University of Maryland University College is a constituent institution of the University System of Maryland. The global university specializes in high-quality, career-oriented degree and nondegree programs tailored to the needs of today’s working adults.

UMUC has earned a worldwide reputation for excellence as a comprehensive virtual university and, through a combination of classroom and distance-learning formats, provides educational opportunities for lifelong learning to students in Maryland, as well as throughout the United States and the world. UMUC serves its students through undergraduate and graduate degree and certificate programs and noncredit leadership development and customized programs, as well as conference services at its Inn and Conference Center in Adelphi, Maryland. For more information regarding UMUC and its programs, visit www.umuc.edu.
ACCREDITATION

University of Maryland University College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104 (215-662-5606). UMUC is governed by the University System of Maryland Board of Regents and certified by the State Council of Higher Education for Virginia. UMUC is a constituent institution of the University System of Maryland.

NONDISCRIMINATION

UMUC is committed to ensuring that all individuals have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by UMUC and/or University System of Maryland policy or by federal, state, or local authorities, in accordance with UMUC Policy 40.30 Policy and Procedures on Affirmative Action, Equal Opportunity, and Sexual Harassment (www.umuc.edu/policy/admin04030.shtml). UMUC does not discriminate against or harass any person because of race, religion, color, creed, gender, marital status, age, national origin, ancestry, political affiliation, mental or physical disability, sexual orientation, or veteran status (including Vietnam-Era veterans). All inquiries regarding UMUC’s Nondiscrimination Statement or compliance with applicable statutes and regulations should be directed to the director of Diversity Initiatives, Office of the President, UMUC, 3501 University Boulevard East, Adelphi, MD 20783-8000 (phone 800-888-UMUC, ext. 7940).

UMUC IN MARYLAND AND AROUND THE WORLD

At University of Maryland University College (UMUC), a high-quality education is always within reach. UMUC is dedicated to offering on-site and online courses and resources to adult students in Maryland and around the world. The leading education provider for the U.S. military, UMUC serves nearly 54,000 servicemembers worldwide. With more than 130 global course locations and 100 undergraduate and graduate degree and certificate programs offered entirely online, UMUC makes it possible to earn a widely respected degree from just about anywhere.

UMUC’s commitment to students around the globe extends far beyond providing access to excellent degree programs. An online academic and administrative services portal, MyUMUC, makes it simple for students to register for courses, pay tuition, and order textbooks and other supplies when it’s convenient for them. Students can also access academic and career advising, financial aid counseling, library services, and much more online via the university’s Web site or by phone or e-mail. All over the world, UMUC gives its students what they need to succeed, putting goals within their reach.

This catalog provides the degree requirements and recommended curriculum for students who begin continuous study on or after August 1, 2006. (Details are listed on p. 8.) Students should keep their catalog available for easy reference throughout their degree program.

ACADEMIC CALENDAR

STATESIDE

Dates below are tentative. Specific dates, times, and locations and dates of holidays and term breaks are published in the undergraduate Schedule of Classes each term. An undergraduate Schedule of Classes is available at www.umuc.edu/soc.

FALL 2006

Registration begins May 2006
Standard term September 5–December 19, 2006
Session 1 September 5–October 24, 2006
Session 2 October 25–December 19, 2006
Midspring October 25, 2006–February 5, 2007

SPRING 2007

Registration begins October 2006
Standard term January 24–May 10, 2007
Session 1 January 24–March 18, 2007
Session 2 March 26–May 10, 2007
Midspring March 26–June 30, 2007

SUMMER 2007

Registration begins February 2007
Term I May 29–August 19, 2007
Term 2 July 19–August 19, 2007

COMMENCEMENT MAY 12, 2007

SUMMER 2007

Registration begins May 2006
Standard term May 29–August 19, 2007
Session 1 May 29–July 9, 2007
Session 2 July 19–August 19, 2007

UMUC ASIA

Term I August 21–October 14, 2006
Term II October 30–December 23, 2006
Term III January 22–March 17, 2007
Term IV April 2–May 26, 2007
Term V June 4–July 28, 2007

UMUC EUROPE

Term I August 21–October 14, 2006
Term II October 30–December 23, 2006
Term III January 15–March 10, 2007
Term IV March 26–May 19, 2007
Term V June 4–July 28, 2007

At University of Maryland University College (UMUC), a high-quality education is always within reach. UMUC is dedicated to offering on-site and online courses and resources to adult students in Maryland and around the world. The leading education provider for the U.S. military, UMUC serves nearly 54,000 servicemembers worldwide. With more than 130 global course locations and 100 undergraduate and graduate degree and certificate programs offered entirely online, UMUC makes it possible to earn a widely respected degree from just about anywhere.

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This catalog provides the degree requirements and recommended curriculum for students who begin continuous study on or after August 1, 2006. (Details are listed on p. 8.) Students should keep their catalog available for easy reference throughout their degree program.
FROM THE DEAN

On behalf of the faculty and staff in the School of Undergraduate Studies, I am delighted to welcome you to University of Maryland University College (UMUC).

UMUC is an expert in serving adult students. For nearly 60 years, we have helped students juggle the demands of work, family, and study. We reach out to you wherever you are, with formats and schedules that serve your needs. Most important, we reach out with educational programs of quality and rigor, which will prepare you well for careers and life experiences.

You come to us at an exciting time in UMUC’s development, which this catalog reflects. It includes several new degree programs, as well as other changes made in response to workplace and educational trends and your needs as a student. Throughout your career at UMUC, you will see us continuing to add to our offerings and services, and we will keep you updated.

Since we are always evolving and adding to the opportunities we offer, I encourage you also to take advantage of other resources, including the Schedule of Classes and our newsletters. Your central resource is MyUMUC, the online gateway to the latest information and resources, including schedules, registration, and orientation to UMUC.

I hope that you will become an active member of the UMUC community. Challenge yourself and your fellow students in class interaction, seek out opportunities to explore new learning, and become involved. Make the most of your time at UMUC! Even after graduation, I hope you will stay connected through graduate study and our alumni opportunities.

Everything we do in the School of Undergraduate Studies is planned so that you can learn, plan, and fulfill your dreams. Please let us know how we are doing and how we can support you more effectively. Welcome to the UMUC family. You have our best wishes for much success in your educational career.

Sincerely,

[Signature]

Mary Ellen Hrutka, PhD
Vice Provost and Dean,
School of Undergraduate Studies

POLICY STATEMENT

This publication and its provisions do not constitute, and should not be regarded as, a contract between UMUC and any party or parties. At the time of publication, reasonable effort was made to ensure the factual accuracy of the information. However, this publication is not a complete statement of all policies, procedures, rules, regulations, academic requirements, and tuition and fees applicable to UMUC, its students, or its programs. In addition, changes or additions may be made to the policies, procedures, rules, regulations, and academic requirements set out in this publication. UMUC reserves the right to make these changes and additions to the information in this publication without prior notice. When a curriculum or graduation requirement is changed, it is not made retroactive unless the change is to the student’s advantage and can be accommodated within the span of years normally required for graduation.

See additional policies and procedures on inside back cover and in the appendices.
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Cover: Graduates (L–R) Shima Prashad, Donxing Chen, and Courtney Kuentz celebrate the completion of their studies at Commencement, May 13, 2006, at the Comcast Center in College Park, Maryland.

UMUC students can complete their degrees at sites throughout Maryland, such as the Student and Faculty Services Center in Adelphi (shown p. 5) and the USM Shady Grove Center (shown p. 3 top) and at military sites in Maryland and around the world, as well as from any location with Internet access through online programs (pictured p. 3 bottom).
INTRODUCTION TO UMUC

For almost 60 years, University of Maryland University College (UMUC) has been focused exclusively on meeting the needs of adult students in the workforce. It is an institution defined by the students it serves—students who must balance the demands of higher education with those of family, career, and military service.

UMUC understands these competing responsibilities and strives to provide an education that fits busy lifestyles—through high quality academic programs and innovative course and service delivery formats. In addition, the university constantly explores new ways to further its mission, and has done so throughout its history.

HISTORY

In 1947 UMUC was founded as the College of Special and Continuation Studies at the University of Maryland in direct response to a need for education opportunities for adult students, especially military personnel and recent veterans returning to civilian life after World War II.

When, in 1949, the U.S. Department of Defense sought to provide educational opportunities for military servicemembers still stationed in Europe, UMUC answered the call. The university later expanded its outreach to military personnel in Asia in 1956.

With classroom sites spanning the globe, the university nevertheless recognized a need for programs that were not dependent on on-site instruction. As early as the 1950s, the university began to experiment with new ways of reaching students. Courses were offered first through instructional television, then voicemail and audiotapes, interactive television and video network technologies, and ultimately online.

UMUC developed and offered its first online courses in the 1990s using its own software program—Tycho. As access to the World Wide Web became commonplace, Tycho developed into WebTycho and became the course format of choice for more and more students. Today it is a rare student who does not take at least some coursework online via WebTycho, and many students interact with the university entirely through distance technologies.

As UMUC evolved into a virtual university, it also ensured that student services and resources would be available to students worldwide. The Interactive Registration and Information System (IRIS) was created to allow students to register and access information by telephone. Recently, MyUMUC—the university's online gateway to academic and administrative information and resources—was launched. Through MyUMUC, students can apply for admission, register, access financial aid information, view grades, and pay tuition. More services are being developed.

In 1970 UMUC became a separate, degree-granting institution, and in 1988 the university became part of the newly organized University System of Maryland (USM).
CARRYING OUT THE MISSION

As it seeks to serve adult students, UMUC focuses on three areas: quality, access, and affordability.

Quality
An accredited university, UMUC is dedicated to providing the highest quality programs and services to its students and ensuring excellence in its online and on-site courses. In providing these programs, UMUC relies on a renowned faculty of scholar-practitioners—teachers who bring real-world experience to courses—and the use of the latest technologies. UMUC also is able to provide a wealth of resources to its students because of its place within the University System of Maryland.

The success of UMUC’s efforts is evident. Year after year, UMUC continues to garner awards from such notable organizations as the University Continuing Education Association, the Sloan Consortium, and the Maryland Distance Learning Education.

Access
UMUC is committed to eliminating any barriers that stand between the student and his or her educational goals. That includes admission—UMUC requires no standardized exams. Most students can apply and register for their first class at the same time, before presenting transcripts.

As a global university, UMUC also ensures that students can take classes any time, any place, by offering the largest selection of online programs available—in addition to classes at sites throughout Maryland and the metropolitan Washington area and at military sites in Europe and Asia. Services can also be accessed online and by phone, as well as on-site.

Affordability
UMUC prides itself on making education affordable. While universities throughout the country have experienced massive increases year after year, UMUC has kept its tuition increases to a minimum. At the same time, UMUC has worked to expand its range of financial aid opportunities—from scholarships and grants, to a monthly payment plan, to special rates for active-duty service personnel.

Facilities and Programs
UMUC offers degree programs from the associate’s level to the doctorate. Most undergraduate and graduate programs are available online.

These academic programs are administered by the School of Undergraduate Studies and the Graduate School of Management and Technology. The Graduate School also comprises the National Leadership Institute (which provides noncredit leadership development training), the Institute for Environmental Management, and the Institute for Global Management.

Headquarters for these programs are located in Adelphi, Maryland, and also serve as home to a prestigious art collection and a conference facility, the Inn and Conference Center, operated by Marriott.

Most classes and services, however, are provided at nearly 150 sites worldwide. UMUC also delivers education and services to students all over the world through cutting-edge technology—via the university Web site, its online course delivery system WebTycho, its online service portal MyUMUC, and its telephone service system IRIS.

FOR ASSISTANCE
Assistance is available by e-mail at info@umuc.edu, or by phone at 800-888-UMUC.
School of Undergraduate Studies

The mission of the School of Undergraduate Studies at University of Maryland University College is to provide open access to quality undergraduate educational opportunities to women and men around the world, including residents of the state of Maryland, members of the U.S. Armed Services, and national and international students pursuing a university education online. The School of Undergraduate Studies welcomes students and assists them as they enter and progress through the university. It seeks to prepare graduates who are and will become effective professionals and citizens in their organizations, communities, and families.

At the undergraduate level, UMUC offers the Associate of Arts (for active-duty military personnel only), the Bachelor of Arts, the Bachelor of Science, and the Bachelor of Technical and Professional Studies degrees, as well as a wide range of undergraduate certificates. The School of Undergraduate Studies is committed to meeting undergraduate students’ needs for lifelong learning by providing innovative delivery of high-quality educational programs, ensuring substantive and relevant curricula, and recognizing the value of experiential learning.

PREPARING CITIZENS FOR THE 21ST CENTURY

UMUC prepares graduates to be effective professionals and citizens in their organizations, communities, and families. The university values the contributions of both a liberal education and diverse disciplines to the undergraduate experience, and thus incorporates the fundamentals of liberal learning in all programs to complement practice.

Instruction and curricula at UMUC are based on the belief that central to all learning is the ability to participate in an increasingly global and diverse society and to interact in civil and humane ways. UMUC also recognizes the value of historical insight while ensuring that its programs are contemporary in approach. Understanding the importance of contemporary skills in information acquisition and evaluation, effective writing, and technological fluency, the university expects students to master and practice those skills as part of their study toward their undergraduate degree. In fulfillment of these principles, UMUC provides undergraduate students with a broad foundation in general education and cross-curricular skills and knowledge.

For their core academic studies, students may choose one of 29 academic majors from a wide variety of academic fields, including business, computing, humanities, communications, biotechnology, social sciences, legal studies, environmental management, gerontology, and fire science. (A chart of available programs is on pp. 12–13.) Academic minors are available in 36 different areas. The majors and minors provide focused courses of study that are developed and kept current through consultation with faculty, employers, professional and educational organizations, and other experts in the field. These academic programs prepare students for the modern workplace and also help working students put their current knowledge into a broader context.

Recognizing the importance of lifelong learning, UMUC also offers 43 undergraduate certificates covering specific content areas in business and management, communications, computing and technology, gerontology, paralegal studies, and science and security. Certificates are especially valuable for students who wish to refresh their skills and knowledge, advance to a higher level or different specialty in the workplace, or earn a credential for career advancement while progressing toward the bachelor’s degree. (Full descriptions of certificates begin on p. 95.) Courses toward these certificates may also be applied toward the bachelor’s degree.

SERVING NONTRADITIONAL STUDENTS

UMUC welcomes all students and helps them achieve their educational goals but has a special focus on the needs of nontraditional students. In fall 2004, 79 percent of UMUC undergraduates worked full-time, and more than 54 percent had at least one child. Currently, the median age for stateside undergraduate students is 32 years old.

In recognition of the diverse educational goals and aspirations of its students, the university uses a variety of strategies to ensure access and facilitate degree completion. Knowing that adult students bring experience as well as a willingness to learn, UMUC acknowledges the value of that experience by incorporating the assessment of nontraditional learning in the evaluation of students. Since adult students may have gained college-level learning from multiple sources, UMUC offers a number of innovative credit options that recognize the learning achieved through work and life experience and accelerate progress toward the degree. These options include Cooperative Education, which offers credit for new learning in the workplace, and Prior Learning, which offers credit for college-level learning acquired through previous life or work experience (described on pp. 237–39). UMUC also accepts credit from community college coursework and a variety of other sources, including military service credit and credit by examination (described on pp. 240–41).

UMUC understands the demands of balancing work, family, and study and responds by offering undergraduate classes at convenient locations and times, including evenings and weekends. Courses are also provided in innovative formats, including accelerated terms and online delivery. The rapid growth in undergraduate enrollments at UMUC testifies to the convenience, flexibility, and substantive content of its academic offerings in all formats.
EDUCATIONAL PARTNERSHIPS

UMUC is dedicated to collaboration and cooperation with other Maryland educational institutions, both public and private, and actively seeks partnerships with those institutions to benefit Maryland citizens. For nearly 60 years, UMUC has proudly served the U.S. military through its educational partnership in Europe and Asia. The university also reaches out through educational collaborations around the world.

In support of the university’s mission to extend access to educational opportunities to Maryland’s adult students, UMUC has formed alliances with 10 Maryland community colleges (listed at right), enabling students to earn an associate’s degree at an allied community college and finish a bachelor’s degree by completing upper-level coursework at UMUC. These alliances offer students a seamless transition between curricula through linked degree programs. Numerous locations in Maryland and the Washington, D.C., area and online courses enable students to complete associate’s and bachelor’s degrees conveniently close to home.

UMUC’s partnerships with Maryland community colleges have expanded further with the creation of several specialized programs. The Bachelor of Technical and Professional Studies programs in biotechnology (described on p. 21) and laboratory management (described on p. 65) are joint initiatives with several community colleges in Maryland. Special UMUC scholarships are also available for graduates from Maryland community colleges.

UMUC is a charter member of MarylandOnline, a consortium of Maryland community colleges and universities formed to encourage collaboration among institutions across Maryland and to extend resources for the development and delivery of online courses.

UMUC also works to develop strong strategic partnerships with local and national leaders in business and industry, government, and nonprofit organizations and is an important partner in the region’s economic development. An advisory council made up of corporate and nonprofit leaders assists the School of Undergraduate Studies in advancing the mission of UMUC. Consistent with its mission of bringing convenient and relevant learning opportunities to the workforce, UMUC has developed strong relationships with many prominent employers in the area and around the country, including the World Bank, Comcast, UAW-Ford, Northrop Grumman, and Lockheed Martin.

UMUC has developed a certificate program with the National Volunteer Firefighter Council and other customized programs for employers and organizations across the country. The university has developed articulated programs with other educational institutions nationwide—including community colleges across the United States—and internationally, including Far East National University and Irkutsk State University in Russia.

FOR MORE INFORMATION

For more information about UMUC and the School of Undergraduate Studies, students should contact the university by phone at 800-888-UMUC or by e-mail at umucinfo@umuc.edu.

Alliance partners include

- Anne Arundel Community College
- Carroll Community College
- College of Southern Maryland
- Community College of Baltimore County
- Frederick Community College
- Hagerstown Community College
- Harford Community College
- Howard Community College
- Montgomery College
- Prince George’s Community College
Bachelor's Degree Requirements

At the undergraduate level, UMUC offers the Bachelor of Arts (BA), Bachelor of Science (BS), and Bachelor of Technical and Professional Studies (BTPS) degrees, as well as 43 certificates. The Associate of Arts degree and several other certificates are available only to active-duty military personnel and others who conform to special stipulations.

Except for those restricted programs, current UMUC degree programs are open to UMUC students anywhere in the world. However, offerings sufficient to complete every program may not be available at every location. Students should consult advisors and site-specific materials to determine which programs they may normally expect to complete from their geographic location.

Requirements for degrees vary according to the major and minor. The requirements that all candidates for the bachelor’s degree must meet are summarized in the following sections.

EXPECTATIONS

UMUC aims to produce graduates who are well prepared to be responsible citizens of a global society as well as effective participants in the complex, fast-changing world of work. A bachelor’s degree from UMUC offers a multidimensional experience, combining a solid educational foundation with cross-curricular breadth and focused study in an academic discipline. Through that experience, UMUC graduates develop and demonstrate the hallmarks of the educated person: intellectual ability, curiosity, and flexibility; fundamental skills in reasoning, analysis, investigation, and expression; understanding of the principles of scientific and intellectual inquiry; awareness of global and historical context; and civic and ethical responsibility.

UMUC demands that students meet expectations in specific core learning areas across the bachelor’s degree as well as within the major disciplines. The UMUC degree begins with basic intellectual tools, ensuring through the general education and cross-curricular requirements that students are able to

- Demonstrate competence in effective writing and oral communication.
- Understand information technology broadly enough to apply technology productively to academic studies, work, and everyday life; recognize when information technology would assist or impede the achievement of a goal; and adapt to the changes in and advancement of information technology.
- Demonstrate competence in information literacy by using libraries and other information resources to locate, evaluate, and use needed information effectively.
- Demonstrate knowledge of other cultures and the ability to respond appropriately to a variety of cross-cultural situations.
- Demonstrate the application of mathematical and numerical reasoning skills.
- Demonstrate the ability to understand key concepts and principles of the natural, social, and behavioral sciences and apply these principles appropriately within their lives.
- Demonstrate knowledge of relationships to other times and cultures, past and present, and an appreciation of major contributions of various events and individuals to human civilization; gain a chronological knowledge of the past and/or factual knowledge of a specific historical period; and study historical topics, trends, or events in the context of other disciplines to foster an understanding of issues of cause and effect.
- Demonstrate an understanding of their roles and responsibilities as citizens, including the ability to think critically and systematically about the consequences of their actions on the environment, both physical and social; knowledge of governance, society, and ethical issues that enable students to develop informed judgments and negotiate different perspectives; and understanding that will enable them to function responsibly as civically engaged citizens able to contribute meaningfully to society.

