishing materials, their application and treatment on various woods and metals; refinishing and upholstering.

ENGT 2500 Applied Computer Technology (2) Develops computer literacy through a study of microcomputers, peripherals and applications, and software.

ENGT 2515 Applied Manufacturing Processes (3) The manufacturing processes used to fabricate and form engineering materials into useful products. Includes laboratory experiences using the common materials and basic processes. Prerequisite: ENGT 1510.

ENGT 2530 Machine Tool Technology (3: 3 lecture, 0 lab) An introduction to machine tools with experiences in turning, drilling, milling, grinding, and related bench work. Assigned projects.

ENGT 3130 Composite Technology I (3) Fundamental principles of materials, basic design theory, manufacturing processes, inspection and repair concepts.

ENGT 3210 Manufacturing in the Aerospace Industry (3) Manufacturing activities required in order to plan, organize, schedule, control and direct manufacturing activities in the environment of an aerospace industry.

ENGT 3501 Computer Programming for Manufacturing (3) Students will study control logic, data acquisition, data storage and computer programming as they relate to manufacturing. Prerequisite: BTE 1210 or equivalent.

ENGT 3510 Engineering Planning and Control (3) Planning and controlling the manufacturing process including materials, machines, people, and suppliers.

ENGT 3520 Engineering Economy (3) Elements that influence the cost of manufactured products, the process of determining manufacturing costs, cost justification, value analysis and cost reduction analysis. Prerequisites: ENGT 2515 and ENGT 2530 or junior class standing.

ENGT 3530 Inspection and Quality Control (3) Principles and methods of controlling the quality of manufactured products. Emphasis will be on gauging and inspection.

ENGT 3550 Principles of Numerical Control (3) Introduction to N/C Machining Operations. Includes laboratory work in writing and executing manual program on N/C Machine Tools.

ENGT 3562 Computer Numerical Control (CNC) (3: 2 lecture, 1 lab) Concepts presented and analyzed include CNC machine setup, tooling selection, part setup, inspection methods, programming, industrial machining centers, flexible manufacturing systems and rapid prototyping systems.

ENGT 4550 Simulation in Engineering Technology (3) Collection of methods and applications to simulate the behavior of manufacturing and service systems. Emphasis on hands-on time with Software utilizing case studies, and lab exercises. Prerequisite: Senior standing or Graduate status.

FASHION: TEXTILES AND CLOTHING IN BUSINESS

Major, Bachelor of Science Degree (43-118)

The graduate with a Bachelor of Science degree with a major in Fashion: Textiles and Clothing in Business will use the knowledge and skills obtained in the program to:

- Communicate and collaborate effectively in both individual and team settings in a creative environment.
- Demonstrate professional qualities that are socially, ethically and responsibly moral in a diverse society.
- Use technology to create and present materials, organize and analyze data, and manage the production of soft goods from development through retail consumption.
- Demonstrate awareness of constant changes within the global fashion market and the need for sustainable materials in textile products.
- Interact effectively with co-workers, supervisors and customers to solve problems that lead to effective management and leadership.

Sem. Hours

MAJOR REQUIREMENTS 72

FAME 1400	Intro. to Fashion Merchandising	3
FAME 1420	Applied Design in Fashion & Apparel Merchandising	3
FAME 1450	Textile & Apparel Fabrications I	3
FAME 2430	Image Management for Fashion	3
FAME 2440	Fashion Merchandising Practicum	3
FAME 2442	Textiles	3
FAME 3425	Apparel Performance Evaluation	3
FAME 3440	Fashion Promotion	3
FAME 3444	Fashion Products	3
FAME 4410	Architectural Interiors	3
FAME 4430	Merchandising Applications	3
FAME 4433	International Apparel Technology	3
FAME 4434	Fashion History	3
FAME 4444	Fashion Merchandising	3
FAME 4445	Senior Seminar in Fashion & Apparel Merchandising	3
FAME 4490	Internship in Fashion & Apparel Merchandising	3
ACCT 2101	Principles of Financial Acct.	3
MGT 3315	Management of Organizations	3
MKT 3400	Principles of Marketing	3
MKT 3410	Retail Management	3
MKT 3420	Principles of Advertising	3
MKT 3430	Professional Sales	3
MKT 3480	Consumer Behavior	3
	Departmentally approved elective	3

GENERAL EDUCATION REQUIREMENTS (page 41) 48

CHEM 1104	Div. II A (required)	4
ECON 1010	Div. II B (required)	3
AGRI 2130	Div. II D (required)	3
IGEN 3116	Div. IV A (required)	3
FREE ELECTIVES		4
MINIMUM TOTAL		124

FASHION MERCHANDISING

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (327)

	Sem.	Hours
MINOR REQUIREMENTS		21
FAME 1420 Applied Design in Fashion & Apparel Merchandising		3
FAME 2430 Image Management for Fashion		3
FAME 2442 Textiles		3
Departmentally approved electives		12

Fashion and Apparel Merchandising

FAME 1400 Introduction to Fashion Merchandising (3) Survey of the field of fashion merchandising. Emphasis on trends and developments of fashion marketing operations.

FAME 1420 Applied Design in Fashion and Apparel Merchandising (3) Application of the elements and principles of design to planning apparel and home or commercial interiors.

FAME 1450 Textile and Apparel Fabrications I (3: 3 lecture, 0 lab) An introductory course with an emphasis on textiles and apparel goods as they relate to computerized equipment and software.

FAME 2430 Image Management for Fashion (3) Wardrobe planning from aesthetic, social, psychological, and economic viewpoints.

FAME 2440 Fashion Merchandising Practicum (2-3) Supervised fashion merchandising-training and experience in an approved retail establishment with emphasis on apparel selection, merchandise sales, and floor management. *May be repeated for a maximum of 12 semester hours.*

FAME 2442 Textiles (3) Characteristics of fibers, yarns, finishes and consideration of fabric construction, and color application. Textile behavior, performance, maintenance and legislative developments pertaining to textiles. Prerequisite: sophomore standing.

FAME 2450 Textile and Apparel Fabrications II (3) Application of technological skills, problem solving techniques and creativity through the use of computerized equipment and software as it relates to apparel production and merchandising. Prerequisites: FAME 1420 and FAME 1450.

FAME 3425 Apparel Performance Evaluation (3: 3 lecture, 0 lab) Principles and techniques of fitting and evaluating material, construction, finishes, and quality of ready-to-wear garments. Prerequisites: FAME 2442.

FAME 3440 Fashion Promotion (3) Researching, planning, and presenting fashion promotion activities appropriate for the apparel and textile industries, including fashion show production.

FAME 3444 Fashion Products (3) Production and merchandising of fashion products, their relationship to industrial trends and the economy. Prerequisites: 3 semester hours of clothing construction, FAME 2442 and ECON 1010.