These core learning areas are further promoted by integration throughout all programs. UMUC conducts learning outcomes assessments to measure and improve student learning in these areas as well as in specific disciplinary knowledge and skills.

In pursuit of an academic major (and minor), the UMUC student acquires mastery of a considerable body of knowledge in a specific academic subject area or group of related subjects. Each major and minor provides clearly articulated objectives for the knowledge, skills, and abilities a student acquires in completing the major.

REQUIREMENTS

In general, the UMUC degree requirements that apply to a student are those that were in effect when the student began continuous enrollment in any public institution of higher education in Maryland (including UMUC). If the student has not been continuously enrolled, the requirements that apply are those in effect at UMUC when the student resumes continuous enrollment. To be considered continuously enrolled, degree-seeking students must be or have been enrolled at UMUC or another Maryland public institution of higher education and have had no more than two sequential years of nonenrollment. When a continuously enrolled student chooses to change his or her degree program, the student may be subject to all degree requirements in effect at the time of the change.

The following requirements for the BA, BS, and BTPS are applicable to students who enroll on or after August 1, 2006.
BACHELOR’S DEGREE REQUIREMENTS

General Education Requirements

Note: Courses applied to general education requirements may not be applied toward major, minor, or elective requirements and may not be taken pass/fail.

A. Communications
ENGL 101/101X (3 credits)
Must be completed within first 18 credits. Placement test required. May not be earned through credit by examination.

Another writing course (3 credits)
All 3-credit COMM courses (except COMM 300, 379A, 380, 400, 486A, 486B, and 493); ENGL 102, 278F, 291, 294, 303, 391/391X, 480, 482, 483, 485, and 493; and JOUR 201 apply.

A third course in writing or a course in speech communication
All 3-credit COMM and SPCH courses (except 486A and 486B); ENGL 102, 278F, 281, 281X, 291, 294, 303, 384, 391/391X, 480, 482, 483, 485, and 493; and JOUR 201 apply.

An upper-level intensive writing course (3 credits)
ENGL 391/391X and COMM 393/393X and 394/394X apply. May not be earned through credit by examination.

No more than 3 credits of writing credit may be earned through credit by examination.

B. Arts and Humanities
One 3-credit course each in two of the following disciplines: ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, literature, or foreign language.

C. Behavioral and Social Sciences
One 3-credit course each in two of the following disciplines: AASP (AASP 201 only), ANTH, BEHS, CCJS (CCJS 100, 105, 330, 350, 360, 432, 451, 452, 453, 454, and 461 only), ECON, GEOG, GERO (except GERO 341, 342, 351, and 353), GVPT, PSYC, SOCY, or WMST (WMST 200 only).

D. Biological and Physical Sciences
A science lecture course (3 credits) with related laboratory course (1 credit) or a science course combining lecture and laboratory (4 credits).

Any other science course (3 credits).
Courses from the following disciplines satisfy both requirements: ASTR, BIOL, BSCI, CHEM, GEOL, NSCI, PHYS, biotechnology, botany, entomology, general science, and zoology.

E. Mathematics
MATH 105, MATH 106, MATH 107, or a course at or above the level of college algebra.
Must be completed within first 18 credits. Placement test required.
Note: MATH 107 or any higher-level mathematics course is required for majors in all computing areas and most business-related areas. Students should refer to the specific major for requirements or recommendations.

F. Interdisciplinary or Emerging Issues
For all students: One course (LIBS 150) in information literacy and research methods (1 credit), which must be completed within the first 18 credits.

For computing majors:
One course satisfying the international perspective requirement and one course satisfying the civic responsibility perspective requirement (6 credits). Applicable courses are listed on p. 11.

For noncomputing majors:
A total of 6 credits in computing courses as follows:
• IFSM 201 (3 credits)
• An additional computing course appropriate to the academic major (3 credits)

Students should refer to the specific major for requirements or recommendations. Unless otherwise specified, upper- or lower-level courses in CMIS, CMIT, CMSC, CMST, and IFSM; ACCT 326; and LGST 360 and 363A apply. Note: IFSM 300 or ACCT 326 is required for business-related majors.

Cross-Curricular Perspective Requirements

Unless otherwise specified, these requirements may be satisfied anywhere in the degree (within the general education requirements or major, minor, or elective courses). A given course may be applied to only one of the cross-curricular requirements, even though it may appear on more than one list.

A. Historical Perspective
One course that offers a historical perspective (3 credits)
The historical perspective requirement may be met by any 3-credit HIST or ARTH course (except ARTH 100).

B. International Perspective
One course that offers an international perspective (3 credits)
The international perspective requirement may be met by 3 credits of a foreign language. A list of other approved international perspective courses is found on p. 11. Computing majors must satisfy this requirement within the general education requirements.

C. Civic Responsibility Perspective
One course that offers a perspective on civic responsibility (3 credits)
A list of approved civic responsibility perspective courses is found on p. 11. Computing majors must satisfy this requirement within the general education requirements.

Total General Education and Cross-Curricular Perspective Requirements

41–50
Major, Minor, and Elective Requirements  

<table>
<thead>
<tr>
<th>Major, Minor, and Elective Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Academic Major</td>
<td>30–38</td>
</tr>
<tr>
<td>The number of credits required to complete an academic major varies according to academic program. At least half the credits earned within the major must be upper level (i.e., earned in courses numbered 300 and higher) and must be earned through UMUC. No grade may be lower than C. Specific coursework is prescribed for each major and is described in the following chapter. Students may receive a dual major upon completion of all requirements for both majors, including the required minimum number of credits for each major; however, the same course may not be used to fulfill requirements for more than one major.</td>
<td></td>
</tr>
<tr>
<td>B. Academic Minor</td>
<td>15–19</td>
</tr>
<tr>
<td>Choosing a minor is strongly encouraged even though it is optional for all but accounting majors. Students may not take a major and minor in the same area and may not receive a dual minor. The number of credits required to complete an academic minor varies according to academic program. At least half the credits earned within the minor must be upper level (unless otherwise specified) and must be earned through UMUC. No grade may be lower than C. Specific coursework is prescribed for each minor and is described in the following chapter.</td>
<td></td>
</tr>
<tr>
<td>C. Electives</td>
<td>15–49</td>
</tr>
<tr>
<td>Electives may be taken in any academic discipline. No more than 21 credits may consist of vocational or technical credit (described on p. 240). Pass/fail credit, up to a maximum of 18 credits, may be applied toward electives only.</td>
<td></td>
</tr>
</tbody>
</table>

Total Major, Minor, and Elective Requirements  70–79

Overall Bachelor’s Degree Requirements

In addition to the general education and cross-curricular perspective requirements and the major, minor, and elective requirements listed on pp. 9–10, the overall requirements listed below pertain to all bachelor’s degrees.

1. Students must complete a minimum of 120 credits.
2. Students must maintain a minimum grade point average of 2.0 (C) overall and a minimum grade of C (2.0) for any course applied to the academic major or minor.
3. Within the 120 credits required, the following coursework must be taken through UMUC:
   - 30 credits (normally the final 30)
   - Half of the required number of credits within both the major and the minor
   - 15 credits at the upper level (i.e., earned in courses numbered 300 to 499), preferably within the major or minor
4. At least 45 credits must be upper level and include
   - At least one-half of the credits required for the major
   - 3 credits in intensive writing
   The remaining upper-level credits may be earned in any part of the curriculum.
5. At least half the required number of credits for any academic major or minor must be earned through graded coursework. Credit earned by examination, portfolio assessment, internships/Cooperative Education, or non-collegiate training does not count as graded coursework.

Total Degree Requirements  120 Credits
Second Bachelor's Degree

At UMUC, students who have already received a bachelor's degree from UMUC or from another regionally accredited institution can broaden their education by earning a second bachelor's degree with a different major. However, students may not earn a second bachelor's degree with a double major. Students may not earn a second degree in general studies and, except for the accounting degree which has a mandatory minor, may not obtain an academic minor in the second degree.

A student must have received the first bachelor's degree to be eligible to begin a second. For a second bachelor's degree, the student needs to complete at least 30 credits through UMUC after completing the first degree. The combined credit in both degrees must add up to at least 150 credits.

Students must complete all requirements for the major, as well as an upper-level intensive writing course, IFSM 201 (except for computing majors), an international perspective course, and a civic responsibility perspective course. If any of these requirements were satisfied in the previous degree, the remainder necessary to complete the minimum 30 credits of new courses should be satisfied with courses related to the major. For purposes of determining what major requirements apply to a given student, the applicable date is the date the student started coursework at UMUC after being admitted into the second undergraduate degree program. As with other degrees, continuous enrollment at UMUC is required. A minimum grade point average of 2.0 in all courses taken through UMUC is required for graduation.

To qualify for academic honors in a second bachelor's degree, the student must complete at least 45 new credits through UMUC with the requisite grade point average.

All students need to be aware of what is entailed in a second bachelor's degree. Before beginning work or considering nontraditional options toward a second degree, each student should consult an academic advisor. Advisors will be glad to explain the requirements for a second bachelor's degree and clarify its limitations.

CROSS-CURRICULAR PERSPECTIVE COURSE CHOICES

The following course lists apply to requirements effective fall 2006. Students who began continuous enrollment before fall 2006 should contact an academic advisor to confirm whether their course choices apply to requirements. No course may be used to fulfill more than one of the cross-curricular perspective requirements.

Historical Perspective
Any 3-credit HIST or ARTH course (except ARTH 100)

International Perspective
Any foreign language course of 3 or more credits
Any ASTD course of 3 or more credits
ACCT 425 International Accounting
ANTH 102 Introduction to Anthropology: Cultural Anthropology and Linguistics
ANTH 344 Cultural Anthropology and Linguistics
BMGT 392 Global Business Management
ENGL 454 Modern World Drama
GVPT 200 International Political Relations
HUMN 351 Myth and Culture
MRKT 454 Global Marketing
SPCH 482 Intercultural Communication

Civic Responsibility Perspective
BMGT 496 Business Ethics
ENGL 406 Shakespeare: Power and Justice
GVPT 100 Principles of Government and Politics
GVPT 403 Law, Morality, and War
HUMN 311 Workplace Ethics
IFSM 304 Ethics in the Information Age
NSCI 362 Environmental Change and Sustainability
PHIL 140 Contemporary Moral Issues
SPCH 426 Negotiation and Conflict Management
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Bachelor’s Degree Curricula

MAJORS AND MINORS

The academic major requires 30 to 38 credits, while the minor (optional) requires 15 to 19 credits. Students must maintain a minimum grade point average of 2.0 (C) and earn a minimum grade of C (2.0) for any course applied to the major or minor. Half of the credit applied toward any major must be upper level, and at least half of the credit for any major or minor must be taken through UMUC. At least half of the credit applied toward a major or minor must be earned through graded coursework. A maximum of six 1-credit courses may be applied to a major or minor. Students must also fulfill all overall requirements for the bachelor’s degree (listed on p. 10).

Majors and minors are described in the following section.

Majors

Each major is available only for the Bachelor of Arts (BA), the Bachelor of Science (BS), or the Bachelor of Technical and Professional Studies (BTPS) degree. Dual majors are only available for the Bachelor of Science degree.

Available for the BA

Asian studies*
Communication studies
English
History
Humanities

Available for the BS

Accounting
Business administration
Computer and information science
Computer information technology
Computer science
Computer studies
Criminal justice
Environmental management
Finance
Fire science
General studies**
Gerontology
Global business and public policy
Human resource management
Information systems management
Investigative forensics
Legal studies
Management studies
Marketing

Political science
Psychology
Social science

Available for the BTPS***

Biotechnology
Laboratory management

Minors

Academic minors are strongly recommended but optional. They are available in the following areas:

Accounting
African American studies
Art
Art history
Asian studies*
Biology
Business administration
Business law and public policy
Business supply chain management
Communication studies
Computer studies
Criminal justice
Customer service management
Economics
English
Environmental management
Finance
Fire science
Forensics
Gerontology
History
Humanities
Human resource management
International business management
 Journalism
Management studies
Marketing
Mathematical sciences
Microbiology
Natural science
Political science
Psychology
Sociology
Speech communication
Strategic and entrepreneurial management
Women’s studies

* Not available in all locations. Students should consult an advisor before selecting this major or minor.
** Available only to active-duty military personnel and certain others who conform to special stipulations. General studies is not available for a double major.
*** Available only to students who have completed an Associate of Applied Science degree in an appropriate field from a community college with which UMUC has an articulation agreement. Students should consult an advisor before selecting these majors.
BACHELOR’S DEGREE CURRICULA

DESCRIPTIONS OF MAJORS AND MINORS

Accounting

Students may seek either an academic major or minor in accounting.

Major in Accounting

The accounting major focuses on the processes for analyzing and reporting the economic activities of organizations and communicating that information to decision makers. The accounting curriculum includes studies in managerial accounting, budgeting, accounting systems, internal controls, financial analysis, financial reporting, internal and external auditing, taxation, international accounting, and accounting issues related to for-profit, not-for-profit, and government organizations.

Objectives

The student who graduates with a major in accounting will be able to:

• Employ critical-thinking, analytical, and problem-solving skills to resolve complex business and accounting issues.
• Use clear and concise communication to convey relevant financial and nonfinancial information to the target audience so that decision makers can formulate informed decisions and take action.
• Utilize technology (such as computers, accounting software, information databases, and the World Wide Web) to facilitate and enhance accounting and financial reporting processes.
• Identify the appropriate managerial and business issues critical to analyzing accounting data and other information used for identifying and assessing opportunities and risks, developing organizational plans, allocating resources, and accomplishing objectives.
• Apply relevant accounting principles and standards to specific business activities and workplace situations.
• Employ national, international, and historical perspectives to analyze accounting and business issues.
• Identify ethical issues associated with accounting and business situations and apply appropriate principles of ethics and civic responsibility.
• Use analytical and research tools to monitor evolving accounting standards and practices and to maintain professional skills in a changing business environment.
• Apply the interpersonal and leadership skills expected of today’s accounting professional.

Degree Requirements

A degree with a major in accounting requires the successful completion of 120 credits of coursework, including 54 credits for the major and mandatory minor in business administration, 41 credits in general education requirements, and 25 credits in electives and other requirements. At least 18 credits in the major and 9 credits in the minor must be earned in upper-level courses (numbered 300 or above).

Requirements for the Accounting Major

Coursework for a major in accounting, with a mandatory minor in business administration, includes the following:

• Required core courses (24 credits): ACCT 220, 221, 310, 311, 321, 323, 422, and 495
• Supplemental major courses (12 credits): Any upper-level ACCT courses
• Required minor courses (18 credits): STAT 230; BMGT 340, 364, 380, and 496; and MRKT 310
• Required related courses (12 credits) which may be applied anywhere in the degree: ACCT 326 (or IFSM 300), ECON 201 and 203, and MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in accounting. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Accounting Degree Courses

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<tr>
<th>First Courses (to be taken within the first 18 credits)</th>
<th>Credits</th>
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<td>EDCP 100 Principles and Strategies of Successful Learning</td>
<td>3 (strongly recommended as first course)</td>
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<tr>
<td>LIBS 150 Information Literacy and Research Methods</td>
<td>1</td>
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<tr>
<td>ENGL 101/101X Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107 College Algebra</td>
<td>3 or a higher-level math course</td>
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<tr>
<td>BMGT 110 Introduction to Business and Management</td>
<td>3 (strongly recommended elective for students with no prior business experience)</td>
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<tr>
<td>◆ ACCT 220 Principles of Accounting I</td>
<td>3</td>
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<tr>
<th>Introductory Courses (to be taken within the first 30 credits)</th>
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<tr>
<td>◆ ACCT 221 Principles of Accounting II</td>
<td>3</td>
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<tr>
<td>ECON 201 Principles of Macroeconomics (related requirement for the major; also fulfills the first behavioral and social sciences requirement)</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 100 Introduction to Physical Science and NSCI 101 Physical Science Laboratory or other course(s) to fulfill the biological and physical sciences science lecture and laboratory requirement</td>
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</table>
BACHELOR'S DEGREE CURRICULUM

ENGL 291 Expository and Research Writing 3
or other course to fulfill the communications/writing requirement
IFSM 201 Introduction to Computer-Based Systems 3

Foundation Courses (to be taken within the first 60 credits)
PHIL 140 Contemporary Moral Issues 3
or a foreign language course

Additional Elective Courses (to be taken in the last 60 credits along with required major courses)
MRKT 310 Marketing Principles and Organization 3

Capstone Course for Major (to be taken in the last 15 credits)
ACCT 495 Contemporary Issues in Accounting Practice 3

Total credits for BS in accounting 120

Minor in Accounting
The accounting minor complements the skills the student gains in his or her major discipline by providing a study of how the accounting environment measures and communicates the economic activities of organizations to enable stakeholders to make informed decisions regarding the allocation of limited resources.

Objectives
The student who graduates with a minor in accounting will be able to

- Employ critical-thinking, analytical, and problem-solving skills to resolve business and accounting issues.
- Use clear and concise communication to convey relevant financial and nonfinancial information to the target audience so that decision makers can formulate informed decisions and take action.
- Utilize technology (such as computers, accounting software, information databases, and the World Wide Web) to facilitate and enhance accounting and financial reporting processes.
- Apply relevant accounting principles and standards to specific business activities and workplace situations.
- Identify ethical issues associated with accounting and business situations and apply appropriate principles of ethics and civic responsibility.

Requirements for the Minor
A minor in accounting requires the completion of 15 credits of coursework in accounting, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed on the next page. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor's degree, students should refer to their major and pp. 9–10.
African American Studies

Students may seek an academic minor in African American studies.

Minor in African American Studies

The African American studies minor complements the skills the student gains in his or her major discipline by offering an interdisciplinary approach to study of the contemporary life, history, and culture of African Americans.

Objectives

The student who graduates with a minor in African American studies will be able to

• Discuss the diversity and historical development of the African American experience.
• Explain aspects of the cultural and historical expression of the African American experience.
• Demonstrate an understanding of fundamental interdisciplinary methods, research, and topics relevant to African American studies.

Requirements for the Minor

A minor in African American studies requires the completion of 15 credits of coursework focusing on African American issues, drawn from various disciplines as appropriate; at least 9 of these credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed at right. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.
Requirements for the Minor

A minor in art requires the completion of 15 credits of art coursework, including 3 credits in art theory and 12 credits in art media covering drawing, painting, and graphics and design; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course selections are listed below. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Art Minor Courses Credits
(to be taken in the the last 60 credits with required and supplemental major courses)

Art Theory Course
One course chosen from the following: 3
ARTT 100 Two-Dimensional Art Fundamentals
ARTT 150 Introduction to Art Theory
ARTT 200 Elements of Three-Dimensional Form and Space
ARTT 220 Color in Composition
ARTT 250 Elements of Commercial Design

Drawing Course
One course chosen from the following: 3
ARTT 110 Elements of Drawing I
ARTT 210 Elements of Drawing II
ARTT 418 Drawing

Painting Course
One course chosen from the following: 3
ARTT 320 Elements of Painting
ARTT 428 Painting
ARTT 470 Watercolor

Graphics and Design Course
One course chosen from the following: 3
ARTT 354 Elements of Computer Graphics
ARTT 479 Advanced Computer Graphics
COMM 493 Graphics/Text Integration

Supplemental Course
An additional upper-level supplemental course chosen from any of the above lists 3

Total credits for minor in art 15
Asian Studies

The Asian studies major and minor are not available at all locations. Students should consult an advisor before selecting this program.

Major in Asian Studies

The Asian studies major provides an interdisciplinary overview of the history, business, economics, politics, and culture of the Asian/Pacific region. It examines that region’s rich past and continuing contributions to the global community. The curriculum reflects this commitment to cultural awareness and scholarly analysis within the format of Asian life and influence.

Objectives

The student who graduates with a major in Asian studies will be able to

• Demonstrate understanding of the historical and cultural dimensions of Asia.
• Think critically and perform research in Asian studies.
• Demonstrate effective communication skills, both orally and in writing, within the sphere of Asian economic, political, cultural, and historical developments.
• Demonstrate an understanding of Asian social, political, and economic structures and their local and global influences.
• Demonstrate fluency in technology appropriate for research, study, and communication in relation to Asian studies.
• Demonstrate competence in an Asian language.
• Demonstrate a knowledge of ethical and social responsibility issues within an Asian context.

Degree Requirements

A degree with a major in Asian studies requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Asian Studies Major

Coursework for a major in Asian studies includes the following:

• Required foundation courses (12 credits): ASTD 150, 160, and 485 and PHIL 307
• Required Asian language sequence (9 credits): Either JAPN 111, 112, and 114 or KORN 111, 112, and 114
• Supplemental major courses (9 credits): Chosen from ANTH 417, ECON 380 and 484, HUMN 312 and 350, and any upper-level ASTD, JAPN, KORN, Asian HIST, and Asian GVPT courses

Recommended Sequence

The following course sequence will fulfill all the requirements for the BA in Asian studies. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Asian Studies Degree Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Courses</td>
<td></td>
</tr>
<tr>
<td>Note: Placement tests are required for math and English composition courses.</td>
<td></td>
</tr>
<tr>
<td>EDCP 100</td>
<td>3</td>
</tr>
<tr>
<td>Principles and Strategies of Successful Learning</td>
<td></td>
</tr>
<tr>
<td>(strongly recommended as first course)</td>
<td></td>
</tr>
<tr>
<td>LIBS 150</td>
<td>1</td>
</tr>
<tr>
<td>Information Literacy and Research Methods</td>
<td></td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Writing</td>
<td></td>
</tr>
<tr>
<td>MATH 105</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics: Contemporary Topics and Applications</td>
<td></td>
</tr>
<tr>
<td>or MATH 106</td>
<td>3</td>
</tr>
<tr>
<td>Finite Mathematics or a higher-level math course</td>
<td></td>
</tr>
<tr>
<td>Introductory Courses</td>
<td>to be taken within the first 30 credits</td>
</tr>
<tr>
<td>PHIL 140</td>
<td>3</td>
</tr>
<tr>
<td>Contemporary Moral Issues</td>
<td></td>
</tr>
<tr>
<td>or ENGL 240</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Fiction, Poetry, and Drama or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, literature, or foreign language course to fulfill the first arts and humanities requirement</td>
<td></td>
</tr>
<tr>
<td>BIOL 101</td>
<td>3</td>
</tr>
<tr>
<td>Concepts of Biology</td>
<td></td>
</tr>
<tr>
<td>and BIOL 102</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory in Biology or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement</td>
<td></td>
</tr>
<tr>
<td>ENGL 291</td>
<td>3</td>
</tr>
<tr>
<td>Expository and Research Writing or other course to fulfill the communication/ writing requirement</td>
<td></td>
</tr>
<tr>
<td>GVPT 170</td>
<td>3</td>
</tr>
<tr>
<td>American Government or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td></td>
</tr>
<tr>
<td>IFSM 201</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Computer-Based Systems</td>
<td></td>
</tr>
<tr>
<td>◆ ASTD 150</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Asian Studies I</td>
<td></td>
</tr>
<tr>
<td>◆ JAPN 111</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Japanese I</td>
<td></td>
</tr>
<tr>
<td>or KORN 111</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Korean I or other Asian language course for the major</td>
<td></td>
</tr>
<tr>
<td>Foundation Courses</td>
<td>to be taken within the first 60 credits</td>
</tr>
<tr>
<td>◆ ASTD 160</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Asian Studies II</td>
<td></td>
</tr>
<tr>
<td>ANTH 102</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Anthropology: Cultural Anthropology and Linguistics or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)</td>
<td></td>
</tr>
</tbody>
</table>

www.umuc.edu/ugp 19
Minor in Asian Studies

The Asian studies minor complements the skills the student gains in his or her major discipline by providing an interdisciplinary study of the cultural, historical, political, and contemporary business reality of the Asian/Pacific world.

Objectives

The student who graduates with a minor in Asian studies will be able to

• Examine and analyze aspects of Asian history, politics, business, economics, and society.
• Examine and analyze aspects of Asian culture.
• Hone analytical, research, and writing skills within Asia-centered topics and themes.

Requirements for the Minor

A minor in Asian studies requires the completion of 15 credits of coursework in Asian studies, drawn from various disciplines as appropriate. At least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor's degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Asian Studies Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken in the last 60 credits with required and supplemental major courses)</td>
<td></td>
</tr>
<tr>
<td><strong>Introductory Course</strong></td>
<td></td>
</tr>
<tr>
<td>ASTD 150 Introduction to Asian Studies I</td>
<td>3</td>
</tr>
<tr>
<td>or ASTD 160 Introduction to Asian Studies II</td>
<td></td>
</tr>
<tr>
<td><strong>Supplemental Minor Courses</strong></td>
<td></td>
</tr>
<tr>
<td>An upper-level supplemental course chosen from any courses applicable to the Asian studies major</td>
<td>3</td>
</tr>
<tr>
<td>A second upper-level supplemental course</td>
<td>3</td>
</tr>
<tr>
<td>A third upper-level supplemental course</td>
<td>3</td>
</tr>
<tr>
<td>A fourth upper-level supplemental course</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total credits for minor in Asian studies</strong></td>
<td>15</td>
</tr>
</tbody>
</table>
Biology

Students may seek an academic minor in biology.

Minor in Biology

The biology minor complements the skills the student gains in his or her major discipline by providing an underlying scientific base upon which to build a career in the life sciences, allied health fields, bioinformatics, environmental management, science journalism, or science education.

Objectives

The student who graduates with a minor in biology will be able to

- Demonstrate an understanding of the basic structure and function of living organisms, including the principles of molecular and cellular biology, inheritance, evolution, and ecology.
- Perform standard laboratory procedures and apply the scientific method, as appropriate.
- Apply basic scientific knowledge to problems encountered in medicine, public health, biotechnology, agriculture, and environmental science.

Requirements for the Minor

A minor in biology requires the completion of 16 credits of coursework in biology, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Biology Minor Courses

(to be taken in the last 60 credits with required and supplemental major courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Foundation Courses</td>
<td></td>
</tr>
<tr>
<td>BIOL 101 Concepts of Biology 3</td>
<td></td>
</tr>
<tr>
<td>and BIOL 102 Laboratory in Biology 1</td>
<td></td>
</tr>
<tr>
<td>Core Course</td>
<td></td>
</tr>
<tr>
<td>One course chosen from the following: 3</td>
<td></td>
</tr>
<tr>
<td>BIOL 160 Human Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL 164 Introduction to Human Anatomy and Physiology</td>
<td></td>
</tr>
<tr>
<td>BIOL 201 Human Anatomy and Physiology I</td>
<td></td>
</tr>
<tr>
<td>BIOL 211 Environmental Science</td>
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<tr>
<td>BIOL 215 Population Biology and General Ecology</td>
<td></td>
</tr>
</tbody>
</table>

Biotechnology

Students who have completed an Associate of Applied Science degree in biotechnology or a related field from a community college with which UMUC has an articulation agreement for this major may seek an academic major in biotechnology. Students should consult an advisor before selecting this major.

The major in biotechnology is based on collaborative arrangement between UMUC and specific Maryland community colleges. Students with a similar degree from another institution may be considered for this program only based on an institutional articulation agreement with UMUC.

Major in Biotechnology

The biotechnology major is designed to build on the technical and scientific knowledge gained through the associate’s degree program and direct experience in the field. It combines laboratory skills and applied coursework relevant to the biotechnology industry with extensive biotechnology internship experience and upper-level study.

Objectives

The student who graduates with a major in biotechnology will be able to

- Understand and explain the basic principles of biotechnology, cell biology, genetics, microbiology, and molecular biology.
- Perform standard laboratory procedures employed in academic, industry, and government biotechnology and molecular biology laboratories.
- Apply the principles of biotechnology to problems encountered in medicine, public health, research and development, agriculture, industrial and commercial production, and environmental science.
Degree Requirements

A degree with a major in biotechnology requires the successful completion of 120 credits of coursework from UMUC and the collaborating community college, including 36 credits for the major; 41 credits in general education requirements; and 43 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Biotechnology Major

Coursework for a major in biotechnology includes the following lower-level coursework taken as part of an appropriate Associate of Applied Science degree program at a collaborating community college:

- Foundation courses (15 credits): General microbiology (with laboratory), general genetics (with laboratory), and biotechnology techniques
- Required related courses (17 credits), which may be applied anywhere in the bachelor’s degree: Chosen from biotechnology, biochemistry, cell biology, chemistry, genetics, immunology, microbiology, molecular biology, physics, and virology courses

Coursework for a major in biotechnology also includes the following:

- Required core courses (12 credits): BIOL 350 and 400 and 6 credits of Co-op internship courses (numbered 486A or 486B) in any discipline related to biotechnology
- Supplemental major courses (9 credits): Chosen from BIOL 320, 333–339, 350–359, 362, 430–439, and 422; NSCI 301; and an additional Co-op internship

Recommended Sequence

The following course sequence will fulfill all the requirements for the BTPS in biotechnology (if the student selects appropriate courses as part of the articulated degree program from the community college). Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options.

Information on alternate courses (where allowable) to fulfill general education requirements. Students must fulfill degree requirements in the following areas:

- Behavioral and social sciences (two courses)
- Communications (one course)
- Humanities (one course)
- Natural science (two courses)
- Mathematics (one course)
- Physical education (one course)
- Writing (one course)

Coursework taken as part of an appropriate Associate of Applied Science degree program at a collaborating community college:

- Introductory and General Education Courses
  - IFSM 201 Introduction to Computer-Based Systems
  - ENGL 291 Expository and Research Writing
  - MATH 105 Mathematics: Contemporary Topics
  - MATH 106 Finite Mathematics
  - GVPT 170 American Government
  - PSYC 100 Introduction to Psychology
  - HIST 142 Western Civilization II
  - HIST 157 History of the United States Since 1865
  - SPCH 100 Foundations of Speech Communication
  - PHIL 140 Contemporary Moral Issues
  - FREN 101 Elementary French I
  - SPCH 482 Intercultural Communication

- Required Upper-Level Courses for Major (to be taken after introductory and foundation courses)
  - COMM 390 Writing for Managers
  - IFSM 304 Ethics in the Information Age
  - ANTH 344 Cultural Anthropology and Linguistics
  - BIOL 350 Molecular and Cellular Biology
  - BIOL 400 Life Science Seminar
  - BIOL 362 Neurobiology

- Required Courses (to be taken within the first 18 credits at UMUC if not brought in transfer)
  - LIBS 150 Information Literacy and Research Methods
  - ENGL 101/101X Introduction to Writing
  - GVPT 170 American Government
  - PSYC 100 Introduction to Psychology
  - HIST 142 Western Civilization II
  - HIST 157 History of the United States Since 1865
  - SPCH 100 Foundations of Speech Communication
  - PHIL 140 Contemporary Moral Issues
  - FREN 101 Elementary French I
  - SPCH 482 Intercultural Communication

- Recommended Sequence

First Courses (to be taken within the first 18 credits at UMUC if not brought in transfer)

Note: Placement tests are required for math and English composition courses.

- ENGL 101/101X Introduction to Writing
- MATH 105 Mathematics: Contemporary Topics
- MATH 106 Finite Mathematics

- Required Core Courses (12 credits):
  - BIOL 350 Molecular and Cellular Biology
  - BIOL 400 Life Science Seminar
  - BIOL 362 Neurobiology

- Required Related Courses (17 credits), which may be applied anywhere: Chosen from biotechnology, biochemistry, cell biology, chemistry, genetics, immunology, microbiology, molecular biology, physics, and virology courses

- Foundation Courses (15 credits): General microbiology (with laboratory), general genetics (with laboratory), and biotechnology techniques

- Recommended Course Sequence

- Biotechnology Degree Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 350 Molecular and Cellular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 400 Life Science Seminar</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 362 Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 201 Introduction to Computer-Based Systems</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 291 Expository and Research Writing</td>
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</tr>
<tr>
<td>MATH 105 Mathematics: Contemporary Topics</td>
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</tr>
<tr>
<td>MATH 106 Finite Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 170 American Government</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 100 Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>HIST 142 Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 157 History of the United States Since 1865</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 100 Foundations of Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 140 Contemporary Moral Issues</td>
<td>3</td>
</tr>
<tr>
<td>FREN 101 Elementary French I</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 482 Intercultural Communication</td>
<td>3</td>
</tr>
</tbody>
</table>
Business Administration

Students may seek either an academic major or minor in business administration.

Major in Business Administration

The business administration curriculum includes studies in accounting, business law and public policy, business supply chain management, customer service and operations management, ethics and social responsibility, finance, human resource management and labor relations, international business, strategic and entrepreneurial management, organizational behavior, marketing and sales, and statistical analysis. A major in business administration prepares graduates for business- and management-related careers in for-profit and not-for-profit organizations and the public sector, encouraging critical thinking and problem solving.

Objectives

The student who graduates with a major in business administration will be able to

• Use critical-thinking skills in conducting research in business and management.
• Apply analytical and problem-solving skills in resolving business management problems and issues.
• Identify and apply key concepts and theories in business and management.
• Articulate the domestic and global dimensions of and influences on business and management.
• Employ effective communication skills, orally and in writing, consistent with the business and professional environment.
• Use computer applications and technology currently in the workplace.
• Assess philosophies of ethics and social responsibility relevant to business and management.
• Develop innovative leadership and team-management skills necessary for success in a diverse and changing workplace.

• Recognize the history and development of theories and concepts in business management, accounting, economics, statistics, finance, marketing, human resource management, business law, and strategic management and apply these theories and concepts to various business situations.
• Evaluate ethical, social, civic, cultural, and political issues as they relate to business operations, human resources and human factors, information systems, governmental regulation, and domestic and international ventures.
• Apply appropriate information technology to analyze problems and issues, develop business research, report key data, and recommend management strategy and action plans.

Degree Requirements

A degree with a major in business administration requires the successful completion of 120 credits of coursework, including 36 credits for the major; 41 credits in general education requirements; and 43 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Business Administration Major

Coursework for a major in business administration includes the following:

• Required foundation courses (12 credits): BMGT 110 (or prior business experience and an additional supplemental course), ACCT 220 and 221, and STAT 230
• Required core courses (21 credits): BMGT 340, 364, 380, 495, and 496; HRMN 300; and MRKT 310
• Supplemental major course or courses (3 credits): Any ACCT, BMGT, ENMT, HRMN, MRKT, and MGST course
• Required related courses (9 credits), which may be applied anywhere in the degree: ACCT 326 (or IFSM 300), ECON 201 and 203, and MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in business administration. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.
Bachelor's Degree Curricula

Business Administration Degree Courses

First Courses (to be taken within the first 18 credits)

Note: Placement tests are required for math and English composition courses.

EDCP 100 Principles and Strategies of Successful Learning 3
LIBS 150 Information Literacy and Research Methods 1
ENGL 101/101X Introduction to Writing 3
MATH 107 College Algebra or a higher-level math course 3
◆ BMGT 110 Introduction to Business and Management 3
  (students with business experience should substitute a supplemental major course in the last 60 credits of study)

Introductory Courses (to be taken within the first 30 credits)

ECON 201 Principles of Macroeconomics 3
  (related requirement for the major; also fulfills the first behavioral and social sciences requirement)
NSCI 100 Introduction to Physical Science 3
  and NSCI 101 Physical Science Laboratory 1
  or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement
ENGL 291 Expository and Research Writing or other course to fulfill the communications/writing requirement 3
IFSM 201 Introduction to Computer-Based Systems 3
◆ ACCT 220 Principles of Accounting I 3
PHIL 140 Contemporary Moral Issues 3
  or a foreign language course
  or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement

Foundation Courses (to be taken within the first 60 credits)

◆ STAT 230 Business Statistics 3
or STAT 200 Introduction to Statistics 3
PSYC 100 Introduction to Psychology 3
or SOCY 100 Introduction to Sociology or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
◆ ACCT 221 Principles of Accounting II 3
BIOL 101 Concepts of Biology 3
or ASTR 100 Introduction to Astronomy or other course to fulfill the biological and physical sciences lecture requirement
ECON 203 Principles of Microeconomics (related requirement for major) 3
HIST 142 Western Civilization II 3
or HIST 157 History of the United States Since 1865 or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement
IFSM 300 Information Systems in Organizations 3
or ACCT 326 Accounting Information Systems 3
SPCH 100 Foundations of Speech Communication 3
or COMM 390 Writing for Managers or other course to fulfill the communications/writing or speech requirement

Additional Required Courses (to be taken after introductory and foundation courses)
◆ BMGT 364 Management and Organization Theory 3
COMM 394/394X Business Writing or other course to fulfill the communications/upper-level intensive writing requirement 3
◆ MRKT 310 Marketing Principles and Organization 3
◆ BMGT 380 Business Law I 3
◆ HRMN 300 Human Resource Management 3
◆ BMGT 340 Business Finance 3
◆ BMGT 392 Global Business Management or other course(s) to fulfill the requirements for international perspective and supplemental major coursework 3
◆ BMGT 496 Business Ethics (also fulfills the civic responsibility requirement) 3

Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses) 37

Recommended Minor

Human resource management, marketing, finance, or other business-related minor

Recommended Elective

MATH 220 Elementary Calculus I (for students who plan to go on to graduate school)

Capstone Course for Major (to be taken in the last 15 credits) 3

Total credits for BS in business administration 120

Minor in Business Administration

The business administration minor complements the skills the student gains in his or her major discipline by providing a study of principles and techniques used in organizing, planning, managing, and leading within various organizations.

Objectives

The student who graduates with a minor in business administration will be able to

• Use critical thinking skills in conducting research in business and management.
• Apply analytical and problem-solving methods in resolving business management problems and issues.
• Identify and apply key concepts and theories in business and management.
• Employ effective written and oral communication skills consistent with the business and professional environment.
• Develop innovative leadership and team-management skills necessary for success in a diverse and changing workplace.
Requirements for the Minor

A minor in business administration requires the completion of 15 credits of coursework in business administration, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Business Administration Minor Courses Credits
(to be taken in the last 60 credits along with required and supplemental major courses)

Required Foundation Course or Courses
BMGT 110 Introduction to Business and Management 3
BMGT 364 Management and Organization Theory 3

Supplemental Courses
A supplemental course chosen from ACCT, BMGT, ENMT, HRMN, MRKT, and MGST courses 3
A second supplemental course 3
A third supplemental course 3

Total credits for minor in business administration 15

Business Law and Public Policy

Students may seek an academic minor in business law and public policy.

Minor in Business Law and Public Policy

The business law and public policy minor complements the skills the student gains in his or her major discipline by exploring and analyzing legal, social, environmental, technological, and ethical issues affecting business, industry, and government.

Objectives

The student who graduates with a minor in business law and public policy will be able to

- Discuss and analyze legal theories, concepts, and issues related to the conduct of business transactions.
- Describe the integral and complex interactions among law, business, and public policy variables and their significant societal and ethical considerations.
- Employ critical-thinking, analytic, and effective communication skills—developed through case briefings, presentations, and discussions—when engaged in problem solving.
- Participate in collaborative strategies to encourage cooperative team efforts and enhance problem-solving skills.
- Undertake pertinent research at a professional level using computer-based technology.