FAME 4410 Architectural Interiors (3) The application of architectural designs, materials, and furnishings in the interior environment. A concentration of textile products for residential and nonresidential settings that reflect today's lifestyle. Prerequisites: FAME 1420 or equivalent and FAME 2442.

FAME 4414 Advanced Technical Problems in Fashion (3: 3 lecture, 0 lab) Individual or group work on advanced technical problems in Fashion/Apparel Merchandising. Provide exploration of content not available through normal course offerings. *May be repeated for a maximum of 6 semester hours.* Prerequisites: minimum 2.5 Cumulative GPA, written contract/proposal with objectives/learning competency and written department consent.

FAME 4424 Pattern Design (3) The design and construction of garments from a basic pattern, using the principles of art as applied to dress design.

Prerequisites: FAME 2430 and 3 semester hours of clothing construction
FAME 4430 Merchandising Applications (3) Builds upon the necessary understanding, knowledge, and working applications of the basics for profitable fashion merchandising. Prerequisite: ACCT 2101. Corequisite: FAME 4444.

FAME 4433 International Apparel Technology (3) An analysis of economic, political, and cultural systems affecting the importing and exporting of textiles and apparel. Technology affecting the global fashion marketplace will be emphasized.

FAME 4434 Fashion History (3) Analysis of the evolution of fashion in Western civilization. Prerequisite: FAME 2430.

FAME 4442 Advanced Textiles (3) Comparative study of factors influencing the properties of fibers and fabrics as well as the performance of textile and apparel products. Lab period is used to test textile performance with standardized test procedures. Prerequisites: CHEM 1104 or equivalent and FAME 2442.

FAME 4444 Fashion Merchandising (3) Principles and practices of fashion manufacturing and merchandising. Prerequisites: FAME 3444, MKT 3410. Corequisite: FAME 4430.

FAME 4445 Senior Seminar in Fashion and Apparel Merchandising (3) Philosophy, current issues and trends in fashion and apparel merchandising will be covered. Focus on problem-solving styles leading to group and individual research problems. Prerequisites: senior standing.

FAME 4450 Special Problems in Textiles and Clothing (2-3) Recent trends. Group and individual problems which will include reports, discussions, bibliographies, research, and experiments. *May be repeated for a maximum of 6 semester hours.* Prerequisite: FAME 2442.

FAME 4490 Internship in Fashion and Apparel Merchandising (2-3) Provides experience for students in cooperating businesses. *May be repeated for a maximum of 12 semester hours with no more than 6 semester hours graduate credit.*

GRAPHIC ARTS TECHNOLOGY MANAGEMENT

Major, Bachelor of Science Degree (43-146)

The graduate with a Bachelor of Science Degree with a major in Graphic Arts Technology Management will use the knowledge and skills in the program to:

- Utilize terminology appropriate to graphic arts.
- Analyze graphic production systems and solve problems associated with these systems.
- Demonstrate knowledge of current trends and innovations in graphic arts.
- Discuss the role of team dynamics in the work environment.
- Explain the industry structure and career opportunities in graphic arts.
- Demonstrate effective written and oral communication skills.
- Appreciate the societal significance of graphic arts.
- Exhibit professional ethics, environmental responsibility and safety.
- Perform basic production processes which illustrate conceptual understanding of the printing production cycle.

Sem. Hours

	Sem.	Hours
MAJOR REQUIREMENTS		70
GRAP 1000 Orientation to Graphic Arts		1
GRAP 1010 Fundamentals of Printing Processes		3
GRAP 2030 Digital Pre-Press for Printing Applications		3
GRAP 2031 Digital Image Processing		3
GRAP 2032 Imaging Technology		3
GRAP 2035 Digital Imposition & Workflow		3
GRAP 3024 Flexographic Technology		3
GRAP 3034 Offset Press Technology		3
GRAP 3043 Binding, Finishing & Distribution		3
GRAP 3045 Substrates & Inks		4
GRAP 3051 Graphic Arts Management		3
GRAP 3057 Graphic Arts Quality Assurance		3
GRAP 4038 Color Science		4
GRAP 4053 Graphic Arts Production Analysis		3
GRAP 4055 Printing Estimating & Costing		3
GRAP 4095 Senior Seminar in Graphic Arts		1

ACCT 2100	Survey of Accounting	3
MGT 3325	Business Communications	3
GRAP 3016	Graphic Arts Practicum, 3 or	
SOT 3022	Internship in Technology	3
INDM 4210	Industrial Management, 3 or	
MGT 3315	Management of Organizations, 3	3
Approved Electives (with Advisor and Program Coordinator consent) from one of the following areas.		12
Area 1 Customer Service and Sales		
Area 2 Graphic Design		
Area 3 Multimedia/Imaging		
Area 4 Production Management & Supervision		
Area 5 Technical Application		
GENERAL EDUCATION REQUIREMENTS (page 41)		48
CHEM 1104	Div. II A (required) or	
PHYS 1104	Div. II A (required)	4
IGEN 3116	Div. IV A (required)	3
FREE ELECTIVES		6
MINIMUM TOTAL		124

GRAPHICS

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor. (147)

	Sem. Hours
MINOR REQUIREMENTS	20
Electives from the following	6-7
GRAP 1010 Fundamentals of Printing Processes	3
GRAP 1110 Fundamentals of Drafting	2
PHOT 1210 Foundations of Professional Phot.	3
PHOT 1211 Foundations of Technique & Critique	1
Departmentally approved electives in graphics	13-14

Graphic Arts

GRAP 1000 Orientation to Graphic Arts (1) Orientation to the philosophy, development, and current trends in the professional preparation for careers in graphic arts.

GRAP 1010 Fundamentals of Printing Processes (3) Digital pre-press, printing production and post-press processes, materials and equipment. Laboratory experiences support lecture/theory content.

GRAP 1500 Technical Problems in Graphics (1-3) Individual or group work on introductory level technical problems in graphics. Provide exploration of content not available through normal course offerings. *May be repeated for a maximum of 6 hours.* Prerequisite: written contract/proposal with objectives and departmental consent.

GRAP 2030 Digital Pre-Press for Printing Applications (3) Electronic page layout methods and image generation using current applications. Prerequisite: GRAP 1010.

GRAP 2031 Digital Image Processing (3) The study of systems/applications used to manipulate and modify images for printing. Practical experience in image composition and manipulation, including typographical and special effects.

GRAP 2032 Imaging Technology (3) Investigation of photographic and electronic technology used to produce line, halftone and color separated images for printing processes. Laboratory experiences support lecture/theory content. Prerequisite: GRAP 1010.

GRAP 2035 Digital Imposition & Workflow (3: 1.5 lecture, 1.5 lab) Manual and electronic imposition methods, prepress proofing, conventional lithographic platemaking, computer to plate techniques, and direct digital printing. Laboratory experiences support lecture/theory content. Prerequisite: GRAP 1010.

GRAP 2610 Principles of Multimedia (3) Selection, organization, and production of materials for multimedia. Introductory experiences creating web pages and interactive presentations for business, industry, and education.