Requirements for the Minor

A minor in business law and public policy requires the completion of 15 credits of coursework in business law and public policy, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Business Law and Public Policy Minor Courses Credits
(to be taken in the last 60 credits along with required and supplemental major courses)

Required Courses
BMGT 380 Business Law I 3
BMGT 496 Business Ethics 3
Supplemental Courses
A supplemental course chosen from the following: 3
- BMGT 378 Legal Environment of Business
- BMGT 381 Business Law II
- BMGT 405 Environmental Management and Business
- BMGT 428 Legal Aspects of Technology Management
- BMGT 437 International Business Law
- BMGT 454 The Global Manager and Public Policy
- BMGT 482 Business and Government
- HRMN 408 Employment Law for Business
- HRMN 462 Labor Relations Law

A second supplemental course 3
A third supplemental course 3

Total credits for minor in business law and public policy 15
Requirements for the Communication Studies Major

Coursework for a major in communication studies includes the following:

• Required foundation course (3 credits): COMM 300
• Writing and language arts course (3 credits): Chosen from COMM 380, 390, 393, 393X, 394, 394X, and 491 and ENGL 278F, 281, 281X, 384, 391, and 391X
• Mass communication course (3 credits): Chosen from COMM 379A and 400 and any JOUR courses
• Speech communication course (3 credits): Any SPCH course
• Capstone course (3 credits): Chosen from COMM 490 and 495 and SPCH 397
• Supplemental major courses (15 credits): Chosen from PSYC 334 and 424; HRMN 302 and 367; MRKT 310 and 456; and any COMM, JOUR, or SPCH courses

Recommended Sequence

The following course sequence will fulfill all the requirements for the BA in communication studies. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Communication Studies Degree Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Courses</td>
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<tr>
<td>EDCP 100</td>
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<td>LIBS 150</td>
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<td>ENGL 101/101X</td>
<td>3</td>
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<tr>
<td>MATH 105</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 106</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Courses</td>
<td></td>
</tr>
<tr>
<td>HIST 142</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 157</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 101</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Placement tests are required for math and English composition courses.
**Bachelor's Degree Curricula**

- **ENGL 291** Expository and Research Writing 3
  - or other course to fulfill the communications/writing requirement
- **SOCY 100** Introduction to Sociology 3
  - or GVPT 170 American Government 3
  - or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMSST course to fulfill the first behavioral and social sciences requirement
- **IFSM 201** Introduction to Computer-Based Systems 3
- **Foundation Courses** (to be taken within the first 60 credits)
  - **PSYC 100** Introduction to Psychology 3
    - or BEHS 210 Introduction to Social and Behavioral Science or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
  - **NSCI 100** Introduction to Physical Science 3
    - or ASTR 100 Introduction to Astronomy or other course to fulfill the biological and physical sciences lecture requirement
  - **PHIL 140** Contemporary Moral Issues 3
    - or a foreign language course or other course to fulfill the second arts and humanities requirement (discipline must differ from first)
- **SPCH 100** Foundations of Speech Communication 3
  - or JOUR 201 Writing for the Mass Media or other course to fulfill the communications/writing or speech requirement
- **IFSM 304** Ethics in the Information Age 3
  - or other course(s) to fulfill the requirements in interdisciplinary issues/computing and civic responsibility
  - **COMM 300** Communication Theory 3
- **Additional Required Courses** (to be taken after introductory and foundation courses)
  - **COMM 393/393X** Technical Writing 3
    - or **COMM 394/394X** Business Writing or other course to fulfill the communications/upper-level intensive writing requirement
  - **COMM 380** Language in Social Contexts 3
    - or other writing or language arts course for the major
  - **COMM 400** Communication and the Law 3
    - or JOUR 330 Public Relations Theory or other mass communication course for the major
  - **SPCH 470** Listening 3
    - or other speech communication course for the major
  - **COMM 493** Graphics/Text Integration 3
    - or supplemental major course
  - **SPCH 482** Intercultural Communication 3
    - or other course(s) to fulfill the requirements for supplemental major coursework and international perspective
  - Any COMM, JOUR, or SPCH course (supplemental major course)

- A supplemental major course 3
- A supplemental major course 3

**Minor and/or Elective Courses** (to be taken in the last 60 credits along with required major courses)

- **Capstone Course for Major** (to be taken in the last 15 credits)
  - **COMM 495** Seminar in Workplace Communication or **COMM 490** Seminar in Technical Communication or **SPCH 397** Organizational Presentations

**Total credits for BA in Communication Studies** 120

---

**Minor in Communication Studies**

The communication studies minor complements the skills the student gains in his or her major discipline by providing specialized skills in workplace communication, including the development of written and oral communication skills and a greater understanding of human interaction.

**Objectives**

The student who graduates with a minor in communication studies will be able to:

- Apply communication theories—including both speech communication and mass communication theories—to various situations and contexts.
- Identify and apply effective strategies for creating, editing, and presenting effective written messages to different audiences and within different contexts.
- Use tools and technology to gather information, as well as to develop and deliver messages.
- Critically analyze information for creating effective oral or written messages and for evaluating messages.

**Requirements for the Minor**

A minor in communication studies requires the completion of 15 credits of coursework in communication studies, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed on the next page. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor's degree, students should refer to their major and pp. 9–10.
BACHELOR'S DEGREE CURRICULA

Computer and Information Science

Students may seek an academic major in computer and information science.

Major in Computer and Information Science

The computer and information science major provides a coherent, sequential, and integrated academic program of in-depth study that furnishes a body of knowledge and methods, as well as practice in the area of computer and information science. The curriculum focuses on the problem-solving skills and techniques needed to provide computer-based solutions to practical problems, including fundamental practical knowledge in the fields of software engineering, relational databases, programming languages, operating systems, computer networks, and distributed systems.

Objectives

The student who graduates with a major in computer and information science will be able to

- Incorporate relevant theory, techniques, and knowledge of programming languages and computer systems in developing computer-based solutions to practical problems in the field of information systems and technology.
- Effectively use object-oriented programming languages, such as Java or C++, in developing computer-based solutions to practical problems.
- Pursue careers as programmers and programmer analysts, software engineers, and system/network administrators working with operating systems such as UNIX/Linux and Windows; programming languages such as Java, C++, and Perl; and relational and object-oriented database systems such as Oracle.

- Develop clear and precise oral and written communications and enhance skills in the analysis, definition, and documentation of problems and solutions in the field of computer and information science.
- Apply knowledge of the concepts and principles of computer and information science to the management of changes and developments in information systems and technology.
- Discuss the environmental, ethical, and social implications of the rapidly changing field of information technology.
- Identify current and historical trends and patterns in computer and information science and the individuals and organizations that influence and foster these global patterns of change.
- Apply the tools and techniques in research and analysis required to evaluate computer and information science products.
- Discuss the implications and significance of computer and information science for other disciplines and fields of scholarship.

Degree Requirements

A degree with a major in computer and information science requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Computer and Information Science Major

Coursework for a major in computer and information science includes the following:

- Required core courses (15 credits): CMIS 102/102A (or prior programming experience and an additional supplemental course), 141/141A, 160, 241, and 310
- Supplemental major courses (15 credits, 6 of which must be 400-level): Any upper-level CMIS courses (CMIS 486A and 486B do not apply to 400-level requirement.)
- Required related course (3 credits), which may be applied anywhere in the degree: MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in computer information science. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Communication Studies Minor Courses

(to be taken in the last 60 credits with required and supplemental major courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 300 Communication Theory</td>
<td>3</td>
</tr>
</tbody>
</table>

Supplemental Minor Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any upper-level COMM, JOUR, or SPCH course</td>
<td>3</td>
</tr>
<tr>
<td>Any upper-level COMM, JOUR, or SPCH course</td>
<td>3</td>
</tr>
<tr>
<td>Any COMM, JOUR, or SPCH course</td>
<td>3</td>
</tr>
<tr>
<td>Any COMM, JOUR, or SPCH course</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for minor in communication studies 15
## Bachelor's Degree Curricula

### Computer and Information Science

#### Degree Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Courses</strong> (to be taken within the first 18 credits)</td>
<td></td>
</tr>
<tr>
<td>Note: Placement tests are required for math and English composition courses.</td>
<td></td>
</tr>
<tr>
<td>EDCP 100: Principles and Strategies of Successful Learning</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150: Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X: Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107: College Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introductory Courses</strong> (to be taken within the first 30 credits)</td>
<td></td>
</tr>
<tr>
<td>CMIS 102: Introduction to Problem Solving and Algorithm Design</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 102A: Fundamentals of Programming I</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 141A: Fundamentals of Programming II</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 240: Introduction to Fiction, Poetry, and Drama</td>
<td>3</td>
</tr>
<tr>
<td>or PHIL 140: Contemporary Moral Issues</td>
<td>3</td>
</tr>
<tr>
<td>or BIOL 101: Concepts of Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102: Laboratory in Biology</td>
<td>1</td>
</tr>
<tr>
<td><strong>Foundation Courses</strong> (to be taken within the first 60 credits)</td>
<td></td>
</tr>
<tr>
<td>CMIS 241: Data Structures and Abstraction</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 100: Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or SOCY 100: Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>or NSCI 100: Introduction to Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>or ASTR 100: Introduction to Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 142: Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 157: History of the United States Since 1865</td>
<td>3</td>
</tr>
<tr>
<td>or IFSM 304: Ethics in the Information Age</td>
<td>3</td>
</tr>
<tr>
<td><strong>Additional Required Courses</strong> (to be taken after introductory and foundation courses)</td>
<td></td>
</tr>
<tr>
<td>CMIS 310: Computer Systems and Architecture</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 325: UNIX with Shell Programming</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 330: Software Engineering Principles and Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 320: Relational Databases</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 370: Data Communications</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 415: Advanced UNIX and C</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 460: Software Design and Development</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 420: Advanced Relational Databases</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 435: Computer Networking</td>
<td>3</td>
</tr>
<tr>
<td><strong>Minor and/or Elective Courses</strong> (to be taken in the last 60 credits along with required major courses)</td>
<td></td>
</tr>
<tr>
<td>Recommended Minor: Computer studies</td>
<td>46</td>
</tr>
</tbody>
</table>

**Total credits for BS in computer and information science**: 120
Computer Information Technology

Students may seek an academic major in computer information technology.

Major in Computer Information Technology

The computer information technology major is designed to combine the benefits of a traditional college education with the benefits of hands-on training in state-of-the-art computer technology. Students become technically competent, but also learn to write well-organized and clear memoranda and reports. The computer information technology curriculum integrates technical skills with communication skills, superior general education requirements, and breadth of knowledge in the computer information technology field.

Objectives

The student who graduates with a major in computer information technology will be able to
• Design and implement network and database administration solutions.
• Produce effective proposals, reports, memoranda, briefings, and documentation.
• Communicate effectively using oral and computer-based presentation techniques.
• Apply effective information research techniques.
• Discuss information technology from an international and historical perspective.
• Apply ethical judgments to thinking critically and systematically about the impact of information technology on contemporary social, political, and economic issues.

Degree Requirements

A degree with a major in computer information technology requires the successful completion of 120 credits of coursework, including 33 credits for the major, 41 credits in general education requirements, and 46 credits in the minor, electives, and other degree requirements. At least 17 credits in the major must be earned in upper-level courses (numbered 300 or above), and 18 credits in courses designated CMIT.

Requirements for the Computer Information Technology Major

Coursework for a major in computer information technology includes the following:
• Required foundation courses (12 credits): CMIS 102/102A (or prior programming experience and an additional supplemental course), 141/141A (or CMSC 130), and 310 and CMIT 265
• Core courses (15 credits): Any upper-level CMIT courses
• Supplemental major courses (6 credits): Any CMIS, CMIT, CMSC, CMST, and IFSM courses
• Required related course (3 credits), which may be applied anywhere in the degree: MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in computer information technology. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Computer Information Technology

Degree Courses Credits

First Courses (to be taken within the first 18 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDCP 100</td>
<td>Principles and Strategies of Successful Learning</td>
<td>3</td>
</tr>
<tr>
<td>(strongly recommended as first course)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIBS 150</td>
<td>Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or a higher-level math course</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Introductory Courses (to be taken within the first 30 credits)

◆ CMIS 102 | Introduction to Problem Solving and Algorithm Design | 3 |
| or CMIS 102A | Fundamentals of Programming I | 3 |
| ◆ CMIS 141 | Introductory Programming | 3 |
| or CMIS 141A | Fundamentals of Programming II | 3 |
| PHIL 140 | Contemporary Moral Issues | 3 |
| or ENGL 240 | Introduction to Fiction, Poetry, and Drama or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, literature, or foreign language course to fulfill the first arts and humanities requirement |
| BIOL 101 | Concepts of Biology | 3 |
| and BIOL 102 | Laboratory in Biology | 1 |
| or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement |
BACHELOR’S DEGREE CURRICULA

Minor and/or Elective Courses
(to be taken in the last 60 credits along with required major courses)

<table>
<thead>
<tr>
<th>Recommended Minors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer studies, English, mathematics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 220 Elementary Calculus I or other calculus course (for students planning to go on to graduate school)</td>
</tr>
</tbody>
</table>

Total credits for BS in computer information technology 120

Computer Science

Students may seek an academic major in computer science.

Major in Computer Science

The computer science major is designed for students who have a good background in mathematics and an interest in the theory, practice, art, and science of computer programming. This major provides graduates with an educational foundation appropriate for careers in computer software or computer system design, including careers as software engineers, application software designers, system programmers, and system engineers.

Objectives

The student who graduates with a major in computer science will be able to

• Analyze the effects of computerization on the global workplace.
• Develop and present computer software and system designs effectively, both orally and in writing.
• Design and develop computer software using appropriate programming languages.
• Utilize effective computer organization and system architecture to enhance performance.
• Design and use efficient algorithms and data structures in writing computer programs.
• Apply the mathematical foundations of computer science in analyses of models of computation.
• Use information resources to assist with projects or research.

Degree Requirements

A degree with a major in computer science requires the successful completion of 120 credits of coursework, including 38 credits for the major; 41 credits in general education requirements; and 41 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).
Requirements for the Computer Science Major

Coursework for a major in computer science includes the following:

- Required mathematics courses (8 credits): MATH 140 and 141
- Required foundation courses (12 credits): CMSC 101 (or prior programming experience and an additional supplemental course), 130, 150, and 230
- Required core courses (9 credits): CMSC 311, 330, and 335
- Supplemental major courses (9 credits): Any 400-level CMSC courses (except CMSC 486A and 486B)

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in computer science. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Computer Science Degree Courses

First Courses

Note: Placement tests are required for math and English composition courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDCP 100</td>
<td>Principles and Strategies of Successful Learning</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150</td>
<td>Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107</td>
<td>College Algebra (or a higher-level math course)</td>
<td>3</td>
</tr>
</tbody>
</table>

Introductory Courses

(to be taken within the first 30 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 140</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>CMSC 101</td>
<td>Introductory Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 170</td>
<td>American Government (or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement)</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 101</td>
<td>Concepts of Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102</td>
<td>Laboratory in Biology (or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement)</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 291</td>
<td>Expository and Research Writing (or other course to fulfill the communications writing requirement)</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 150</td>
<td>Introduction to Discrete Structures</td>
<td>3</td>
</tr>
</tbody>
</table>

Foundation Courses

(to be taken within the first 60 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMSC 130</td>
<td>Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 141</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or SOCY 100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 100</td>
<td>Introduction to Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>or ASTR 100</td>
<td>Introduction to Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 230</td>
<td>Computer Science II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 142</td>
<td>Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 157</td>
<td>History of the United States Since 1865 (or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement)</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 304</td>
<td>Ethics in the Information Age (or other course to fulfill civic responsibility requirement)</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 100</td>
<td>Foundations of Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 390</td>
<td>Writing for Managers (or other course to fulfill the communications/ writing or speech requirement)</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 344</td>
<td>Cultural Anthropology and Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>or a foreign language course (or other course to fulfill the international perspective requirement)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Additional Required Courses

(to be taken after introductory and foundation courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 393/393X</td>
<td>Technical Writing (or other course to fulfill the communications/ upper-level intensive writing requirement)</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 311</td>
<td>Computer Organization</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 330</td>
<td>Advanced Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 335</td>
<td>Object-Oriented and Concurrent Programming</td>
<td>3</td>
</tr>
<tr>
<td>Any 400-level CMSC course except CMSC 486A/B (supplemental major course)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>A supplemental major course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>A supplemental major course</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Minor and/or Elective Courses

(to be taken in the last 60 credits along with required major courses)

Recommended Minors

- Computer studies, mathematics

Total credits for BS in computer science: 120
Computer Studies

Students may seek either an academic major or minor in computer studies.

Major in Computer Studies

The computer studies major provides a flexible and coherent program of study integrating courses from several of the specialized computer and information fields. The interdisciplinary approach helps prepare students for a variety of entry-level and midlevel technical and management positions within the information technology field.

Objectives

The student who graduates with a major in computer studies will be able to:

- Incorporate relevant theory, techniques, languages, and systems in developing computer-related solutions to practical problems.
- Apply appropriate knowledge, concepts, and principles to facilitate the management of change in computer technology.
- Conceptualize and manage the design and implementation of high-quality information systems.
- Design and develop computer software using a programming language.
- Use technology to research information and provide a critical analysis of alternatives to help organizations make informed decisions.
- Apply standard system practices to the planning, implementation, management, and evaluation of information systems in an organization.
- Design and produce accurate and precise written documentation in all phases of the system development life cycle from preliminary feasibility studies to end-user documentation and manuals.
- Analyze information technology needs from historical and international perspectives in regard to advances in worldwide e-commerce.

Degree Requirements

A degree with a major in computer studies requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Computer Studies Major

Coursework for a major in computer studies includes the following:

- Required introductory courses (6 credits): CMIS 102/102A (or prior programming experience and an additional supplemental course) and IFSM 201
- Programming language course (3 credits): Chosen from CMIS 140 and 141/141A, CMSC 130, and CMST 306
- Foundation courses (6 credits): Chosen from CMIS 241 (or CMSC 230), IFSM 300 and 310, and CMST 340
- Supplemental major courses (15 credits): Any upper-level CMST, CMIS, CMIT, CMSC, and IFSM courses
- Required related course (3 credits), which may be applied anywhere in the degree: MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in computer studies. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Computer Studies Degree Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Courses</strong></td>
<td></td>
</tr>
<tr>
<td>EDCP 100</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td></td>
</tr>
<tr>
<td>MATH 107</td>
<td>3</td>
</tr>
<tr>
<td><strong>Introductory Courses</strong></td>
<td></td>
</tr>
<tr>
<td>PHIL 140</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 240</td>
<td></td>
</tr>
<tr>
<td>BIOL 101</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102</td>
<td></td>
</tr>
<tr>
<td>• IFSM 201</td>
<td>3</td>
</tr>
<tr>
<td>• CMIS 102</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 102A</td>
<td></td>
</tr>
<tr>
<td>or other course(s)</td>
<td></td>
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<tr>
<td>to fulfill the</td>
<td></td>
</tr>
<tr>
<td>biological and</td>
<td></td>
</tr>
<tr>
<td>physical sciences</td>
<td></td>
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<tr>
<td>lecture and laboratory</td>
<td></td>
</tr>
<tr>
<td>requirement</td>
<td></td>
</tr>
<tr>
<td>or Problem Solving</td>
<td></td>
</tr>
<tr>
<td>Algorithm Design</td>
<td>3</td>
</tr>
<tr>
<td>or other course(s)</td>
<td></td>
</tr>
<tr>
<td>to fulfill the</td>
<td></td>
</tr>
<tr>
<td>biological and</td>
<td></td>
</tr>
<tr>
<td>physical sciences</td>
<td></td>
</tr>
<tr>
<td>lecture and laboratory</td>
<td></td>
</tr>
<tr>
<td>requirement</td>
<td></td>
</tr>
</tbody>
</table>
Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses) 46

Recommended Minor
Business administration

Total credits for BS in computer studies 120

Minor in Computer Studies

The computer studies minor complements the skills the student gains in his or her major discipline by providing a study of the principles and techniques used in developing computer-related solutions to practical problems.

Objectives

The student who graduates with a minor in computer studies will be able to

• Incorporate relevant theory, techniques, languages, and systems in developing computer-related solutions to practical problems.

• Apply appropriate knowledge, concepts, and principles to facilitate the management of change in computer technology.

• Use technology to research information and provide a critical analysis of alternatives to help organizations make informed decisions.

• Apply standard system practices to the planning, implementation, management, and evaluation of information systems in an organization.

Requirements for the Minor

A minor in computer studies requires the completion of 15 credits of coursework chosen from any courses in computer and information science, computer information technology, computer science, computer studies, and information systems management; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Courses may not duplicate those used to satisfy requirements for the major.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.
Criminal Justice

Students may seek either an academic major or minor in criminal justice.

Major in Criminal Justice

The criminal justice major focuses on the nature of crime and the institutions and processes that prevent and respond to crime in a democratic society. The curriculum covers the study of crime and criminal behavior, law enforcement, courts, corrections, security, and investigative forensics. The criminal justice major is designed to provide students with a broad understanding of crime and justice.

Objectives

The student who graduates with a major in criminal justice will be able to

- Describe the history and development of criminal justice organizations and the worldwide diversity of the rule of law in various countries.
- Analyze the operations, policies, and procedures within the criminal justice system.
- Explain the role of the criminal justice system (police, courts, and corrections) in the administration of justice in the United States and other countries.
- Analyze the theories related to deviance and critique the effectiveness of their practical application to behavioral change.
- Demonstrate a cohesive base of skills, techniques, and principles related to the practice of criminal justice.
- Identify and compare international and cross-cultural approaches to crime and prevention.
- Demonstrate the ability to access, interpret, and apply criminal justice research findings.

Degree Requirements

A degree with a major in criminal justice requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Criminal Justice Major

Coursework for a major in criminal justice includes the following:

- Required statistics course (3 credits): STAT 200
- Foundation courses (6 credits): Chosen from CCJS 100, 105, and 230
- Core courses (9 credits): Chosen from CCJS 234, 320, 340, 350, 352, 360, 400, 432, 445, and 497
- Diversity and societal issues course (3 credits): Chosen from CCJS 351 and 370 and SOCY 313 and 427
- Historical period policy issues course (3 credits): Chosen from CCJS 331 and 430 and HIST 319B, 319L, and 372
- Supplemental major courses (6 credits): Any upper-level CCJS courses
- Required related course (3 credits), which may be applied anywhere in the degree: MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in criminal justice. Coursework for the major is indicated by ☻. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.
The criminal justice minor complements the skills the student gains in his or her major discipline by providing a study of crime, law enforcement, courts, corrections, security, and investigative forensics.