GRAP 2620 Multimedia Applications I (3) Multimedia experiences including implementation of visual and sound applied to the www and other technologies. These applications include still and motion imaging and animation. Hands-on experiences supplement lecture. Prerequisite: GRAP 2610.

GRAP 2670 Multimedia Animation (3) Fundamentals of animation theories and practices specializing in digital applications. Planning and storyboarding for types of animation. Hands-on experiences will supplement lecture. Prerequisite: GRAP 2610.

GRAP 3016 Graphic Arts Practicum (3) Supervised work on selected aspects of producing the printed product and/or managing a printing plant. *May be repeated for a maximum of 6 semester hours.* Prerequisite: 2.00 grade-point average overall; department consent.

GRAP 3024 Flexographic Technology (3: 2 lecture, 1 lab) Flexographic printing technology from prepress through postpress operations for both wide and narrow web applications. Instruction on rotary letterpress will also be included. Laboratory experiences support lecture/theory content. Prerequisite: GRAP 1010.

GRAP 3034 Offset Press Technology (3: 2 lecture, 1 lab) Lithographic sheet fed and web press operation and maintenance with emphasis on sources of image problems. Solutions for interrelated substrate, ink, and plate problems. In-line finishing and image carrier technology as they relate to quality image transfer. Laboratory experiences support lecture/theory content. Prerequisite: GRAP 1010.

GRAP 3036 Advanced Offset Lithography (3: 2 lecture, 1 lab) Offset Lithography from image preparation through finishing with concentration on multi-color and process printing, perfecting and automated press controls. Prerequisites: GRAP 2030, GRAP 2031, GRAP 2032, GRAP 2035 and GRAP 3034.

GRAP 3040 Screen Printing (3: 2 lecture, 1 lab) Computer image preparation, screen tensioning, mesh selection, photo stencils, squeegees, markets, principles and applications for industrial screen printing. Laboratory experiences support lecture/theory content. Prerequisite: GRAP 1010.

GRAP 3043 Binding, Finishing and Distribution (3: 2 lecture, 1 lab) Equipment, operations, and principles relative to trimming, binding, folding, shipping/ mailing and specialized finishing operations, including scoring, perforating, die-cutting, embossing and foil stamping. Prerequisite: GRAP 1010.

GRAP 3045 Substrates and Inks (4: 3 lecture, 1 lab) Properties, specification, pricing and procurement of ink and printing substrates (especially paper) relative to commercial printing with emphasis on offset lithography. Prerequisite: GRAP 1010.

GRAP 3051 Graphic Arts Management (3) Principles and practical application of management functions as related to the production of printed materials. Instruction includes classroom simulation of management roles. Prerequisites: GRAP 2035 and junior level status.

GRAP 3057 Graphic Arts Quality Assurance (3) Statistical quality control for graphic arts production; includes data analysis, product acceptance, process control, and problem solving techniques used in the management of quality. Prerequisites: GRAP 2032 or GRAP 3034 or GRAP 3045.

GRAP 4014 Advanced Technical Problems in Graphic Arts (1-3) Individual/group work on recent developments and advanced technical concepts. Experimentation and technical exploration of content not available through formal course offerings in the department. By arrangement for qualified students. *May be repeated for a maximum of 6 semester hours.* Prerequisite: written contract/proposal with objectives and written department consent.

GRAP 4038 Color Science (4: 3 lecture, 1 lab) Technical aspects of process color reproduction; includes color theory, ink evaluation, densitometry, tone reproduction, printing characteristics, color correction, gray balance, color separation, and proofing. Laboratory experiences support lecture/theory content. Prerequisite: GRAP 2032.

GRAP 4045 Advanced Digital Image Processing (3) Advanced image manipulation techniques as related to color and correction with special techniques for the printing and imaging industry. Prerequisite: GRAP 2031 and GRAP 2032.

GRAP 4051 Print Production (3) Applied experiences in management and technological applications in the production of printed material including prepress, press, and post press operations. Prerequisites: GRAP 2032, GRAP 2035, and GRAP 3051.

GRAP 4053 Graphic Arts Production Analysis (3) A variety of printing requests are analyzed to determine printing specifications, production sequence, cost factors, material ordering, and technical problems that may arise during the actual printing. Course emphasis utilizes this analysis into a planning sequence of communications, scheduling, routing, dispatching, and work and material flow required for printing production. Prerequisites: GRAP 2035, GRAP 3034 and GRAP 3045.

GRAP 4055 Printing Estimating and Costing (3) Identification of costs relative to materials, operations, and labor utilized in the production of printed matter. Budgeting, forecasting, cost accounting, and budgeted hourly rates. Prerequisites: GRAP 3051 and GRAP 4053.

GRAP 4095 Senior Seminar in Graphic Arts (1) Professional preparation integrating team building skills, problem solving, and analysis of current trends specific to graphic arts. Prerequisite: 90 semester hours.

GRAP 4500 Special Projects in Graphics (1-3) Investigation of contemporary problems and issues in graphics by selected individuals or groups. *May be repeated for a maximum of 6 semester hours.* Prerequisites: written contract/proposal with objectives and written department consent.

TECHNOLOGY

Major, Bachelor of Science Degree (43-289)

The graduate with a Bachelor of Science Degree in Technology program will use the knowledge and skills obtained in the program to:

- Apply mathematical, statistical and scientific principles to technological situations to maintain and enhance the work within business.
- Use the computer proficiently as an essential tool in planning, monitoring, and controlling of work within business.
- Understand management concepts of cost estimating, quality improvement, scheduling, production planning and control, supervision, work design, ergonomics, plant layout and materials handling.
- Communicate effectively in both individual and team situations using both oral and written communications
- Utilize critical thinking skills to solve problems in both individual and team situations.
- Areas of specialization: Management, Construction, Electronics, Manufacturing, General Technology.

Sem. Hours

MAJOR REQUIREMENTS 47

ET 1010	Applied Electricity, 4 or	
ET 1020	General Electronics, 3	3-4
ET 1050	Digital Principles & Applications	4
GRAP 1105	Basic AutoCAD	1
GRAP 1110	Fundamentals of Drafting	2
GRAP 2170	Intro. to Computer-Aided Drafting	2
ENGT 2040	Engineering Materials Science	4
ENGT 2530	Machine Tool Technology	3
ENGT 3562	Computer Numerical Control (CNC)	3
PR&T 1010	Power Mechanics	3
PR&T 4032	Hydraulics & Pneumatics	3
INDM 4210	Industrial Management	3
SAFE 3000	Prin. of Acc. Caus. & Prev.	3
ACCT 2100	Survey of Accounting	3
Upper-level electives in CMGT, ENGT, ET, GRAP, INDM, MMGT, PR&T, SOT, or TECH		9-10