**Objectives**

The student who graduates with a minor in criminal justice will be able to
- Analyze the operations, policies, and procedures within the criminal justice system.
- Identify the causes of criminal behavior.
- Demonstrate a cohesive base of job-related skills, techniques, and principles related to criminal justice in various countries.
- Recognize trends in crime and criminal behavior.
- Explain the role of the criminal justice system (police, courts, corrections) in the administration of justice worldwide.

**Requirements for the Minor**

A minor in criminal justice requires the completion of 15 credits of coursework in criminal justice and some related areas; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

**Criminal Justice Minor Courses**

**Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJS 320</td>
<td>Introduction to Criminalistics</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 350</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 360</td>
<td>Victimology</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 391/391X</td>
<td>Advanced Expository and Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>SOCY 313</td>
<td>The Individual and Society</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 430</td>
<td>Legal and Ethical Issues in Security Management</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 497</td>
<td>Correctional Administration</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 445</td>
<td>Introduction to Security Management</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 486A/B</td>
<td>Internship in Criminal Justice Through Co-op</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total credits for BS in criminal justice**

120
Supplemental Course
One supplemental course chosen from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJS 351</td>
<td>Issues in Criminal Justice</td>
</tr>
<tr>
<td>CCJS 357</td>
<td>Industrial and Retail Security Administration</td>
</tr>
<tr>
<td>CCJS 370</td>
<td>Race, Crime, and Criminal Justice</td>
</tr>
<tr>
<td>CCJS 453</td>
<td>White-Collar and Organized Crime</td>
</tr>
<tr>
<td>CCJS 496</td>
<td>Computer Crime and Security</td>
</tr>
</tbody>
</table>

Total credits for minor in criminal justice 15

Customer Service Management

Students may seek an academic minor in customer service management.

Minor in Customer Service Management

The customer service management minor complements the skills the student gains in his or her major discipline by providing a study of how customer service managers make informed decisions regarding organization, planning, operating procedures, management, and allocation of limited resources.

Objectives

The student who graduates with a minor in customer service management will be able to

- Apply key concepts in customer service planning and management.
- Analyze the relationship of customer service activities and procedures to the overall organization.

Requirements for the Minor

A minor in customer service management requires the completion of 15 credits in customer service management coursework, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed at right. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Customer Service Management

Required Course
MRKT 395 Customer Service Management 3

Supplemental Courses
One course chosen from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 301</td>
<td>Accounting for Nonaccounting Managers</td>
</tr>
<tr>
<td>BMGT 317</td>
<td>Problem Solving for Managers</td>
</tr>
<tr>
<td>BMGT 364</td>
<td>Management and Organization Theory</td>
</tr>
<tr>
<td>BMGT 375</td>
<td>Procurement Management</td>
</tr>
<tr>
<td>BMGT 378</td>
<td>Legal Environment of Business</td>
</tr>
<tr>
<td>BMGT 487</td>
<td>Project Management I</td>
</tr>
<tr>
<td>HRMN 302</td>
<td>Organizational Communication</td>
</tr>
<tr>
<td>HRMN 406</td>
<td>Employee Training and Development</td>
</tr>
<tr>
<td>MRKT 396</td>
<td>Customer Consultation and Needs Analysis</td>
</tr>
</tbody>
</table>

A second supplemental course 3
A third supplemental course 3
A fourth supplemental course 3

Total credits for minor in customer service management 15

Economics

Students may seek an academic minor in economics.

Minor in Economics

The economics minor complements the skills the student gains in his or her major discipline by providing a study of the forces that determine production and distribution, price levels, and income distribution, as well as other economic factors that influence the quality of life.

Objectives

The student who graduates with a minor in economics will be able to

- Explain fundamental economic concepts and understand the principles and problems of modern economic life.
- Examine the relation of economic concepts to a variety of current social problems, including poverty, divorce, social stratification, and unemployment.
- Analyze economic and social issues and their relationship to personal, public, and business decisions.
Requirements for the Minor

A minor in economics requires the completion of 18 credits in economics, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Economics Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses</td>
<td></td>
</tr>
<tr>
<td>ECON 201</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>ECON 203</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>STAT 230</td>
<td>Business Statistics</td>
</tr>
<tr>
<td>Supplemental Courses</td>
<td></td>
</tr>
<tr>
<td>Any upper-level ECON course</td>
<td>3</td>
</tr>
<tr>
<td>Any upper-level ECON course</td>
<td>3</td>
</tr>
<tr>
<td>Any upper-level ECON course</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for minor in economics 18

Economics Minor Courses
(to be taken in the last 60 credits with required and supplemental major courses)

Required Courses
ECON 201 Principles of Macroeconomics 3
ECON 203 Principles of Microeconomics 3
STAT 230 Business Statistics 3

Supplemental Courses
Any upper-level ECON course 3
Any upper-level ECON course 3
Any upper-level ECON course 3

Total credits for minor in economics 18

Objectives

The student who graduates with a major in English will be able to:

• Analyze significant literary works, primarily those written in English.
• Critically examine intellectual, moral, and ethical issues as they are presented or implied in works of literature.
• Apply techniques of literary research, including research that uses technology and fosters information literacy.
• Analyze literary works, literary genres, literary criticism, the historical development of literature and language, and the contributions of major authors in the context of the cultures within which these authors lived and wrote.
• Formulate ideas, especially for literary analysis, and convey them clearly in both written and spoken English.
• Write effectively and demonstrate superior understanding of the writing process and writing techniques.

Degree Requirements

A degree with a major in English requires the successful completion of 120 credits of coursework, including 33 credits for the major; 41 credits in general education requirements; and 46 credits in the minor, electives, and other degree requirements. At least 17 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the English Major

Coursework for a major in English includes the following:

• Required foundation course (3 credits): ENGL 303
• Fiction genre course (3 credits): ENGL 240, 246, 441, or 457
• Poetry genre course (3 credits): ENGL 240 or 345
• Drama genre course (3 credits): ENGL 240, 244, 434, or 454
• Pre-1800 historical period course (3 credits): ENGL 201, 221, 310, or 311
• Historical period course (3 credits): ENGL 201, 221, 222, 310, 311, 312, 425, 433, or 437
• American author course (3 credits): ENGL 354, 363, 364, or 439
English Degree Courses

First Courses (to be taken within the first 18 credits)

- EDCP 100 Principles and Strategies of Successful Learning 3
- LIBS 150 Information Literacy and Research Methods 1
- ENGL 101/101X Introduction to Writing 3
- MATH 105 Mathematics: Contemporary Topics and Applications 3
  or MATH 106 Finite Mathematics or a higher-level math course

Introductory Courses (to be taken within the first 30 credits)

- PHIL 140 Contemporary Moral Issues 3
  or a foreign language course or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement
- BIOL 101 Concepts of Biology 3
  and BIOL 102 Laboratory in Biology or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement
- ENGL 291 Expository and Research Writing or other course to fulfill the communications/writing requirement
- GVPT 170 American Government or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement
- IFSM 201 Introduction to Computer-Based Systems 3

Foundation Courses (to be taken within the first 60 credits)

- PSYC 100 Introduction to Psychology 3
  or SOCY 100 Introduction to Sociology or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
- NSCI 100 Introduction to Physical Science 3
  or ASTR 100 Introduction to Astronomy or other course to fulfill the biological and physical sciences lecture requirement
- HIST 142 Western Civilization II 3
  or HIST 157 History of the United States Since 1865 or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement
- IFSM 304 Ethics in the Information Age or other course(s) to fulfill the requirements in interdisciplinary issues/computing and civic responsibility
- SPCH 100 Foundations of Speech Communication 3
  or COMM 380 Language in Social Contexts or other course to fulfill the communications/writing or speech requirement
  ◆ ENGL 240 Introduction to Fiction, Poetry, and Drama or other major drama genre course for the major
  ◆ ENGL 303 Critical Approaches to Literature 3

Additional Required Courses (to be taken after introductory and foundation courses)

- ENGL 391/391X Advanced Expository and Research Writing or other course to fulfill the communications/upper-level intensive writing requirement
  ◆ ENGL 345 Modern Poetry or other poetry genre course for the major
- ENGL 441 The Novel in America Since 1914 or other fiction genre course for the major
- ENGL 311 17th- and 18th-Century British Literature or other historical period course for the major
- ENGL 406 Shakespeare: Power and Justice or other British author course for the major
- ENGL 454 Modern World Drama or other course(s) to fulfill the requirements for international perspective and supplemental major coursework
  ◆ Any ENGL course (supplemental major course) 3
  ◆ A supplemental major course 3

Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses) 43

Total credits for BA in English 120
Minor in English

The English minor complements the skills the student gains in his or her major discipline by providing exposure to literary analysis, critical thinking and reading, and the study of the relationship of literature to contemporary intellectual issues.

Objectives

The student who graduates with a minor in English will be able to

• Analyze significant literary works written in, or translated into, English.
• Analyze literary works, literary genres, literary criticism, the historical development of literature and language, and the contributions of major authors in the context of the cultures within which these authors lived and wrote.
• Formulate ideas, especially for literary analysis, and convey them clearly in both written and spoken English.
• Write effectively and demonstrate superior understanding of the writing process and writing techniques.

Requirements for the Minor

A minor in English requires the completion of 15 credits of English coursework, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>English Minor Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>(to be taken in the the last 60 credits with required and supplemental major courses)</td>
<td></td>
</tr>
<tr>
<td><strong>Required Course</strong></td>
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</tr>
<tr>
<td>ENGL 303 Critical Approaches to Literature</td>
<td>3</td>
</tr>
<tr>
<td><strong>Supplemental Courses</strong></td>
<td></td>
</tr>
<tr>
<td>(Genre, period, and major author courses are listed under the English major.)</td>
<td></td>
</tr>
<tr>
<td>One upper-level ENGL genre course</td>
<td>3</td>
</tr>
<tr>
<td>One upper-level ENGL period course</td>
<td>3</td>
</tr>
<tr>
<td>One upper-level ENGL major author course</td>
<td>3</td>
</tr>
<tr>
<td>Any ENGL course</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total credits for minor in English</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

Environmental Management

Students may seek either an academic major or minor in environmental management.

Major in Environmental Management

The major in environmental management educates students to become environmental managers who not only understand all aspects of the environmental industry but also have "new work skills," including skills in critical thinking, problem solving, project management, interpersonal relations, and team building. The major in environmental management prepares students to plan, implement, and control all facets of environmental management.

Objectives

The student who graduates with a major in environmental management will be able to

• Apply and interpret the scientific principles, guiding regulations, and recommended practices in environmental management.
• Demonstrate knowledge of effective techniques for communicating scientific, technical, and legal information to diverse populations, including industry managers and employees, community groups, and the media.
• Develop comprehensive environmental management strategies and possess “new work skills,” i.e., skills in critical thinking, problem solving, project management, interpersonal relations, and team building.
• Combine information technology, international perspectives, and an understanding of the new environmental paradigm of management and prevention in addition to control and remediation.
• Demonstrate a broad understanding of multimedia (air, water, land) environmental contexts, the development of cutting-edge technologies, and the application of existing and emerging environmental technologies in cost-effective and work-efficient ways.
• Demonstrate a broad understanding of multimedia environmental management, regulatory compliance, recent technological changes, emergency management, health and safety management, global resource conservation, and sustainable development.
• Discuss the history and development of theories and concepts in environmental management and their application to various environmental situations.
• Evaluate ethical, social, civic, cultural, and political issues as they relate to environmental management, business operations, human factors, information systems, governmental regulation, and domestic and international ventures.
• Apply appropriate information technology to analyze problems and issues, develop business research, report key data, and recommend management strategy and action plans.
Degree Requirements

A degree with a major in environmental management requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Environmental Management Major

Coursework for a major in environmental management includes the following:

- Required core courses (18 credits): ENMT 301, 303, 321, 322 (or 405), 340, and 495
- Supplemental major courses (12 credits): Any ENMT courses
- Required related courses (12 credits), which may be applied anywhere in the degree: BIOL 101, MATH 115 (or MATH 107–108), NSCI 100, and STAT 230

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in environmental management. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options.

Environmental Management

Degree Courses Credits

First Courses (to be taken within the first 18 credits)

Note: Placement tests are required for math and English composition courses.

EDCP 100 Principles and Strategies of Successful Learning 3 (strongly recommended as first course)
LIBS 150 Information Literacy and Research Methods 1
ENGL 101/101X Introduction to Writing 3
MATH 115 Pre-Calculus 3
or both MATH 107 College Algebra
and MATH 108 Trigonometry and Analytical Geometry (related requirement for the major)

Introductory Courses (to be taken within the first 30 credits)

NSCI 100 Introduction to Physical Science 3
and NSCI 101 Physical Science Laboratory (related requirement for the major; also fulfills the biological and physical sciences lecture and laboratory requirement)
IFSM 201 Introduction to Computer-Based Systems 3
GVPT 170 American Government 3
or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMS course to fulfill the first behavioral and social sciences requirement

Foundation Courses (to be taken within the first 60 credits)

PSYC 100 Introduction to Psychology 3
or SOCY 100 Introduction to Sociology
or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first) and the historical perspective requirement
HIST 142 Western Civilization II 3
or HIST 157 History of the United States Since 1865
or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first)
COMM 390 Writing for Managers
or other course to fulfill the communications/writing or speech requirement
IFSM 300 Information Systems in Organizations 3
ANTH 344 Cultural Anthropology and Linguistics 3
or other course to fulfill the international perspective requirement
IFSM 304 Ethics in the Information Age 3

Enrollment in an upper-level intensive writing course fulfills the upper-level intensive writing requirement.
Minor in Environmental Management
The environmental management minor complements the skills the student gains in his or her major discipline by providing a study of interdisciplinary and multimedia (air, water, land) environmental management and related issues on a fundamental, practical, and global level.

Objectives
The student who graduates with a minor in environmental management will be able to:
• Apply and interpret the scientific principles, guiding regulations, and recommended practices in environmental management.
• Demonstrate knowledge of effective techniques for communicating scientific, technical, and legal information.
• Develop strategies and employ today’s required skills in critical thinking, problem solving, project management, interpersonal relations, and team building.
• Combine information technology and international perspectives.
• Describe the new paradigm of environmental management and prevention and relate it to multimedia environment and sustainable development.

Requirements for the Minor
A minor in environmental management requires the completion of 15 credits of coursework in environmental management; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Environmental Management Minor Courses Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken in the last 60 credits with required and supplemental major courses)</td>
</tr>
<tr>
<td>Required Course</td>
</tr>
<tr>
<td>ENMT 301 Environment and Ecosystems Management</td>
</tr>
<tr>
<td>Supplemental Courses</td>
</tr>
<tr>
<td>Any upper-level ENMT course</td>
</tr>
<tr>
<td>Any ENMT course</td>
</tr>
<tr>
<td>Total credits for minor in environmental management</td>
</tr>
</tbody>
</table>

Finance
Students may seek either an academic major or minor in finance.

Major in Finance
The finance major combines a foundation in the principles of business, economics, and accounting with an in-depth focus on issues and knowledge in the areas of finance and financial management. It includes the study of business finance, financial management, investments, and security analysis and valuation. The finance major prepares graduates for career opportunities in the global business community, with emphasis on careers in financial analysis and management, investment analysis and portfolio management, commercial and investment banking, insurance, risk management, and international finance.

Objectives
The student who graduates with a major in finance will be able to:
• Identify the most current methods for analyzing, interpreting, and reporting financial information.
• Develop, integrate, and apply information to assess the present and future financial status of an organization.
• Use current analytical tools to measure and control the risk of an investment portfolio or a business.
• Estimate short- and long-term financing needs.
• Prepare and analyze capital budgeting projects.
• Determine the value of potential acquisitions and analyze competitors.
• Determine the role of derivatives in the financial process.
• Describe the different dimensions of international finance.
• Think critically, analyze information, and solve problems related to complex financial issues.
• Use computers, financial software, and databases for advanced financial analysis and presentation.

Degree Requirements
A degree with a major in finance requires the successful completion of 120 credits of coursework, including 36 credits for the major; 41 credits in general education requirements; and 43 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Finance Major
Coursework for a major in finance includes the following:
• Required foundation courses (15 credits): ACCT 220 and 221, STAT 230, BMGT 364, and MRKT 310
• Required core courses (15 credits): BMGT 340, 343, 440, 443, and 495
BACHELOR’S DEGREE CURRICULUM

- Supplemental major courses (6 credits): Chosen from BMGT 345, 346, 347, 444, 445, and 446 and ECON 305, 306, and 430
- Required related courses (12 credits), which may be applied anywhere in the degree: ACCT 326 (or IFSM 300), ECON 201 and 203, and MATH 107

Recommended Sequence
The following course sequence will fulfill all the requirements for the BS in finance. Coursework for the major is indicated by ° Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Finance Degree Courses Credits

First Courses (to be taken within the first 18 credits)
Note: Placement tests are required for math and English composition courses.

EDCP 100 Principles and Strategies of Successful Learning 3
LIBS 150 Information Literacy and Research Methods 1
ENGL 101/101X Introduction to Writing 3
MATH 107 College Algebra 3
BMGT 110 Introduction to Business and Management 3

Introductory Courses (to be taken within the first 30 credits)
° ACCT 220 Principles of Accounting I 3
ECON 201 Principles of Macroeconomics 3
NSCI 100 Introduction to Physical Science 3
and NSCI 101 Physical Science Laboratory 1
or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement
ENGL 291 Expository and Research Writing 3
or other course to fulfill the communications/writing requirement
IFSM 201 Introduction to Computer-Based Systems 3
PHIL 140 Contemporary Moral Issues 3
or a foreign language course
or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement

Foundation Courses (to be taken within the first 60 credits)
° STAT 230 Business Statistics 3
or STAT 200 Introduction to Statistics

PSYC 100 Introduction to Psychology 3
or SOCY 100 Introduction to Sociology
or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
° ACCT 221 Principles of Accounting II 3
BIOL 101 Concepts of Biology 3
or ASTR 100 Introduction to Astronomy
or other course to fulfill the biological and physical sciences lecture requirement
ECON 203 Principles of Microeconomics 3
HIST 142 Western Civilization II 3
or HIST 157 History of the United States Since 1865
or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement
SPCH 100 Foundations of Speech Communication 3
or COMM 390 Writing for Managers
or other course to fulfill the communications/writing or speech requirement

Additional Required Courses (to be taken after introductory and foundation courses)
° BMGT 340 Business Finance 3
° MRKT 310 Marketing Principles and Organization 3
° BMGT 343 Investments 3
COMM 394/394X Business Writing 3
or other course to fulfill the communications/writing or speech requirement

IFSM 300 Information Systems in Organizations 3
or ACCT 326 Accounting Information Systems
° BMGT 364 Management and Organization Theory 3

Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses) 28

Recommended Minors
Human resource management, marketing, or other business-related minor

Capstone Course for Major (to be taken in the last 15 credits)
° BMGT 495 Strategic Management 3

Total credits for BS in finance 120
Minor in Finance

The finance minor complements the skills the student gains in his or her major discipline by providing a study of the institutions, theory, and practice associated with the allocation of financial resources within the private sector.

Objectives

The student who graduates with a minor in finance will be able to
- Identify the latest methods for analyzing, interpreting, and reporting financial data.
- Develop information to assess the present and future financial status of an organization.
- Use current analytical tools to measure and control the risk of an investment portfolio or a business.
- Estimate short- and long-term financing needs.
- Analyze capital budgeting projects.
- Determine the value of potential acquisitions and analyze competitors.
- Determine the role of derivatives in the financial process.
- Describe the various dimensions of international finance.
- Use effective written and oral communication skills consistent with the business and professional environment.
- Think critically, analyze information, and solve problems when dealing with complex financial issues.
- Use financial and database software and other computer technologies.

Requirements for the Minor

A minor in finance requires the completion of 15 credits of coursework in finance, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor's degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Finance Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken in the the last 60 credits with required and supplemental major courses)</td>
<td></td>
</tr>
<tr>
<td>Required Courses</td>
<td></td>
</tr>
<tr>
<td>BMGT 340 Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 343 Investments</td>
<td>3</td>
</tr>
<tr>
<td>Supplemental Courses</td>
<td></td>
</tr>
<tr>
<td>Any course applicable to the finance major</td>
<td>3</td>
</tr>
<tr>
<td>A second supplemental course</td>
<td>3</td>
</tr>
<tr>
<td>A third supplemental course</td>
<td>3</td>
</tr>
<tr>
<td>Total credits for minor in finance</td>
<td>15</td>
</tr>
</tbody>
</table>

Fire Science

Students may seek either an academic major or minor in fire science.

Major in Fire Science

The major in fire science covers disaster planning and the administration of fire-protection services, encompassing all areas of incendiary-fire management. Developed in conjunction with the National Fire Academy of the Federal Emergency Management Agency, the major serves fire-service professionals seeking state-of-the-art knowledge to support advancement to chief executive management and senior leadership positions. It also serves professionals in related fields such as public safety, law enforcement, government, health services, insurance, and private-industry emergency response, as well as those in military fire departments in the United States and abroad. The major provides an understanding of the interagency coordination necessary for fire prevention, emergency management, safe and successful fire-incident command, and arson investigation. The curriculum includes analytical approaches to fire protection and investigation, personnel management, disaster and fire-defense planning, hazardous materials management, fire-protection structure and system design, the role of the fire service within the community and political structure, and the phenomena of fire propagation.

Objectives

The student who graduates with a major in fire science will be able to
- Explain and apply the organizational theories and skills required for fire service administration.
- Apply personnel management procedures and practices to manage career and volunteer fire-protection organizations effectively.
- Demonstrate fire prevention as the primary community-based strategy for fire protection and emergency management.
- Develop and administer a comprehensive hazardous materials management program, from planning to postincident phases.
- Analyze the legal implications and aspects of the fire department's role in public safety.
- Describe the fire-related social, cultural, behavioral, economic, and political characteristics of diverse populations in the United States and abroad and analyze their global impact on the fire problem.
- Conduct research using library resources, information technology, analytical tools, and the scientific method to predict and control fire problems and advance the body of knowledge in fire science.
- Develop effective written communications consistent with the fire service and related professional environment.
- Discuss the historical development of fire protection and apply historical lessons to contemporary issues in fire protection and emergency management.
Degree Requirements

A degree with a major in fire science requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Fire Science Major

Coursework for a major in fire science includes the following:

- Required core courses (15 credits): FSCN 302, 304, 305, 403, and 412
- Supplemental major courses (15 credits): Any FSCN courses
- Required related course (3 credits), which may be applied anywhere in the degree: ACCT 326 (or IFSM 300)

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in fire science. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowed) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Fire Science Degree Courses

First Courses (to be taken within the first 18 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDCP 100</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 105</td>
<td></td>
</tr>
<tr>
<td>or a higher-level math</td>
<td></td>
</tr>
<tr>
<td>course or EDCP 100</td>
<td></td>
</tr>
</tbody>
</table>

Introductory Courses (to be taken within the first 30 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVPT 170</td>
<td>3</td>
</tr>
<tr>
<td>or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td></td>
</tr>
<tr>
<td>BIOL 101</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102</td>
<td></td>
</tr>
<tr>
<td>or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement</td>
<td></td>
</tr>
<tr>
<td>ENGL 291</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing requirement</td>
<td></td>
</tr>
<tr>
<td>IFSM 201</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing requirement</td>
<td></td>
</tr>
</tbody>
</table>

Foundation Courses (to be taken within the first 60 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 100</td>
<td>3</td>
</tr>
<tr>
<td>or SOCY 100</td>
<td></td>
</tr>
<tr>
<td>or other course(s) to fulfill the second behavioral and social sciences requirement (discipline must differ from first)</td>
<td></td>
</tr>
<tr>
<td>NSCI 100</td>
<td>3</td>
</tr>
<tr>
<td>or ASTR 100</td>
<td></td>
</tr>
<tr>
<td>or other course to fulfill the biological and physical sciences lecture requirement</td>
<td></td>
</tr>
<tr>
<td>HIST 142</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 157</td>
<td></td>
</tr>
<tr>
<td>or other course(s) to fulfill the international perspective requirement</td>
<td></td>
</tr>
</tbody>
</table>

Recommended Courses (to be taken after introductory and foundation courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 390</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing or speech requirement</td>
<td></td>
</tr>
<tr>
<td>IFSM 300</td>
<td>3</td>
</tr>
<tr>
<td>or ACCT 326</td>
<td></td>
</tr>
<tr>
<td>or other course to fulfill the requirements in interdisciplinary issues/computing and civic responsibility</td>
<td></td>
</tr>
<tr>
<td>FSCN 304</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing or speech requirement</td>
<td></td>
</tr>
<tr>
<td>IFSM 304</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the requirements in interdisciplinary issues/computing and civic responsibility</td>
<td></td>
</tr>
</tbody>
</table>

Additional Required Courses (to be taken after introductory and foundation courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 394/394X</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing or speech requirement</td>
<td></td>
</tr>
<tr>
<td>FSCN 305</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing or speech requirement</td>
<td></td>
</tr>
<tr>
<td>FSCN 412</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing or speech requirement</td>
<td></td>
</tr>
</tbody>
</table>

Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 200</td>
<td>3</td>
</tr>
</tbody>
</table>

Recommended Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Electives</td>
<td>40</td>
</tr>
</tbody>
</table>

Total credits for BS in fire science 120
Minor in Fire Science

The fire science minor complements the skills the student gains in his or her major discipline by providing knowledge of disaster planning and the administration of fire-protection services, including organization, planning, operating procedures, management, and allocation of limited resources.

Objectives

The student who graduates with a minor in fire science will be able to

- Recognize the legal basis for public safety responsibility and product liability.
- Develop innovative leadership and team-management skills necessary for success in a diverse and changing workplace.
- Use computer technology to inform and enhance operational and strategic management decisions.
- Apply current computer applications and technology in the workplace.
- Explain fire fighting and disaster planning as practiced in other parts of the world.
- Write reports and make presentations of the quality expected by senior management.
- Use current information technology to access relevant managerial and educational resources worldwide.
- Develop a comprehensive hazardous materials management program, including preincident planning, on-site emergency response, and postincident analysis and investigation.
- Apply skills in analysis and evaluation to complete fire-risk assessment.
- Think critically and constructively and perform research in fire science using commonly accepted quantitative and qualitative analytical tools to understand and evaluate fire and emergency situations and scenarios.
- Apply analytical and problem-solving methods in resolving fire and other emergency problems and issues.
- Analyze the domestic and global dimensions of fire science.
- Develop effective written and oral communications consistent with the fire-service and related professional environment.
- Describe the impact of historical events and social change on the fire and rescue service of today.

Requirements for the Minor

A minor in fire science requires the completion of 15 credits of coursework in fire science, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed at right. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Fire Science Minor Courses

(to be taken in the the last 60 credits with required and supplemental major courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSCN 302</td>
<td>Advanced Fire Administration</td>
<td>3</td>
</tr>
<tr>
<td>or FSCN 304</td>
<td>Fire-Personnel Management</td>
<td></td>
</tr>
</tbody>
</table>

Supplemental Courses

- Any upper-level FSCN course 3
- Any upper-level FSCN course 3
- Any FSCN course 3
- Any FSCN course 3

Total credits for minor in fire science 15

Forensics

Students may seek an academic minor in forensics. A related academic major is available in investigative forensics (p. 63).

Minor in Forensics

The minor in forensics complements the skills the student gains in his or her major discipline by providing interdisciplinary study in selected areas of criminal justice, natural science, social science, investigation and security, information and computer systems, psychology, and sociology. It combines laboratory and field skills in the collection and analysis of physical evidence with further study in the various subfields of forensics.

Objectives

The student who graduates with a minor in forensics will be able to

- Collect, manipulate, and analyze various pieces of evidence and data from crime scenes.
- Articulate the role of crime scene investigation and evidence in the criminal justice system.
- Explain the role of the social, behavioral, natural, and computer sciences in forensics.

Requirements for the Minor

A minor in forensics requires the completion of 15 credits of coursework in criminal justice, natural science, social science, and investigation or security; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed on the next page. If a specific course
required for the minor is taken instead to satisfy requirements for the major, another course from the lists below or another forensic science course should be substituted to fulfill the minimum number of credits for the minor.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Forensics Minor Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJS 234</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 320</td>
<td>3</td>
</tr>
</tbody>
</table>

Natural Science Course

One course chosen from the following:

- BIOL 320  Forensic Biology
- BIOL 356  Molecular Biology Laboratory
- NSCI 301  Laboratory Organization and Management

Social Science Course

One course chosen from the following:

- CCJS 461  Psychology of Criminal Behavior
- FSCN 402  Fire-Related Human Behavior
- PSYC 370  Foundations of Forensic Psychology
- SOCY 427  Deviant Behavior

Investigations and Security Course

One course chosen from the following:

- CCJS 420  Medical and Legal Investigations of Death
- CCJS 496  Computer Crime and Security
- FSCN 306  Incendiary-Fire Analysis and Investigation
- FSCN 403  Managerial Issues in Hazardous Materials

Total credits for minor in forensics  15

General Studies

The general studies major is available only to active-duty military personnel and certain others who conform to specific stipulations. Students outside UMUC Europe and UMUC Asia should not select this major.

Major in General Studies

The general studies major allows students to draw from various disciplines that provide a body of knowledge appropriate to an identified area of interest (for example, an aspect of culture, a historical period, or a geographical location). The interdisciplinary approach emphasizes analysis and synthesis of diverse theory and practice.

Objectives

The student who graduates with a major in general studies will be able to

- Understand and apply key concepts from chosen disciplines.
- Develop effective written and oral communication skills consistent with the chosen areas of study.
- Apply skills and concepts to problems of modern life.
- Define an approach grounded in the chosen disciplines and appropriate to the study of a specific topic, area, or theme.
- Develop effective skills in cross-disciplinary comparison, historical and critical analysis, research, and evaluation.
- Use computers for communication and research.
- Demonstrate information literacy through research and resource evaluation appropriate to the chosen area of study.

Degree Requirements

A degree with a major in general studies requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the General Studies Major

Coursework for the major in general studies includes either 15 credits in each of two different disciplines or specific coursework for a particular curriculum as defined by UMUC. The general studies major requires prior approval. Unless the curriculum has already been defined by UMUC, students must submit a formal proposal explaining the focus and curricular objectives of the proposed course of study and identifying specific courses to fulfill those objectives. Students should consult an advisor about eligibility for the major and about the requirements and procedure for submitting a proposal.
Recommended Sequence

The following course sequence will fill the requirements for the BS in general studies if course selection in the major is approved. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

General Studies Degree Courses

<table>
<thead>
<tr>
<th>First Courses (to be taken within the first 18 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDCP 100 Principles and Strategies of Successful Learning (strongly recommended as first course)</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150 Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td><strong>MATH 105 Mathematics: Contemporary Topics and Applications</strong></td>
<td>3</td>
</tr>
<tr>
<td>or MATH 106 Finite Mathematics or a higher-level math course</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Introductory Courses (to be taken within the first 30 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 140 Contemporary Moral Issues or a foreign language course</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 101 Concepts of Biology and BIOL 102 Laboratory in Biology</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 291 Expository and Research Writing or other course to fulfill the communications/writing requirement</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 170 American Government or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 201 Introduction to Computer-Based Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foundation Courses (to be taken within the first 60 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSVC 100 Introduction to Psychology or SOCY 100 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 100 Introduction to Physical Science or ASTR 100 Introduction to Astronomy</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Required Courses for the Major and Degree (to be taken after introductory and foundation courses)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 391/391X Advanced Expository and Research Writing or other course to fulfill the communications/upper-level intensive writing requirement</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coursework for the major, including</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 credits in first discipline (at least 9 of which are upper level)</td>
<td>15</td>
</tr>
<tr>
<td>15 credits in second discipline (at least 6 of which are upper level)</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total credits for BS in general studies</td>
<td>120</td>
</tr>
</tbody>
</table>
Gerontology

Students may seek an academic major or minor in gerontology.

Major in Gerontology

The major in gerontology prepares students to implement and manage health and human service programs in gerontology. It combines a foundation in the psychological and physical aspects of aging with an understanding of programs, services, and policies related to aging and older adults.

Objectives

The student who graduates with a major in gerontology will be able to

• Describe and analyze the biological and psychosocial processes of aging.
• Demonstrate an understanding of historical trends in the field of gerontology.
• Analyze the impact of race, ethnicity, gender, and social class on the aging process.
• Identify and apply cross-cultural and international perspectives on aging.
• Identify services and programs available to older adults locally and nationally.
• Articulate and analyze the development of policies related to aging and their impact on programs for older adults, both locally and nationally.
• Demonstrate the ability to access, interpret, and apply gerontological research findings.
• Apply interdisciplinary gerontological knowledge to work with older adults in one’s chosen area of practice.
• Effectively communicate gerontological concepts in oral and written form.

Degree Requirements

A degree with a major in gerontology requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Gerontology Major

Coursework for a major in gerontology includes the following:

• Required foundation courses (9 credits): GERO 100, 220 (or PSYC 357), and 302 (or BIOL 307)
• Required management courses (9 credits): STAT 230 and GERO 301 (or BMGT 361) and 306
• Health-related course (3 credits): GERO 338, 350, 355, 380, 391, or 460
• Supplemental major courses (6 credits): Any GERO courses

• Required internship (3 credits): GERO 486A
• Required related course (3 credits), which may be applied anywhere in the degree: MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in gerontology. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Gerontology Degree Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Courses</strong> (to be taken within the first 18 credits)</td>
<td></td>
</tr>
<tr>
<td>EDPC 100 Principles and Strategies of Successful Learning</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150 Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107 College Algebra or a higher-level math course</td>
<td>3</td>
</tr>
<tr>
<td><strong>Introductory Courses</strong> (to be taken within the first 30 credits)</td>
<td></td>
</tr>
<tr>
<td>◆ GERO 100 Introduction to Gerontology</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 170 American Government or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 101 Concepts of Biology and BIOL 102 Laboratory in Biology or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 291 Expository and Research Writing or other course to fulfill the communication writing requirement</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 201 Introduction to Computer-Based Systems</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 140 Contemporary Moral Issues or a foreign language course or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first general education requirement in arts and humanities</td>
<td>3</td>
</tr>
<tr>
<td><strong>Foundation Courses</strong> (to be taken within the first 60 credits)</td>
<td></td>
</tr>
<tr>
<td>◆ GERO 220 Psychological Aspects of Aging or PSYC 357 Psychology of Adulthood and Aging</td>
<td>3</td>
</tr>
<tr>
<td>◆ STAT 230 Business Statistics or STAT 200 Introduction to Statistics or STAT 225 Introduction to Statistical Methods in Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>
Minor in Gerontology

The gerontology minor complements the skills the student gains in his or her major discipline by examining aging from a multidisciplinary perspective that integrates biological, sociological, psychological, and historical perspectives. It provides the student with the opportunity to study complex processes and aspects of aging and the field of gerontology.

Objectives

The student who graduates with a minor in gerontology will be able to

- Demonstrate the ability to apply—in an integrated, interdisciplinary way—biological, sociological, psychological, and health concepts to work with older adults.
- Evaluate important historical trends in the field of aging and their effect on understanding the aging process for different generations.
- Analyze the impact of gender, ethnicity, and socioeconomic status on the experience of aging from an interdisciplinary perspective.
- Analyze current family and intergenerational issues related to aging from an interdisciplinary perspective.
- Articulate the social, political, legal, health, and policy implications of a rapidly expanding aging population for society.
- Use information technology skills to access and retrieve information on aging and gerontology.

Requirements for the Minor

A minor in gerontology requires the completion of 15 credits of coursework in gerontology, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERO 100</td>
<td>Introduction to Gerontology</td>
<td>3</td>
</tr>
<tr>
<td>or SOCY 100</td>
<td>Introduction to Sociology</td>
<td></td>
</tr>
<tr>
<td>or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSCI 100</td>
<td>Introduction to Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>or ASTR 100</td>
<td>Introduction to Astronomy</td>
<td></td>
</tr>
<tr>
<td>or other course to fulfill the biological and physical sciences lecture requirement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIST 142</td>
<td>History of the United States Since 1865 or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 157</td>
<td>History of the United States Since 1865 or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement</td>
<td></td>
</tr>
<tr>
<td>SPCH 100</td>
<td>Foundations of Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 380</td>
<td>Language in Social Contexts or other course to fulfill the communication writing or speech requirement</td>
<td></td>
</tr>
<tr>
<td>IFSM 304</td>
<td>Ethics in the Information Age or other course(s) to fulfill the requirements in interdisciplinary issues computing and civic responsibility</td>
<td>3</td>
</tr>
<tr>
<td>◆ GERO 302</td>
<td>Health and Aging</td>
<td>3</td>
</tr>
<tr>
<td>or BIOL 307</td>
<td>The Biology of Aging</td>
<td></td>
</tr>
<tr>
<td>Additional Required Courses (to be taken after introductory and foundation courses)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANTH 344</td>
<td>Cultural Anthropology and Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>or SPCH 482</td>
<td>Intercultural Communications or other course to fulfill the international perspective requirement</td>
<td></td>
</tr>
<tr>
<td>◆ GERO 301</td>
<td>Service/Program Management</td>
<td>3</td>
</tr>
<tr>
<td>or BMGT 361</td>
<td>Health Management</td>
<td></td>
</tr>
<tr>
<td>◆ GERO 306</td>
<td>Programs, Services, and Policies</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 391/391X</td>
<td>Advanced Expository and Research Writing or other course to fulfill the communications upper-level intensive writing requirement</td>
<td>3</td>
</tr>
<tr>
<td>◆ GERO 338</td>
<td>Health Promotion in Older Adults or other health-related course for the major</td>
<td>3</td>
</tr>
<tr>
<td>◆ GERO 311</td>
<td>Women and Aging</td>
<td>3</td>
</tr>
<tr>
<td>or GERO 410</td>
<td>Cross-Cultural Perspectives of Aging or other supplemental major course</td>
<td></td>
</tr>
<tr>
<td>◆ GERO 327</td>
<td>Ethnicity and Aging or other supplemental major course</td>
<td>3</td>
</tr>
<tr>
<td>Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses)</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Internship for Major (to be taken in the last 30 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>◆ GERO 486A</td>
<td>Internship in Gerontology Through Co-op</td>
<td>3</td>
</tr>
<tr>
<td>Total credits for BS in gerontology</td>
<td>120</td>
<td></td>
</tr>
</tbody>
</table>
Core Courses
One course chosen from the following: 3
- GER 302 Health and Aging
- or BIOL 307 The Biology of Aging
- GER 306 Programs, Services, and Policies
- GER 331 Sociology of Aging
- GER 486A Internship in Gerontology Through Co-op
A second core course 3

Supplemental Course
Any upper-level GERO course 3

Total credits for minor in gerontology 15

Global Business and Public Policy

Students may seek an academic major in global business and public policy.

Major in Global Business and Public Policy

The major in global business and public policy prepares students for career opportunities in all economic sectors, including domestic and global business; federal, state, and local governments; international governmental organization; and domestic and international nongovernmental or nonprofit sectors. The major combines a foundation in the principles of business, marketing, and accounting with an in-depth focus on global business and public policy, including study in international and multinational management, public policy and management, and issues related to international law, marketing, finance, and development.

Objectives

The student who graduates with a major in global business and public policy will be able to
- Define relevant theories and concepts and explain their applications to global business and public policy.
- Identify and assess the impact of national social systems on international business and public policy and describe the dynamic interrelationships between the domestic and global environments.
- Demonstrate an understanding of the roles of government, multinational corporations, and global and regional organizations in international business and identify related public policy issues.

• Explain the role of the manager as a global leader in today’s complex, cross-functional, multicultural, economic, and political settings.
• Apply critical thinking, analytic, communication, and team building skills.