GENERAL EDUCATION REQUIREMENTS (page 41) 48

PHYS 1104	Div. II A Part 1 (required)	4
ECON 1010	Div. II B (required)	3
GEOG 3201	Div. II D (required)	3
COMM3010	Div. III (required)	3
ICAP 4110	Div. IV (required), 3 or	
IGEN 3116	Div. IV (required), 3	3

FREE ELECTIVES 29

MINIMUM TOTAL 124

TECHNOLOGY 2+2

Major, Bachelor of Science Degree

This "2+2" program is designed to build upon an Associate Degree. (43-329)

The graduate with a Bachelor of Science Degree in Technology 2+2 major transfer program will use the knowledge and skills obtained in the program to:

- Apply mathematical, statistical and scientific principles to technological situations to maintain and enhance the work within business.
- Use the computer proficiently as an essential tool in planning, monitoring, and controlling of work within business.
- Understand management concepts of cost estimating, quality improvement, scheduling, production planning and control, supervision, work design, ergonomics, plant layout and materials handling.
- Communicate effectively in both individual and team situations using both oral and written communications.
- Utilize critical thinking skills to solve problems in both individual and team situations.
- Areas of specialization: Management, Construction, Electronics, Manufacturing, General Technology.

Sem. Hours

MAJOR REQUIREMENTS 76

Associate Degree Technology Courses	38
A technology related Associate in Applied Science or Associate in Science Degree from an accredited community college or technical institute in a field of study related to the School of Technology will be accepted. Thirty-eight semester hours of the degree transferred should apply towards the major and the remainder towards General Education. The General Education requirements transferred must be equivalent to UCM's requirements. NOTE: <i>All core courses are offered online.</i>	
Core	21
INDM 4010	Current Issues in Industry 3
INDM 4015	Legal Aspects of Industry 3
INDM 4210	Industrial Management 3
INDM 4260	Organizational Dynamics 3
MMGT 4580	Quality Systems 3
SAFE 3000	Prin. of Acc. Caus. & Prev., 3 or
SAFE 3120	Industrial Hygiene, 3 3
CTE 3060	Technical Writing 3
Electives from one or more of the following areas	17

Area 1: Management

TECH 3050	Technical Career Subjects, 1-3 or	
SOT 3022	Internship in Technology, 1-3	1-3
INDM 4220	Human Factors Engineering	3
INDM 4240	Facilities Engineering	3

Area 2: Construction

CMGT 3320	Prin. of Construction Mgt.	3
CMGT 3330	Building Codes & Code Admin.	3
CMGT 3355	Const. Plan & Sched.	3
CMGT 4325	Computer Est. & Cost Analysis	3
CMGT 4330	Mechanical Systems for Buildings	3
CMGT 4355	Comp.-Based Proj. Control	3

Area 3: Electronics

NET 3062	Network Design	3
NET 4060	Advanced Routing	3
NET 4062	Advanced Switching	3
NET 4064	Advanced Network Design	3
NET 4100	Network Device Configuration	3

Area 4: Manufacturing

ENGT 3510	Eng. Planning & Control	3
ENGT 3520	Engineering Economy	3
ENGT 3530	Inspection & Quality Control	3
ENGT 3562	Computer Numerical Control (CNC)	3
MMGT 4520	Robotics & Automation	3
MMGT 4590	Computer Integrated Manuf. (CIM)	3

Area 5: General Technology

The student, working with a faculty adviser, will select a minimum of 17 sem. hours of upper level coursework from program areas in the School of Technology

GENERAL EDUCATION REQUIREMENTS (page 41) 48

Associate in Applied Science or Associate in Science Degree
 General Education courses transferred (if equivalent) 15-18
 General Education courses remaining (based on 15-18
 General Education equivalent courses transferred in) 30-33

MATH	1111	Div. I C (required)	3
PHYS	1104	Div. II A (required)	4
BTE	1210	Div. II A (required)	2
ECON	1010	Div. II B (required)	3
ICAP	4109	Div. IV or	
ICAP	4110	Div. IV or	
IGEN	3116	Div. IV	3

MINIMUM TOTAL 124

Technology

- TECH 1040 Technical Mathematics I (3)** Application of the principles of algebra, geometry, and the fundamental concepts of trigonometry to technical work. Designed for associate degree technical programs. Prerequisite: AE 1030 or one unit of high school algebra.
- TECH 1042 Technical Mathematics II (3)** Application of the principles of numerical and analytical trigonometry, complex numbers, vector algebra and oblique triangle, logarithms, basic analytic geometry and probability theory. Prerequisite: MATH 1111 or concurrently; or TECH 1040
- TECH 2040 Calculus for Technology (3)** Application of the fundamental concepts of differential and integral calculus to technology. Prerequisites: MATH 1111; and TECH 1042 or MATH 1112.
- TECH 3050 Technical Career Subjects (1-3)** In-depth competency, skill development, and advanced concepts taught in formal course offerings through explorations of innovative techniques and procedures used in business and industry. *May be repeated for a maximum of 12 semester hours.* Prerequisite: consent of a review committee of three faculty members in the department.
- TECH 4020 Industrial Energy Management (3)** Energy efficient techniques in a variety of industrial settings.
- TECH 4050 Equipment Installation and Maintenance* (2)** Technical problems in the installation of power equipment; care and maintenance of tools and machines; servicing school equipment; safety. *Not available for graduate credit.

INDUSTRIAL TECHNOLOGY-MANUFACTURING MANAGEMENT

Major, Bachelor of Science Degree
 (43-240)

This program has been placed in abeyance. See the Department Chair for more information.

MANUFACTURING

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor
 (153)

	Sem.	Hours
MINOR REQUIREMENTS		22
ENGT 2040 Engineering Material Science	4	
ENGT 2530 Machine Tool Technology	3	
ENGT 3562 Computer Numerical Control (CNC)	3	
Electives from the following	12	
ENGT 1510 Intro. to Manufac. Processes	3	
ENGT 2515 Applied Manufac. Processes	3	
ENGT 3530 Inspection & Quality Control	3	
MMGT 4520 Robotics & Automation	3	
MMGT 4590 Computer Integrated Manuf. (CIM)	3	
GRAP 1105 Basic AutoCAD	1	
GRAP 1110 Fundamentals of Drafting	2	
GRAP 2170 Intro. to Computer-Aided Drafting	2	

Manufacturing Management

- MMGT 4060 Aerospace Manufacturing Safety (3)** Safety, health and environmental issues in aerospace manufacturing with an emphasis on the management of safety programs in manufacturing industries.
- MMGT 4221 Manufacturing Problem Solving (3)** A micro-level look at issues that directly affect processes, procedures, and management within the manufacturing industry.
- MMGT 4520 Robotics and Automation (3)** Automated manufacturing equipment, computer integrated manufacturing systems, and the use of industrial robots. Computer programming background recommended.
- MMGT 4580 Quality Systems (3)** The principles and practices of Total Quality Managements and the decision making tools and techniques utilized by professionals in today's successful industries.
- MMGT 4590 Computer Integrated Manufacturing (CIM) (3: 2 lecture, 1 lab)** Emphasis on product planning and engineering, production planning, control, and execution. Includes integration of computer numerical control (CNC) machines, robotics, material handling, and quality control. Prerequisite: MMGT 4520 or consent of instructor.