Degree Requirements

A degree with a major in global business and public policy requires the successful completion of 120 credits of coursework, including 36 credits for the major; 41 credits in general education requirements; and 43 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Global Business and Public Policy Major

Coursework for a major in global business and public policy includes the following:
- Required foundation courses (15 credits): ACCT 220 and 221, BMGT 340 and 364, and MRKT 310
- Required core courses (15 credits): BMGT 366, 392, 454 (or MRKT 454), 456, and 482
- Supplemental major courses (6 credits): Chosen from ACCT 425; BMGT 339, 405, 407, 428, 437, 446, and 496; and HRMN 408
- Required related courses (18 credits), which may be applied anywhere in the degree: ACCT 326 (or IFSM 300), BMGT 380, ECON 201 and 203, MATH 107, and STAT 230

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in global business and public policy. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Global Business and Public Policy

Degree Courses Credits

First Courses (to be taken within the first 18 credits)
Note: Placement tests are required for math and English composition courses.
- EDCP 100 Principles and Strategies of Successful Learning 3 (strongly recommended as first course)
- LIBS 150 Information Literacy and Research Methods 1
- ENGL 101/101X Introduction to Writing 3
- MATH 107 College Algebra 3
  or a higher-level math course
BACHELOR’S DEGREE CURRICULA

BMGT 110 Introduction to Business and Management 3
(Strongly recommended elective for students with no prior business experience)

Introductory Courses (to be taken within the first 30 credits)
◆ ACCT 220 Principles of Accounting I 3
ECON 201 Principles of Macroeconomics 3
(related requirement for the major; also fulfills first behavioral and social sciences requirement)
NSCI 100 Introduction to Physical Science 3
and NSCI 101 Physical Science Laboratory 1
or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement
ENGL 291 Expository and Research Writing 3
or other course to fulfill the communications/writing requirement
IFSM 201 Introduction to Computer-Based Systems 3
PHIL 140 Contemporary Moral Issues 3
or a foreign language course
or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement

Foundation Courses (to be taken within the first 60 credits)
STAT 230 Business Statistics 3
(related requirement for major)
◆ ACCT 221 Principles of Accounting II 3
ECON 203 Principles of Microeconomics 3
(related requirement for major)
HIST 142 Western Civilization II 3
or HIST 157 History of the United States Since 1865 3
or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement
PSYC 100 Introduction to Psychology 3
or SOCY 100 Introduction to Sociology 3
or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
SPCH 100 Foundations of Speech Communication 3
or COMM 390 Writing for Managers 3
or other course to fulfill the communications/writing or speech requirement
BIOL 101 Concepts of Biology 3
or ASTR 100 Introduction to Astronomy 3
or other course to fulfill the biological and physical sciences lecture requirement
◆ BMGT 364 Management and Organization Theory 3
◆ MRKT 310 Marketing Principles and Organization 3
IFSM 300 Information Systems in Organizations 3
or ACCT 326 Accounting Information Systems 3

Additional Required Courses (to be taken after introductory and foundation courses)
COMM 394/394X Business Writing 3
or other course to fulfill the communications/upper-level intensive writing requirement

BMGT 380 Business Law I 3
(related requirement for major)
◆ BMGT 392 Global Business Management 3
(Also fulfills the international perspective requirement)
◆ BMGT 340 Business Finance 3
◆ BMGT 437 International Business Law 3
or other supplemental major course
◆ BMGT 366 Managing in the Public Sector 3
◆ BMGT 456 Multinational Management 3
◆ BMGT 482 Business and Government 3
◆ BMGT 454 The Global Manager and Public Policy 3
or MRKT 454 Global Marketing
◆ BMGT 339 Government and Business Contracting 3
or other supplemental major course
BMGT 496 Business Ethics 3
or other course to fulfill the civic responsibility requirement

Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses) 25

Total credits for BS in global business and public policy 120

History

Students may seek either an academic major or minor in history.

Major in History

The major in history provides students with skills in historical research and analysis, a chronological understanding of the past, and factual knowledge of specific historical periods. Study yields an appreciation of U.S. history, as well as the histories of other peoples and cultures, that enhances multicultural understanding in the workplace and everyday society. Such skills and knowledge prepare students for careers in education, law, government, business, management, public relations, writing, and research.

Objectives

The student who graduates with a major in history will be able to
- Demonstrate an understanding of historical methods and appreciate how history has been written and interpreted over recorded time.
- Articulate how he or she is uniquely affected by the U.S. historical experience.
- Demonstrate a chronological understanding of the diverse peoples, events, and cultures that have shaped human civilization.
• Think and read critically and conduct research that includes identifying, evaluating, and presenting with integrity the primary and secondary sources of historical information.
• Demonstrate awareness of the ethical and social issues associated with the writing and interpreting of history.
• Demonstrate an increased awareness of current events and the ability to evaluate these events from a historical perspective.
• Use research opportunities to develop and refine technological skills.
• Write cogent, documented, historical papers that exhibit interpretive skill as well as factual knowledge.

**Degree Requirements**

A degree with a major in history requires the successful completion of 120 credits of coursework, including 33 credits for the major; 41 credits in general education requirements; and 46 credits in the minor, electives, and other degree requirements. At least 17 credits in the major must be earned in upper-level courses (numbered 300 or above).

**Requirements for the History Major**

Coursework for a major in history includes the following:

- Required U.S. history sequence (6 credits): HIST 156 and 157
- Required methodology course (3 credits): HIST 309
- World history sequence (6 credits): HIST 115–116, HIST 141–142, or HIST 284–285
- European distribution course (3 credits): HIST 324, 325, 326, 327, 332, 333, 334, 335, 336, 337, 358, 375, 430, 431, 432, 433, 434, 437, 438, 439, 440, 441, 443, or 448
- Supplemental major courses (9 credits): Any HIST courses

**Recommended Sequence**

The following course sequence will fulfill all the requirements for the BA in history. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

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### History Degree Courses

<table>
<thead>
<tr>
<th>First Courses (to be taken within the first 18 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Placement tests are required for math and English composition courses.</td>
</tr>
<tr>
<td>EDCP 100 Principles and Strategies of Successful Learning</td>
</tr>
<tr>
<td>LIBS 150 Information Literacy and Research Methods</td>
</tr>
<tr>
<td>ENGL 101/101X Introduction to Writing</td>
</tr>
<tr>
<td>or MATH 105 Mathematics: Contemporary Topics and Applications</td>
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<tr>
<td>or MATH 106 Finite Mathematics or a higher-level math course</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Introductory Courses (to be taken within the first 30 credits)</th>
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</thead>
<tbody>
<tr>
<td>◆ HIST 115 World History I</td>
</tr>
<tr>
<td>or HIST 141 Western Civilization I</td>
</tr>
<tr>
<td>or HIST 284 East Asian Civilization I (first course in required world history sequence for the major)</td>
</tr>
<tr>
<td>PHIL 140 Contemporary Moral Issues</td>
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<tr>
<td>or a foreign language course</td>
</tr>
<tr>
<td>or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement</td>
</tr>
<tr>
<td>or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement</td>
</tr>
<tr>
<td>ENGL 291 Expository and Research Writing</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing requirement</td>
</tr>
<tr>
<td>GVPT 170 American Government</td>
</tr>
<tr>
<td>or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GER, or WMST course to fulfill the first behavioral and social sciences requirement</td>
</tr>
<tr>
<td>IFSM 201 Introduction to Computer-Based Systems</td>
</tr>
<tr>
<td>◆ HIST 116 World History II</td>
</tr>
<tr>
<td>or HIST 142 Western Civilization II</td>
</tr>
<tr>
<td>or HIST 285 East Asian Civilization II (second course in required world history sequence for the major)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Foundation Courses (to be taken within the first 60 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>◆ HIST 156 History of the United States to 1865</td>
</tr>
<tr>
<td>PSYC 100 Introduction to Psychology</td>
</tr>
<tr>
<td>or SOCY 100 Introduction to Sociology or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)</td>
</tr>
<tr>
<td>NSCI 100 Introduction to Physical Science</td>
</tr>
<tr>
<td>or ASTR 100 Introduction to Astronomy or other course to fulfill the biological and physical sciences lecture requirement</td>
</tr>
<tr>
<td>◆ HIST 157 History of the United States Since 1865</td>
</tr>
</tbody>
</table>
ENGL 240 Introduction to Fiction, Poetry, and Drama 3
or HUMN 311 Workplace Ethics
or other course to fulfill the second arts
and humanities requirement (discipline
must differ from first)
SPCH 100 Foundations of Speech Communication 3
or COMM 380 Language in Social Contexts
or other course to fulfill the communications/
writing or speech requirement
IFSM 304 Ethics in the Information Age
or other course(s) to fulfill the requirements
in interdisciplinary issues/computing and
civic responsibility
HUMN 351 Myth and Culture
or other course to fulfill the international
perspective requirement

Additional Required Courses (to be taken after introductory and
foundation courses)
ENGL 391/391X Advanced Expository and Research Writing 3
◆ HIST 309 Introduction to Historical Writing 3
◆ HIST 364 Emergence of Modern America: 1900 to 1945 3
or other U.S. distribution course
for the major
◆ HIST 336 Europe in the 19th Century: 1815 to 1919 3
or other European distribution course
for the major
◆ HIST 481 History of Modern China 3
or other world regions distribution course
for the major
◆ Any HIST course (supplemental major course) 3
◆ An upper-level supplemental major course 3
◆ An upper-level supplemental major course 3

Minor and/or Elective Courses (to be taken in the last 60 credits
along with required major courses) 40

Total credits for BA in history 120

Minor in History
The history minor complements the skills the student gains in
his or her major discipline by offering a historical perspective
and by developing critical thinking and an appreciation of the
major contributions of various events and individuals to human
civilization.

Objectives
The student who graduates with a minor in history will be able to
• Demonstrate a chronological understanding of the diverse
peoples, events, and cultures that have shaped human
civilization.
• Demonstrate an increased awareness of current events and the
ability to evaluate these events from a historical perspective.

Requirements for the Minor
A minor in history requires the completion of 15 credits of
coursework in history, at least 12 of which must be earned in
upper-level courses (numbered 300 or above). Specific course
requirements are listed below. If a specific course required for
the minor is taken instead to satisfy the requirements for the
major, another course in the same discipline should be substi-
tuted to fulfill the required minimum number of credits for the
minor. Any course used to replace an upper-level course should
also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree,
students should refer to their major and pp. 9–10.

History Minor Courses Credits
(to be taken in the the last 60 credits along with required and
supplemental major courses)

Required Course
HIST 309 Introduction to Historical Writing 3

Supplemental Courses
Note: Courses applicable to the supplemental course categories
are listed as distribution courses for the history major.
One upper-level HIST course in U.S. history 3
One upper-level HIST course in European history 3
One upper-level HIST course in world regions history 3
Any HIST course 3

Total credits for minor in history 15
Humanities

Students may seek either an academic major or minor in humanities.

Major in Humanities

The humanities major offers a multidisciplinary study of global humanities that integrates topics in the arts, history, language and culture, literature, and philosophy and religion. The humanities major provides a broad perspective on human behavior, thought, and values and focuses on American, Asian, and European cultures. The integrated humanities major encourages thinking across traditional disciplines.

Objectives

The student who graduates with a major in the humanities will be able to

• Demonstrate knowledge of and appreciation for the cultural traditions, major ideas, and historical developments of the human experience.
• Explain and critically assess the interrelationships of the arts, history, language and culture, literature, and philosophy.
• Understand the major historical and cultural forces that influence and control American, Asian, and European societies.
• Develop interdisciplinary and multicultural perspectives for analyzing and comparing the arts, history, language and culture, literature, and philosophies.
• Apply critical reasoning, judgment, and choice.
• Write and speak effectively and clearly.
• Use computers for communication and research.

Degree Requirements

A degree with a major in humanities requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Humanities Major

Coursework for a major in humanities includes the following:

• Foundation courses (6 credits): Chosen from HUMN 102, 120, and 351
• Arts breadth course (3 credits): Chosen from HUMN 334 and any 3-credit ARTH, ARTT, MUSC, THET, and dance courses
• Language and linguistics breadth course (3 credits): Chosen from COMM 380 and any 3-credit foreign language (not literature) course
• Literature breadth course (3 credits): Chosen from ENGL 303 and any 3-credit English or foreign-language literature courses
• Philosophy and religion breadth course (3 credits): Chosen from HUMN 127, 311, 312, 350, and 351 and any 3-credit PHIL courses
• Supplemental major courses (12 credits): 6 credits in HUMN courses and 6 credits in HUMN or other courses listed for the arts, language, literature, and philosophy breadth course requirements

Recommended Sequence

The following course sequence will fulfill all the requirements for the BA in humanities. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.
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Minor in Humanities

The humanities minor complements the skills the student gains in his or her major discipline by providing an integrated curriculum for enrichment and exploration of culture and ideas, as well as a broad perspective on human behavior, thought, and values across traditional disciplines.

Objectives

A student graduating with a minor in humanities will be able to:

• Discuss some of the cultural traditions, major ideas, and historical developments of the human experience.
• Explain and critically assess the interrelationships of philosophy, language, literature, history, and the arts as forms of human expression.
• Interpret some of the major historical and cultural forces that influence and control European, Asian, or American societies.
• Apply critical reasoning, judgment, and choice.
• Write and speak effectively and clearly.
• Use computers for communication and research.

Requirements for the Minor

A minor in humanities requires the completion of 15 credits of coursework in humanities, at least 12 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

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<thead>
<tr>
<th>Humanities Minor Courses</th>
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</tr>
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<tbody>
<tr>
<td>(to be taken in the last 60 credits along with required and supplemental major courses)</td>
<td></td>
</tr>
<tr>
<td>Language and Linguistics Course</td>
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<tr>
<td>One course chosen from the language and linguistics breadth courses listed for the major</td>
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</tr>
<tr>
<td>Literature Course</td>
<td></td>
</tr>
<tr>
<td>One course chosen from the literature breadth courses listed for the major</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy and Religion Course</td>
<td></td>
</tr>
<tr>
<td>One course chosen from the philosophy and religion breadth courses listed for the major</td>
<td>3</td>
</tr>
<tr>
<td>Arts Course</td>
<td></td>
</tr>
<tr>
<td>One course chosen from the arts breadth courses listed for the major</td>
<td>3</td>
</tr>
<tr>
<td>Supplemental Course</td>
<td></td>
</tr>
<tr>
<td>Any upper-level HUMN course</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for minor in humanities 15
Human Resource Management

Students may seek either an academic major or minor in human resource management.

Major in Human Resource Management

The human resource major provides 21st-century skills, knowledge, and understanding of human resource functions in private- and public-sector organizational settings. These functions include human resource planning; recruitment, selection, placement, and orientation of employees; training and career development; labor relations; management of performance appraisal, compensation, and benefit programs; and development of personnel policies and procedures. The human resource management major prepares students for work in business administration and human resources. Through the proper selection of courses, the student can prepare for the certification examinations for Human Resource Professional, Senior Human Resource Professional, and International Human Resource Professional, which are offered by the Society of Human Resource Management. In addition to the focus on human resource functions, the major includes courses in management and organization theory, organizational behavior and development approaches, labor relations theory and practice, interpersonal skill development, and women’s perspectives in management.

Objectives

The student who graduates with a major in human resource management will be able to

• Conduct effective human resource planning for technological innovation in a global environment.
• Describe the importance of internal and external organizational environments and the impact of their interrelationships on human resource functions.
• Explain the processes of job analysis, staffing, appraisal and compensation, career training, and development.
• Identify various performance appraisal systems and critically evaluate their pros and cons.
• Demonstrate cohesive team-management skills with a focus on the group dynamics of an increasingly diverse workforce.
• Discuss the history of union/management relations and associated major federal, state, and local legislation; executive orders; and court decisions.
• Describe the interaction among management, labor, and the federal agencies.
• Utilize various processes and tools for bargaining, negotiating, and resolving disputes.
• Use quantitative and qualitative analytical research methods to evaluate human resource initiatives and solve problems.
• Develop effective written and oral communications consistent with the business and professional environment.

• Apply appropriate information technology to analyze problems and issues, develop business research, report key data, and recommend management strategy and action plans.
• Interpret and apply human resource principles in a global setting.
• Describe the history of theories and concepts in human resource management and related fields and apply them in appropriate situations.
• Evaluate ethical, social, civic, cultural, and political issues as they relate to the environment of human resource management.

Degree Requirements

A degree with a major in human resource management requires the successful completion of 120 credits of coursework, including 36 credits for the major; 41 credits in general education requirements; and 43 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Human Resource Management Major

Coursework for a major in human resource management includes the following:

• Required foundation courses (9 credits): BMGT 110 (or prior business experience and an additional supplemental course), ACCT 221 (or ACCT 301), and STAT 230
• Required core courses (18 credits): BMGT 364 and HRMN 300, 362 (or 390 or 406), 400, 408, and 495
• Supplemental major courses (9 credits): Chosen from BMGT 340, 380, 381, 391, 464, 465, and 484; MRKT 310; and any upper-level HRMN courses
• Required related courses (12 credits), which may be applied anywhere in the degree: ACCT 326 (or IFSM 300), ECON 201 and 203, and MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in human resource management. Coursework for the major is indicated by ♦. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and inter-disciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Human Resource Management

Students may seek either an academic major or minor in human resource management.
### Bachelor's Degree Curricula

#### Human Resource Management

**Degree Courses**

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<td>IFSM 300</td>
<td>Information Systems in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>or ACCT 326</td>
<td>Accounting Information Systems</td>
<td></td>
</tr>
<tr>
<td>or ACCT 326</td>
<td>(students should note prerequisite)</td>
<td></td>
</tr>
<tr>
<td>SPCH 100</td>
<td>Foundations of Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 390</td>
<td>Writing for Managers</td>
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<td>writing or speech requirement</td>
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<tr>
<td>◆ BMGT 364</td>
<td>Management and Organization Theory</td>
<td>3</td>
</tr>
<tr>
<td>◆ HRMN 300</td>
<td>Human Resource Management</td>
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**Additional Required Courses** (to be taken after introductory and foundation courses)

- COMM 394/394X Business Writing
- or other course to fulfill the communications/writing requirement
- BMGT 392 Global Business Management
- or other course to fulfill the international perspective requirement
- ◆ HRMN 400 Human Resource Management: Analysis and Problems
- ◆ HRMN 408 Employment Law for Business
- ◆ HRMN 362 Labor Relations
- or HRMN 390 Contemporary Compensation Management
- or HRMN 406 Employee Training and Development
- ◆ BMGT 340 Business Finance
- (supplemental major course and prerequisite for capstone course)
- ◆ MRKT 310 Marketing Principles and Organization
- (supplemental major course and prerequisite for capstone course)
- BMGT 496 Business Ethics
- or other course to fulfill the civic responsibility requirement
- ◆ BMGT 380 Business Law I
- or other supplemental major course

**Minor and/or Elective Courses** (to be taken in the last 60 credits along with required major courses)

- Recommended Minor
- Business-related minor

**Capstone Course for Major** (to be taken in the last 15 credits)

- ◆ HRMN 495 Contemporary Issues in Human Resource Management Practice

**Total credits for BS in human resource management** | 120

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**First Courses** (to be taken within the first 18 credits)

Note: Placement tests are required for math and English composition courses.

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<td>LIBS 150</td>
<td>Information Literacy and Research Methods</td>
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</tr>
<tr>
<td>ENGL 101/101X</td>
<td>Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107</td>
<td>College Algebra</td>
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<tr>
<td>◆ BMGT 110</td>
<td>Introduction to Business and Management</td>
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<td>Principles of Macroeconomics</td>
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<td></td>
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<td>Introduction to Physical Science</td>
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**Human Resource Management**

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**Minor and/or Elective Courses** (to be taken in the last 60 credits along with required major courses)

- Recommended Minor
- Business-related minor

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- ◆ HRMN 495 Contemporary Issues in Human Resource Management Practice

**Total credits for BS in human resource management** | 120

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</table>
Minor in Human Resource Management

The human resource management minor complements the skills the student gains in his or her major discipline by examining the human resource functions in a private- or public-sector organizational setting. These functions include human resource planning, recruitment, selection, and placement; employee appraisal and compensation; employee training and career development; management of labor relations; and development of a human resource department implementation plan.

Objectives

A student graduating with a minor in human resource management will be able to:

- Conduct effective human resource planning for technological innovation in a global environment.
- Describe the importance of internal and external organizational environments and the impact of their interrelationships on human resource functions.
- Explain the processes of job analysis, staffing, appraisal and compensation, career training, and development.
- Identify various performance appraisal systems and critically evaluate their pros and cons.
- Demonstrate cohesive team-management skills in decision making, communications, motivation, and interpersonal behavior by focusing on the group dynamics that occur within an increasingly diverse workforce.
- Discuss the history of union/management relations and associated major federal, state, and local legislation; executive orders; and court decisions.
- Understand the interaction among management, labor, and the federal agencies.
- Learn the processes and tools for bargaining, negotiating, and resolving disputes.
- Demonstrate information literacy through the use of commonly accepted quantitative and qualitative analytical research methods to evaluate human resource initiatives and solve problems.
- Develop effective written and oral communications consistent with the business and professional environment.

Requirements for the Minor

A minor in human resource management requires the completion of 15 credits of coursework in human resource management, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed at right. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Information Systems Management

Students may seek an academic major in information systems management.

Major in Information Systems Management

The information systems management major provides students with the skills needed to successfully participate in and support the increasingly visible role of information technology in corporate decision making. The curriculum focuses on the methods, concepts, and practical applications of information systems in the workplace. It develops graduates’ abilities to conceptualize and manage the design and implementation of high-quality information systems.