Integrative Studies Capstone

- ICAP 4110 Industrial Problem Solving* (3)** Designed for students preparing for careers in manufacturing management. Student teams will analyze manufacturing problems, propose solutions, and present recommendations. Prerequisite: senior standing. *Not available for graduate credit.

Industrial Management

- INDM 4010 Current Issues in Industry (3)** Identify, discuss, and research current issues, trends, and technological changes affecting industry as related to corporate planning, decision making, and managing for the future. Prerequisites: junior or senior standing for undergraduate credit.
- INDM 4015 Legal Aspects of Industry (3)** Coverage of legal aspects of industry. Focus on the legal system, sources of law, and types of law affecting the manufacturing and/or construction industry.
- INDM 4210 Industrial Management (3)** A survey of operations management in industry today. Industrial management principles and applications, management science, operations analysis and design, manufacturing processes, process life cycle, production inventory, and quality control are emphasized.
- INDM 4220 Human Factors Engineering (3)** Integration of concepts involved in providing safe and comfortable work places (Ergonomics) with concepts directed toward increased productivity and profitability (VWork Design).
- INDM 4230 Quality Control Management (3)** Overall approach to quality and the control activities of management. Technical aspects of management control systems, statistical analysis, statistical quality control, and management concepts are emphasized. Prerequisite: background statistics course.
- INDM 4240 Facilities Engineering (3)** Provides students and practitioners with the practical resources that describe the techniques and procedures for developing an efficient facility layout and an introduction to computer simulations.
- INDM 4260 Organizational Dynamics (3)** Various types and styles of supervisory leadership in the industrial setting. Emphasis is placed on human relations aspects of leadership in the line and staff organizational structure.
- INDM 4280 Industrial Statistics (3)** Statistical methods designed for industrial and applied research. Some of the quantitative methods used for solving industrial problems, including measurement system analysis, statistical process control, probability distribution, testing hypotheses, multiple regression analysis, design of experiment, and nonparametric statistics commonly used in industry. Prerequisite: MATH 1111 or consent of instructor.

PHOTOGRAPHY

Major, Bachelor of Science Degree
(43-228)

The graduate with a Bachelor of Science degree in Photography will use the knowledge and skills obtained in the program to:

- Comprehend, discuss and demonstrate visual literacy.
- Recognize and demonstrate professional and visual ethics and attitudes pertaining to photography.
- Demonstrate the attitude and skills for self-motivated and life-long learning and behavior.
- Comprehend and apply appropriate scientific concepts, principles, and photographic technologies and possess the flexibility to accommodate technological change.
- Apply accepted principles and practices for managing processes, systems, material, financial, and human resources in the photographic industry.
- Demonstrate appropriate communication, managing information, critical thinking, problem solving, conceptual/creative/artistic and technical skills.
- Demonstrate the necessary technical and professional skills associated with creating and producing high quality images, on-demand, using a wide range of appropriate equipment to an informed, discerning clientele.
- Demonstrate proficiency within one of four specialty areas in the profession. These four areas are: commercial, portrait, media and technical.
- Develop skills to create and maintain a dynamic portfolio appropriate to career goals.
- Demonstrate the ability to select the most appropriate photographic technology for specific tasks.

	Sem. Hours
MAJOR REQUIREMENTS	47
PHOT 1210 Foundations of Professional Photography	3
PHOT 1211 Foundations of Technique & Critique	1
PHOT 1216 Photographer's Forum 1	1
PHOT 2216 Photographer's Forum 2	1
PHOT 3216 Photographer's Forum 3	1
PHOT 4216 Photographer's Forum 4	1
Minimum of one (1) semester hour of Forum per academic year.	
PHOT 2200 Editorial Photography	3
PHOT 2210 Intro. Studio Techniques	3
PHOT 2220 Photographic Materials & Proc.	3
PHOT 2270 Conventional B&W Photography	3
PHOT 3230 Digital Imaging	3
PHOT 3250 Portrait Photography	3
PHOT 4200 Color Imaging	3
PHOT 4252 Portfolio Photography	3
Electives from one of the following areas	15
Area 1 Commercial Area 2 Media Area 3 Portrait Area 4 Technical	
GENERAL EDUCATION REQUIREMENTS (page 41)	48
IGEN 3116 Div. IV A (required)	3
FREE ELECTIVES	29
MINIMUM TOTAL	124

PHOTOGRAPHY

Minor for a Bachelor's Degree

UCM does not confer teacher certification for this minor.
(148)

	Sem. Hours
MINOR REQUIREMENTS	20-21
PHOT 1210 Foundations of Professional Photography	3
PHOT 1211 Foundations of Technique & Critique	1
PHOT 2210 Intro. Studio Techniques	3
PHOT 3250 Portrait Photography	3
Electives in photography	10-11

Photography

- PHOT 1203 Introduction to Photography (3)** Course encompasses exposing, and printing photographs including darkroom experiences. Color and digital imaging are introduced. Not for Photo majors or minors.
- PHOT 1210 Foundations of Professional Photography (3)** Primarily intended for photography majors and minors encompassing composition, exposure, processing and printing of digital images. Must furnish an approved digital SLR camera. Corequisite: PHOT 1211
- PHOT 1211 Foundations of Technique and Critique (1)** Explanations, demonstrations, and critique of Foundations of Professional Photography assignments. Corequisite: PHOT 1210.
- PHOT 1216 Photographer's Forum 1 (1)** Seminar for student portfolio presentation and for study of current events in photography through open discussions, activities, and outside speakers.
- PHOT 2200 Editorial Photography (3)** Photographic techniques for producing story telling images in a variety of media environments including news, documentary, sports, and event photography. Prerequisite: PHOT 1210.
- PHOT 2210 Introduction to Studio Techniques (3)** Theory and laboratory experiences involving problems associated with a variety of photographic situations applicable to commercial photography. Prerequisite: PHOT 1210.
- PHOT 2216 Photographer's Forum 2 (1)** Seminar for student portfolio presentation and for study of current events in photography through open discussions, activities, and outside speakers.
- PHOT 2220 Photographic Materials and Processes (3)** Properties of photographic materials, processes and systems will be studied. Laboratory experiences include process control, masking, copying, duplicating, and processing positive and negative photographic materials. Prerequisite: PHOT 1210.
- PHOT 2270 Conventional Black and White Photography (3)** Techniques for controlling tonal values in the black and white photographic process. Emphasis is on production and enhancement of photographic control through the acquisition and refinement of personal technique. Prerequisite: PHOT 1210.
- PHOT 2280 Creative Photography (3)** Analysis of a variety of processes and influences upon which the student can draw to develop their photographic sensibilities of creative self-expression. Prerequisite: PHOT 1210.
- PHOT 3210 Investigative Photography (3)** Exploratory experiences in the accepted photographic techniques for civil and criminal photographic documentation. Prerequisite: PHOT 1210.
- PHOT 3215 Origins of Photography (3)** A survey of the people, styles, inventions, and processes in photography from early developments to present day.
- PHOT 3216 Photographer's Forum 3 (1)** Seminar for student portfolio presentation and for study of current events in photography through open discussions, activities, and outside speakers.
- PHOT 3230 Digital Imaging (3)** Applications-oriented introduction to electronic imaging. Provides knowledge and develops skill in image digitizing, output options, image enhancement and manipulation. Prerequisite: PHOT 1210.
- PHOT 3240 Nature and Scenic Photography (3)** Photographic techniques used to illustrate the natural features of plants, animals, and the landscape. The student must furnish a focusing 35mm or larger format camera with adjustable f-stops and shutter speeds and a macro lens, diopters, or other close-up equipment. Prerequisite: PHOT 1210.
- PHOT 3250 Portrait Photography (3)** Experiences in portrait photography with an emphasis on professional techniques, and the operation of specialized equipment utilized in the field. Prerequisite: PHOT 1210.
- PHOT 3260 Digital Portfolio (3)** Develop knowledge and skills in planning, researching, formatting, sequencing and producing a multi-image digital portfolio. Prerequisite: PHOT 3230.
- PHOT 3280 Advanced Studio Techniques (3)** Provide an advanced experience in directed studio photographic communication. Prerequisite: PHOT 2210.
- PHOT 3290 Architectural Photography (3)** Architectural photography is the imaging of the man-made structures to convey the experience of being in and around a built environment. Prerequisite: PHOT 2210.

PHOT 4200 Color Imaging (3) In-depth experience in exposing, manipulating and printing color images. Prerequisites: PHOT 2210, PHOT 2200, PHOT 3230.

PHOT 4210 Wedding & Location Photography (3) Provide advanced instruction and practice in non studio portrait photography using professional light control techniques. Prerequisite: PHOT 3250.

PHOT 4214 Advanced Technical Problems in Photography (1-3) individual or group work on advanced technical problems in photography. Provide exploration of content not available through normal course offerings. *May be repeated for a maximum of 6 semester hours.* Prerequisites: minimum 2.5 GPA, written contract/proposal with objectives and written department consent.

PHOT 4215 Advanced Digital Imaging (3) This course surveys the modern development of photography beginning with 1900 to contemporary imaging styles, photographers, and systems. Course includes on-line discussion, written assignments, and critique concerning the comparative analysis of various periods, schools of thought, and particular individuals. Prerequisite: PHOT 3125.

PHOT 4216 Photographer's Forum 4* (1) Seminar for student portfolio presentation and for study of current events in photography through open discussions, activities, and outside speakers. *Not available for graduate credit.

PHOT 4220 Advanced Digital Imaging (3) An advanced study of digital image editing systems used to manipulate, modify and composite images for photographic illustration. Prerequisite: PHOT 3230.

PHOT 4230 Business Management for Photographers (3) Exploratory experiences, information and techniques concerning the use of computer hardware and software used for photographic business management. Prerequisite: PHOT 3250.

PHOT 4250 Advanced Color Portraiture (3) Commercial photography providing experiences in posing, exposure, and composition for a color portrait. Precise camera room techniques will be emphasized to ensure the most salable product from machine proofing. Prerequisites: PHOT 1210 and PHOT 3250.

PHOT 4252 Portfolio Photography (3) Culminating experience in photography providing for the creation of a successful interview strategy and the production of a portfolio to reflect personal career goals. Prerequisite: Senior standing or consent of chairperson/instructor.

PHOT 4260 Advertising Photography (3) Theories and practices of advertising photography as a marketing medium with in-depth experience in procedures and techniques. Prerequisite: PHOT 3280 or consent of instructor.

Office of Undergraduate Studies

Academic Enrichment

The *Department of Academic Enrichment (AE)* strives to improve student academic success by helping underprepared students prepare, prepared students advance, and advanced students excel.

Academic Enrichment students will develop and demonstrate knowledge and skills needed to:

- Meet and exceed UCM's academic standards through introductory college courses in composition, mathematics and reading.
- Function successfully at UCM through courses designed to orient students to the university environment, college studies and diversity.

General

AE 1000 Introduction to College Writing (3) Classroom and tutorial instruction in the process of developing paragraphs and longer essays with emphasis placed on mechanics, usage, and sentence structure.

AE 1012 Speed Reading (1) Principles and applications of speed reading and comprehension techniques to textbooks and other types of reading materials. Inquire at Learning Center, Humphreys 110.

AE 1030 Introductory Algebra (3) Designed to review or improve basic algebra skills. Includes integers, equations, inequalities, polynomials, factoring, quadratic equations, graphing linear equations and work with word problems.

TRIO Student Support Services

AE 0101 Fundamentals of Writing I SSS (3) Review and application of English grammar and basic writing techniques. Prerequisite: acceptance into TRIO Student Support Services. Not applicable to graduation requirements.

AE 0111 University Study Techniques I SSS (3: 3 lecture 0 lab) Review and application of methods for vocabulary, comprehension, and reading rate development. Prerequisite: acceptance into TRIO Student Support Services. Not applicable to graduation requirements.

AE 0131 Fundamentals of Math I SSS (3) Review of fractions and decimals with an introduction to negative numbers and linear equations. Prerequisite: acceptance into TRIO Student Support Services. Not applicable to graduation requirements.

AE 1102 Fundamentals of Writing II SSS (3) Continuation and further application of grammar and writing techniques through paragraph and essay development. Prerequisite: acceptance into TRIO Student Support Services and AE 0101 or demonstrated skill level. This course substitutes for AE 1000.

AE 1112 University Study Techniques II SSS (3: 3 lecture, 0 lab) Continuation and further application of vocabulary, comprehension, and reading rate development, in addition to flexibility and methods for reading college textbooks. Prerequisite: acceptance into TRIO Student Support Services and AE 0111 or demonstrated skill level. This course substitutes for AE 1010.

AE 1125 College Success Strategies SSS (1) Focus on personal responsibility to enhance academic achievement. Prerequisite: acceptance into TRIO Student Support Services and AE 1400 or consent.

AE 1132 Fundamentals of Math II SSS (3) Continuation and further application of math skills through an introduction to algebra, including properties of numbers, linear equations, graphing, polynomials, factoring, and quadratic equations. Prerequisite: acceptance into TRIO Student Support Services and AE 0131 or demonstrated skill level. This course substitutes for AE 1030.

Test Preparation

AE 1200 C-BASE Review - English (1) This course is a review of the basic concepts of English (reading and literature, and writing) to assist the student in preparing to take the English section of the College Base Academic Subjects Examination (C-BASE).

AE 1210 C-BASE Review - Social Studies (1) This course is a review of the basic concepts of social studies (history and the social sciences) to assist the student in preparing to take the social studies section of the College Base Academic Subjects Examination (C-BASE).

AE 1220 C-BASE Review - Science (1) This course is a review of the basic concepts of science (life, earth, and physical) to assist the student in preparing to take the science section of the College Base Academic Subjects Examination (C-BASE).

AE 1230 C-BASE Review - Mathematics (1) This course is a review of the basic concepts of mathematics (general mathematics, algebra, and geometry) to assist the student in preparing to take the mathematics section of the College Base Academic Subjects Examination (C-BASE).

AE 1240 LSAT Test Preparation (1) This course provides students with information about and practice with the types of questions asked on the LSAT. Strategies for successfully taking this test are also presented. Audit or P/F credit only.

AE 1250 GRE Test Preparation (1) This course is designed to help students prepare to take the GRE by becoming more familiar with the adaptive test format used by GRE. Students will be provided with tips and strategies for answering the antonym, analogy, and reading comprehension questions. Time will also be spent practicing for the two writing samples now added to the GRE. Audit or P/F credit only.

Orientation

AE 1400 Freshman Seminar (1) An introduction to university academics and university life. Intended for all new students at UCM. Topics include university resources, academic skills, interpersonal skills, time management, and goal setting. Open only to students with fewer than 25 University of Central Missouri credits. Not available to students with credit in AE 1420.

AE 1410 Exploring College Majors and Careers (1) An introduction to the wide range of college majors and career options. Students develop self-awareness through assessments, counseling, activities, discussions and interviews. Not available to students with credit in AE 1420.

AE 1420 Freshman Seminar and Career Exploration (2) An introduction to university academics and university life with emphasis on the wide range of college majors and career options with a focus on self-awareness. Open only to students with fewer than 25 University of Central Missouri credits. Not available to students with credit in AE 1400 or AE 1410.

AE 1450 Valuing Differences: Discovering Common Ground (1) Explores personal, experiential, and interactive issues relating to race, gender, class, and culture including ways that culturally diverse populations enrich society through differences and similarities.

Technology

AE 1620 MS Office Word (0.5) An individualized, arranged course designed to teach basic word processing in order to help students achieve their academic and personal technology goals.

AE 1630 MS Office PowerPoint (0.5) An individualized, arranged course that teaches the process for creating interactive presentations in order to help students achieve their academic and personal technology goals.

AE 1640 MS Office Excel (0.5) An individualized, arranged course that teaches the process of creating spreadsheets, tables, and charts in order to help students achieve their academic and personal technology goals.

AE 1650 MS Office Access (1.0) An individualized, arranged course that teaches the process for creating database tables, forms and queries in order to help students achieve their academic and personal technology goals.

Learning Techniques and Special Projects

AE 0800 Special Projects (0.5, 1, 1.5, 2, 3) Individual or group study of material in special areas of interest. *May be repeated for a maximum of 6 semester hours.*

AE 1800 Special Projects (0.5, 1, 1.5, 2, 3) Individual or group study of material in special areas of interest. *May be repeated for a maximum of 6 semester hours.*

AE 1820 Learning Strategies (2) Learning Strategies helps students develop college-level study skills. The coursework emphasizes strategies for taking lecture notes, reading textbooks, managing time, setting goals, processing information, and taking tests.

AE 1825 Supplemental Instruction Lab (1) Supplemental Instruction and structured learning lab for the designated Learning Community block courses. Corequisite: AE 1820.

AE 1826 Supplemental Instruction Lab (1) Supplemental Instruction and structured learning lab for the designated course(s) in which the student is concurrently enrolled. *May be repeated for a total of 6 semester hours.*

AE 1840 Ways of Thinking: Perspectives on Mind and Thought (3) General overview of critical thought, including brain function, scientific method, logic, creative thinking, problem solving strategies, analysis, synthesis, and personal learning and thinking preferences and styles.

AE 2830 Peer Tutoring in the Writing Center (2) Introduction to the theory and practice of one-on-one tutoring in a writing center setting, with emphasis on tailoring instruction to specific student populations. Prerequisites: Completion of freshmen English requirements (ENGL 1020 and 1030 or ENGL 1080) or their equivalents with grades of A and cumulative GPA of 3.2.

AE 4800 Special Projects (0.5, 1.0, 1.5, 2.0, 3.0) Individual or group study of material in special areas of interest. *May be repeated for a maximum of 6 semester hours.*

Integrative Studies

To enroll in a course for General Education Div. IV Area A or B, a student will have successfully completed a minimum of 60 semester hours, all required Intellectual Skills courses, and at least 24 semester hours of General Education Core courses, including a course from each core area. Any additional prerequisites are listed per course.

Integrative Studies Capstone

ICAP 4101 Agricultural Capstone Experience* (3) Integration of agricultural knowledge and problem solving skills using case studies in a seminar forum. Prerequisites: 24 semester hours of agriculture courses and senior standing. *Not available for graduate credit.

ICAP 4109 Construction Operations* (3) A detailed study of the knowledge, processes and operational procedures involved in a commercial construction project. Prerequisites: CMGT 2310, CMGT 2325, CMGT 3320 and CMGT 3355 and senior standing. *Not available for graduate credit.

ICAP 4110 Industrial Problem Solving* (3) Designed for students preparing for careers in manufacturing management. Student teams will analyze manufacturing problems, propose solutions, and present recommendations. Prerequisite: senior standing. *Not available for graduate credit.

ICAP 4111 Socio-Economic Factors Impacting Health* (3) Examines selected socio-economic issues and their impact on health. *Not available for graduate credit.

ICAP 4112 Automotive Systems for Contemporary Society* (3) Integration of communication, technology, sociology, economics, and ecology with automotive engineering, management and service, emphasizing their reciprocal effects on each other. Prerequisite: senior standing in automotive technology. *Not available for graduate credit.

ICAP 4113 Air Operations Management* (3) Challenges the student to perform as an effective member of an air operations management team using critical thinking, decision making and ethics. Prerequisite: senior standing in aviation technology. *Not available for graduate credit.

ICAP 4115 Safety and Health Management* (3) Integration of safety information using conceptual and technical data to resolve safety and health issues. The case study approach will be emphasized. Prerequisites: admission to program, 27 semester hours of SAFE courses and senior standing. *Not available for graduate credit.

ICAP 4221 Artists in Contemporary Society* (3) Artists examine diverse theories of art and ethics as it impacts their careers in a global society. Prerequisite: Consent to enroll, based on the following conditions: all general studies completed; art major; scheduled for graduation the semester enrolled (or the following semester if an art education major). *Not available for graduate credit.

ICAP 4222 The Biological Perspective* (3) An examination of current issues from a biological perspective including the impact of biology on history and culture. For biology majors. Prerequisite: 22 semester hours of biology. *Not available for graduate credit.

ICAP 4225 Computer Science Capstone Experience* (3) Integration of computer science topics from other disciplines, including studies in computer ethics, the social impact of computing, and the psychological issues of computer/human interfaces. Prerequisite: Senior standing in Computer Science. *Not available for graduate credit.

ICAP 4233 The Scientific, Historical, and Sociological Impact of Mathematics* (3) Provides an opportunity to experience and understand the importance of mathematics in human development. Prerequisite: 15 semester hours of college mathematics. *Not available for graduate credit.

ICAP 4240 Literature and Its Discourses* (3) Students will review the skills, content, and methodologies of literary studies and gain a new perspective on them by studying other disciplines and methodologies. Prerequisites: Consent to enroll based on the following conditions: all General Education courses completed; English Major, Bachelor of Arts Degree; scheduled for graduation the semester enrolled or the following semester. Not available for English elective credit. *Not available for graduate credit.

International Center

Intensive English Program

The English Language Center (ELC) offers intensive instruction in English and other short-term programs for English language studies. For qualifying students, the Intensive English Program (IEP) provides the opportunity to improve students' English language skills and become accustomed to a university setting in the United States. The courses are designed to help non-native speakers of English build on their existing language skills. The IEP offers six levels of courses in reading, writing, grammar, communication skills, testing skills, vocabulary, accent reduction, American culture, and academic preparation. Each course is eight weeks long. Two eight-week courses is equal to one level. These courses are credit bearing, but do not count toward completion of an academic degree.

International Study Abroad

ISP 4000 Study Abroad (1-18) This course allows students to enroll at the University of Central Missouri while attending classes in a sponsored study abroad program. The variable credits are based on the number of credit hours the student plans to complete at the foreign institutions. The actual credit recorded represent those credits completed by the student and transferred back to UCM. *May be repeated for a total of 18 semester hours in one semester.* Prerequisite: approval of the Director of the International Center.

ICAP 4245 Actuarial Science Capstone Experience* (3) Integration of actuarial science topics and skills with topics from various other disciplines, including actuarial ethics, social roles, and the Code of Professional Conduct. Prerequisite: MATH 4520, FIN 3850, MGT 3315, MGT 3325, MKT 3405, and senior standing. *Not available for graduate credit.

ICAP 4357 Business Policy* (3) Capstone course requiring integration of business knowledge using conceptual, communication, interpersonal, and technical skills applied to strategic management. Case study and competitive simulation methods are used in an experiential team learning environment. Prerequisites: Admission to the B.S.B.A. program, FIN 3850, MGT 3315, MGT 3325, MKT 3405, and senior standing. *Not available for graduate credit.

ICAP 4468 Student Teaching Secondary II* (4) To be taken in the Professional Semester. For all secondary majors, all K-12 majors, and K-9 majors in elementary physical education. Prerequisite: admission to Teacher Education Program. Corequisite: FLDX 4495 or FLDX 4595 or EDSP 4395. *Not available for graduate credit.

ICAP 4478 Integrative Social Work Practicum Seminar* (3) Integration of classroom knowledge with 500 hours in social service agency practicum. Open to social work majors only. Corequisite: SOWK 4660. Prerequisites: all other required major courses must be completed and consent of the Coordinator of Field Education. *Not available for graduate credit.

Integrative Studies General

IGEN 3116 Creative Problem Solving (3) A broad approach to formal techniques in creative problem solving applicable to any field of endeavor and interest. An additional fee is assessed for this course.

IGEN 3224 Critical Thinking (3) Provides insight into and application of the skills needed to think critically about interpersonal and media messages, as well as analyze information.

IGEN 3232 Media Literacy (3) Explores the relationships between media, its consumers, and producers. Integrates cultural, technological, and economic perspectives on mass media and visual communication.

IGEN 3468 Community, School and Family Connections (3) Focuses on the interactions among community, school and family systems relative to existing and emerging paradigms.

IGEN 3472 Sport in American Life (3) Provides for an understanding and appreciation of the role of sport in American life.

IGEN 3896 Assessing Global Change for the Information Age (3) Challenges students to assess present and future trends, evaluate what is desirable, and reflect on their responsibility for the quality of life in the information age.

IGEN 4224 Communication, Science and Technology (3) Students will focus on the interactions among science, technology and society by examining scientific communication and scientific and technological controversies. Prerequisite: completion of General Education Div. II A.

IGEN 4231 Myth, Memory and Realities* (3) Examines a selected topic in American or World history and literature to understand how interpretations of the past have been constructed to explain the present. *Not available for graduate credit.

IGEN 4236 Science and Religion: From Conflict to Dialogue* (3) A clarification of the historical and philosophical issues that arise in the relationship between science and religion. The course emphasizes a variety of interpretive viewpoints. *Not available for graduate credit.

IGEN 4244 Comparative Cross-Cultural Cinema* (3) Comparison of films with various sub-themes relating to cross-cultural topics such as internationalism, racism and gender. *Not available for graduate credit.

Faculty and Staff

Listing as of March 1, 2009

PRESIDENT

AARON M. PODOLEFSKY – President and Professor of History and Anthropology. B.A., San Jose State University; M.A., M.A., Ph.D., State University of New York at Stony Brook.

VICE PRESIDENTS

RICHARD C. MORRELL – Vice President for Student Affairs. B.S.E., M.S., Emporia State University; Ph.D., University of Northern Colorado.

PAUL PAGE – Interim Vice President for University Advancement. A.A., Fort Scott Community College; B.S., M.S., Pittsburg State University; Ph.D., University of Kansas.

BETTY J. ROBERTS – Vice President for Administration and Finance. A.A., Cazenovia College for Women; B.A., Tusculum College; M.Ed., University of Louisville; Ed. Specialist., Ph.D., University of Missouri - Columbia.

GEORGE W. WILSON – Provost and Vice President for Academic Affairs and Professor of Economics. B.A., M.A., Ph.D., Oklahoma State University.

ADMINISTRATIVE STAFF

Academic Affairs

AKINWUMI B. ADEBAYO – Director of Institutional Research. B.A., University of Lethbridge, Alberta, Canada; M.A., State University of West Georgia; Ph.D., Kansas State University.

KIMBERLY D. ANTHES – Operations Manager, Library Services. B.S., Central Missouri State University.

KARI ANN AZEVEDO – Academic Coordinator, TRIO-McNair Scholars Program. B.A., College of Saint Benedict; M.S., Ph.D., Iowa State University.

NAOMI J. BALDWIN – Assistant Director of International Admissions. B.S., M.S., Central Missouri State University.

WILLIAM A. BANCROFT – MAP Regional Facilitator – Mathematics in Central Regional Professional Development Center. B.S.E., M.S.E., Central Missouri State University.

CYNTHIA A. BERTALOTT – Interim Director, Assessment and Testing Services. B.S.E., M.S.E., Southwest Missouri State University; M.S., Central Missouri State University.

SUDAN BHATTARAI – Microcomputer/Network Specialist, Library Services.

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