Objectives

The student who graduates with a major in information systems management will be able to:

- Apply appropriate problem-solving methodologies to the analysis and solution of problems.
- Apply standard systems practices to the planning, implementation, management, and evaluation of information systems.
- Communicate effectively using oral, written, and multimedia techniques.
- Manage change in the dynamic and global environments of automated systems.
- Use technology to research information needed to produce informed decisions for organizations.
- Identify relationships between programming languages and information systems.
• Demonstrate skills in systems analysis appropriate to the management of information systems projects.
• Demonstrate skills in the design, creation, maintenance, and reporting functions of database systems and database systems management.
• Use a systems approach to select hardware and software for an organization.
• Evaluate ethical issues related to information systems, work productivity, and human factors.

**Degree Requirements**

A degree with a major in information systems management requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

**Requirements for the Information Systems Management Major**

Coursework for a major in information systems management includes the following:

- **Required foundation courses (15 credits):** CMIS 141/141A (or other programming language course) and IFSM 300, 310, 410, and 461
- **Core courses (9 credits):** Any upper-level IFSM courses (3 credits must be in 400-level coursework)
- **Supplemental major courses (6 credits):** Any IFSM, CMIS, CMIT, CMSC, or CMST courses
- **Required related courses (6 credits), which may be applied anywhere in the degree:** MATH 107 and STAT 200

**Recommended Sequence**

The following course sequence will fulfill all the requirements for the BS in information systems management. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

<table>
<thead>
<tr>
<th>Information Systems Management Degree Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Courses (to be taken within the first 18 credits)</strong> Note: Placement tests are required for math and English composition courses.</td>
<td></td>
</tr>
<tr>
<td>EDCP 100 Principles and Strategies of Successful Learning (strongly recommended as first course)</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150 Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107 College Algebra</td>
<td>3</td>
</tr>
<tr>
<td><strong>Introductory Courses</strong> (to be taken within the first 30 credits)</td>
<td></td>
</tr>
<tr>
<td>IFSM 201 Introduction to Computer-Based Systems</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 102 Introduction to Problem Solving and Algorithm Design</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 102A Fundamentals of Programming I (prerequisite to later courses)</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 140 Contemporary Moral Issues</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 240 Introduction to Fiction, Poetry, and Drama or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, literature, or foreign language course to fulfill the first arts and humanities requirement</td>
<td></td>
</tr>
<tr>
<td>BIOL 101 Concepts of Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102 Laboratory in Biology or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 291 Expository and Research Writing or other course to fulfill the communications/writing requirement</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 170 American Government or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td>3</td>
</tr>
<tr>
<td>STAT 200 Introduction to Statistics (related requirement for major)</td>
<td>3</td>
</tr>
<tr>
<td>◆ CMIS 141 Introductory Programming</td>
<td>3</td>
</tr>
<tr>
<td>or CMIS 141A Fundamentals of Programming II or other programming course</td>
<td></td>
</tr>
<tr>
<td>PSYC 100 Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or SOCY 100 Introduction to Sociology or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)</td>
<td></td>
</tr>
<tr>
<td>NSCI 100 Introduction to Physical Science or ASTR 100 Introduction to Astronomy or other course to fulfill the biological and physical sciences lecture requirement</td>
<td>3</td>
</tr>
<tr>
<td>HIST 142 Western Civilization II or HIST 157 History of the United States Since 1865 or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement</td>
<td>3</td>
</tr>
<tr>
<td>◆ IFSM 300 Information Systems in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 344 Cultural Anthropology and Linguistics or a foreign language course or other course to fulfill the international perspective requirement</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 100 Foundations of Speech Communication or COMM 390 Writing for Managers or other course to fulfill the communications/writing or speech requirement</td>
<td>3</td>
</tr>
</tbody>
</table>

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[BACHELOR'S DEGREE CURRICULA](www.umuc.edu/ugp) 61
International Business Management

Students may seek an academic minor in international business management.

Minor in International Business Management

The international business management minor complements the skills the student gains in his or her major discipline by presenting the basic concepts, theories, policies, and practices that support the institutional, environmental, functional, and strategic framework for conducting global business transactions.

Objectives

The student who graduates with a minor in international business management will be able to

• Identify, define, and comprehend key concepts, theories, and issues associated with global business transactions.
• Assess the impact of national social systems on international business and the dynamic interrelationships between the domestic and international environments.
• Demonstrate an understanding of the roles of government, multinational corporations, global institutions, and regional organizations in international business transactions, including trade, foreign investment, and economic development.
• Identify and analyze global strategic issues and decisions based on case analysis.
• Demonstrate critical-thinking, analytic, and effective communication and writing skills through case analyses, research, and presentations.
• Apply skills to conduct research on topics of relevant interest using appropriate resources that enhance information literacy and technical competency.

Requirements for the Minor

A minor in international business management requires the completion of 15 credits of coursework in international business management, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed on the next page. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor's degree, students should refer to their major and pp. 9–10.
International Business Management

Minor Courses Credits
(to be taken in the the last 60 credits along with required and supplemental major courses)

Required Course
BMGT 392 Global Business Management 3

Supplemental Courses
One course chosen from the following: 3
- ACCT 425 International Accounting
- BMGT 407 Global Commerce
- BMGT 437 International Business Law
- BMGT 446 International Finance
- BMGT 454 The Global Manager and Public Policy
- BMGT 456 Multinational Management
- BMGT 498L International Business Contract Management
- MRKT 454 Global Marketing

A second supplemental course 3
A third supplemental course 3
A fourth supplemental course 3

Total credits for minor in international business management 15

Investigative Forensics

Students may seek an academic major in investigative forensics. A related minor is available in forensics (p. 47).

Major in Investigative Forensics

The major in investigative forensics provides a thorough foundation in the knowledge and skills necessary to process and report on physical evidence at a crime scene or in connection with an investigation of civil liability. The curriculum, based on national guidelines, provides students with a basic foundation in investigative, scientific, and laboratory-based forensics, and introduces students to the various disciplines that make up the forensic collaborative workgroup. The major prepares students for career opportunities focused on the investigatory aspects of forensics.

Objectives

The student who graduates with a major in investigative forensics will be able to

• Demonstrate an understanding of the investigative components of forensics and the various types of evidence obtained in crime scene investigation (trace evidence, impressions, firearms, questioned documents, and forensic biological and anthropological evidence).
• Explain the role and the impact of investigative forensics on the criminal justice system.
• Apply analytical and problem-solving skills in all three stages of crime scene investigation (scene reconstruction, scene documentation, and evidence collection).
• Articulate the values and ethics that guide this professional practice area.

Degree Requirements

A degree with a major in investigative forensics requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Investigative Forensics Major

Coursework for a major in investigative forensics includes the following:

• Required foundation courses (9 credits): CCJS 100, 234, and 320
• Required criminal/forensic psychology course (3 credits): CCJS 461 (or PSYC 370)
• Required core courses (9 credits): CCJS 420 and 421 and FSCN 306
• Forensic laboratory science courses (6 credits): Chosen from CCJS 425, 486A, and 486B and any courses designated as forensic lab science
• Supplemental major course (3 credits): Chosen from BIOL 320, 350, and 356; CHEM 103 and 113; FSCN 414; PHYS 121 and 122; and any forensic science courses
• Required related courses (9 credits), which may be applied anywhere in the degree: COMM 393, MATH 107, and STAT 200

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in investigative forensics. Coursework for the major is indicated by ●. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.
Investigative Forensics

Degree Courses Credits

First Courses (to be taken within the first 18 credits)
Note: Placement tests are required for math and English composition courses.
EDCP 100 Principles and Strategies of Successful Learning 3
LIBS 150 Information Literacy and Research Methods 1
ENGL 101/101X Introduction to Writing 3
MATH 107 College Algebra 3
◆ CCJS 100 Introduction to Criminal Justice 3

Introductory Courses (to be taken within the first 30 credits)
GVPT 170 American Government 3
and BIOL 101 Concepts of Biology 3
and BIOL 102 Laboratory in Biology 1
ENGL 291 Expository and Research Writing 3
◆ CCJS 234 Criminal Procedures and Evidence 3
PHIL 140 Contemporary Moral Issues 3
or a foreign language course

Foundation Courses (to be taken within the first 60 credits)
STAT 200 Introduction to Statistics 3
PSYC 100 Introduction to Psychology 3
or SOCY 100 Introduction to Sociology 3
or或其他 course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
NSCI 100 Introduction to Physical Science 3
◆ CCJS 320 Introduction to Criminalistics 3
HIST 142 Western Civilization II 3
or HIST 157 History of the United States Since 1865 3
or or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first) and the historical perspective requirement
SPCH 100 Foundations of Speech Communication 3
or other course to fulfill the communications/writing or speech requirement
IFSM 304 Ethics in the Information Age 3
or other course to fulfill the requirements in interdisciplinary issues/computing and civic responsibility

Additional Required Courses (to be taken after introductory and foundation courses)
COMM 393/393X Technical Writing 3
or other course to fulfill the communications/upper-level intensive writing requirement
◆ CCJS 461 Psychology of Criminal Behavior 3
or PSYC 370 Foundations of Forensic Psychology 3
◆ CCJS 420 Medical and Legal Investigations of Death 3
◆ CCJS 421 Computer Forensics 3
◆ FSCN 306 Incendiary-Fire Analysis and Investigation 3
◆ CCJS 486A Internship in Criminal Justice Through Co-op (or other forensic laboratory science course) 3
◆ CCJS 425 Forensics Lab (or other forensic laboratory science course) 3
◆ Supplemental major course 3

Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses) 40

Total credits for BS in investigative forensics 120

Journalism

Students may seek an academic minor in journalism.

Minor in Journalism

The journalism minor complements the skills the student gains in his or her major discipline by introducing the fundamental concepts and techniques in public relations and mass media writing for creating effective messages given different audiences and contexts. Students also develop an understanding of the legal and ethical implications of communication.

Objectives

The student who graduates with a minor in journalism will be able to

• Apply communication theories—including both speech communication and mass communication theories—to various situations and contexts.
• Explain the role media and mass communication play in society.
• Identify the legal and ethical implications of communication and produce messages that are ethically and legally responsible.
• Apply fundamental concepts and techniques in public relations and mass media writing to create effective messages to different audiences and within different contexts.
• Use tools and technology to gather information, as well as to develop and deliver messages.
• Critically analyze information for creating effective oral or written messages and evaluating messages.

Requirements for the Minor
A minor in journalism requires the completion of 15 credits of coursework in journalism and communication studies, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level. For a listing of all the requirements for the bachelor's degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Journalism Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken in the last 60 credits along with required and supplemental major courses)</td>
<td></td>
</tr>
<tr>
<td><strong>Required Courses</strong></td>
<td></td>
</tr>
<tr>
<td>COMM 300 Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>COMM 400 Communication and the Law</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 201 Writing for the Mass Media</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 202 Editing for the Mass Media</td>
<td>3</td>
</tr>
<tr>
<td><strong>Supplemental Course</strong></td>
<td></td>
</tr>
<tr>
<td>Any upper-level JOUR course</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total credits for minor in journalism</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Laboratory Management
Students who have completed an Associate of Applied Science degree in a biology- or chemistry-related field from a community college with which UMUC has an articulation agreement for this major may seek an academic major in laboratory management. Students should consult an advisor before electing this major.

The major in laboratory management is based on collaborative arrangement between UMUC and specific Maryland community colleges. Students with a similar degree from another institution may be considered for this program only based on an institutional articulation agreement with UMUC.

Major in Laboratory Management
The major in laboratory management focuses on the management and coordination of the nontechnical activities that contribute to a safe and well-run biochemical laboratory. It provides both in-depth study of scientific concepts and procedures (during associate’s degree study at the community college level) and laboratory management skills. The curriculum is designed to prepare students to meet employer needs for scientific technicians trained in both the sciences and the management of laboratory activities.

Objectives
The student who graduates with a major in laboratory management will be able to
• Demonstrate an understanding of basic principles in the natural sciences
• Perform standard laboratory procedures employed in academic, industry, and government laboratories
• Develop comprehensive laboratory management strategies
• Demonstrate skills in critical thinking, problem solving, project management, and team building

Degree Requirements
A degree with a major in laboratory management requires the successful completion of 120 credits of coursework from UMUC and the collaborating community college, including 36 credits for the major; 41 credits in general education requirements; and 43 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).
Requirements for the Major
Coursework for a major in laboratory management includes the following lower-level coursework taken as part of an appropriate Associate of Applied Science degree program at a collaborating community college:

- Foundation courses (15 credits, at least 12 of which should be in laboratory science coursework): Chosen from biology, biochemistry, biotechnology, chemistry, microbiology, molecular biology courses
- Additional required related science coursework (15–22 credits), which may be applied anywhere in the bachelor’s degree

Coursework for a major in laboratory management also includes the following:

- Required upper-level core courses (12 credits): BIOL 400, BMGT 364, COMM 300, and NSCI 301 (or ENMT 322)
- Supplemental major course (3 credits): Chosen from BMGT 317 and 487; IFSM 300; and SPCH 324, 397, 426, 470, and 482
- Required Co-op internship (6 credits): Courses numbered 486A or 486B in any related discipline
- Required related courses (9 credits), which may be applied anywhere in the degree: COMM 393, MATH 107, and STAT 200

Recommended Sequence
The following course sequence will fulfill all the requirements for the BTPS in laboratory management (if the student selects appropriate courses as part of the articulated degree program from the community college). Coursework for the major is indicated by ♦. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options or options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Labotary Management Degree Courses Credits

<table>
<thead>
<tr>
<th>Required Courses from Community College</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦ Lower-level coursework in biology, biochemistry, biotechnology, chemistry, microbiology, and molecular biology</td>
</tr>
<tr>
<td>Additional required science coursework (should also fulfill requirements in biological and physical sciences)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Courses (to be taken within the first 18 credits at UMUC if not brought in transfer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Placement tests are required for math and English composition courses.</td>
</tr>
<tr>
<td>LIBS 150 Information Literacy and Research Methods</td>
</tr>
<tr>
<td>ENGL 101/101X Introduction to Writing</td>
</tr>
<tr>
<td>MATH 107 College Algebra</td>
</tr>
<tr>
<td>or a higher-level math course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Introductory and General Education Courses (to be taken within the first 30 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFSM 201 Introduction to Computer-Based Systems</td>
</tr>
<tr>
<td>ENGL 291 Expository and Research Writing</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing requirement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Upper-Level Courses for Major (to be taken after introductory and foundation courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 393/393X Technical Writing</td>
</tr>
<tr>
<td>or other course to fulfill the communications/upper-level intensive writing requirement</td>
</tr>
<tr>
<td>♦ BIOL 400 Life Science Seminar</td>
</tr>
<tr>
<td>♦ BMGT 364 Management and Organization Theory</td>
</tr>
<tr>
<td>♦ COMM 300 Communication Theory</td>
</tr>
<tr>
<td>♦ NSCI 301 Laboratory Organization and Management</td>
</tr>
<tr>
<td>♦ ENMT 322 Occupational Health and Safety</td>
</tr>
<tr>
<td>♦ BMGT 317 Problem Solving for Managers</td>
</tr>
<tr>
<td>or other supplemental major course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship for Major (to be taken in the last 30 credits)</td>
</tr>
<tr>
<td>♦ Internship through Cooperative Education</td>
</tr>
</tbody>
</table>

Total credits for BTPS in laboratory management 120
Legal Studies

Students may seek an academic major in legal studies.

Major in Legal Studies

The legal studies major prepares students for challenging and responsible paralegal work in various legal settings and focuses on fundamental legal knowledge, skills, and ethical principles. The curriculum addresses the organization, function, and processes of the lawmaking institutions in the American legal system, as well as the role of the paralegal in the legal system and the governing rules of legal ethics. It emphasizes legal analysis, legal writing and drafting, legal research, and computer competence in the legal environment.

Objectives

The student who graduates with a major in legal studies will be able to:

- Explain the historical development and the basic constitutional principles of the American legal system.
- Compare and contrast the American legal system with other legal systems.
- Discuss issues relevant to the paralegal profession.
- Recognize and discuss ethical considerations involved in the practice of law.
- Explain substantive concepts in selected areas of legal specialization.
- Describe the procedures for settlement of civil, criminal, and administrative disputes.
- Identify ways that computers assist in the legal environment.
- Analyze facts, law, and legal issues.
- Explain legal topics and analysis.
- Complete book-based and computer-assisted legal research tasks.
- Draft writings typically assigned to paralegals in selected areas of legal practice.
- Perform tasks typically assigned to paralegals in selected areas of legal practice.
- Use selected software to accomplish tasks in the legal environment.

Degree Requirements

A degree with a major in legal studies requires the successful completion of 120 credits of coursework, including 33 credits for the major; 41 credits in general education requirements; and 46 credits in the minor, electives, and other degree requirements. At least 17 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Legal Studies Major

Coursework for a major in legal studies includes the following:

- Required foundation courses (12 credits): LGST 101, 200, 201, and 204
- General practice procedure and skills course (3 credits): LGST 320, 322, 325, 400, or 401
- General practice substantive law course (3 credits): LGST 312, 315, 316, 340, or 442
- Procedure and skills courses (6 credits): Chosen from any general practice procedure and skills courses and LGST 327, 330, 360, 363A, 370, 398P, 425, 486A, and 486B
- Substantive law courses (6 credits): Chosen from any general practice substantive law courses and LGST 335, 343, 411, 415, 420, 431, 432, 434, 445, and 450
- Supplemental major course (3 credits): Chosen from any LGST courses; CCJS 432 and 453; COMM 400; FSCN 412; and GVPT 399B, 402, and 433

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in legal studies. Coursework for the major is indicated by ☐. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Legal Studies Degree Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSP 100</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>3</td>
</tr>
<tr>
<td>MATH 105</td>
<td>3</td>
</tr>
<tr>
<td>MATH 106</td>
<td>3</td>
</tr>
</tbody>
</table>

Introductory Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 140</td>
<td>3</td>
</tr>
<tr>
<td>or a foreign language course</td>
<td></td>
</tr>
<tr>
<td>GVPT 170</td>
<td>3</td>
</tr>
<tr>
<td>or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GER0, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td></td>
</tr>
</tbody>
</table>
**Management Studies**

Students may seek either an academic major or minor in management studies.

**Major in Management Studies**

The management studies major is based on the premise that many for-profit, nonprofit, and governmental organizations require a knowledge of management principles best gained from a holistic approach to decision making. Using a multidisciplinary approach to management and problem solving, the management studies major prepares students for a variety of management-related careers. The curriculum includes a foundation in business, accounting, economics, statistics, communications, and management theory and focuses on analysis and decision making across a wide spectrum of management activities.

**Objectives**

The student who graduates with a major in management studies will be able to

- Use a multidisciplinary approach in researching organizational problems, issues, and opportunities.
- Analyze information, solve problems, and make decisions from a holistic, global perspective.
- Apply important management concepts and theories from several disciplines.
- Evaluate various strategies and operations for business, not-for-profit, and governmental organizations to determine the best approach.
- Examine the global dimensions involved in managing business, not-for-profit, and governmental organizations.
- Analyze global competition and competitive strategies.
- Assess important trends in international ventures, marketing, financing, and human resource management.
- Integrate the emerging online marketplace into overall organizational strategies.
- Assess the significance of a multicultural, multinational organization.
• Apply appropriate information technology to analyze problems and issues, develop business research, report key data, and recommend management strategy and action plans.
• Describe the history and development of theories and concepts in management and related fields (such as accounting, economics, statistics, finance, marketing, human resource management, business law, and strategic management), and their application to various management situations.
• Develop effective written and oral communication consistent with the management and professional environment.
• Evaluate ethical, social, civic, cultural, and political issues as they relate to the environment of organizational management, operations, human resources and human factors, information systems, governmental regulation, and domestic and international ventures.

Degree Requirements
A degree with a major in management studies requires the successful completion of 120 credits of coursework, including 56 credits for the major; 41 credits in general education requirements; and 43 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Management Studies Major
Coursework for a major in management studies includes the following:
• Required foundation courses (12 credits): BMGT 110 (or prior business experience and an additional supplemental course), ACCT 220, ECON 201 (or 203), and STAT 230
• Required core courses (6 credits): BMGT 364 and HRMN 302
• Supplemental major courses (18 credits): Any ACCT, BMGT, ENMT, FSCN, HRMN, MGST, and MRKT courses
• Required related courses (6 credits), which may be applied anywhere in the degree: ACCT 326 (or IFSM 300) and MATH 107

Recommended Sequence
The following course sequence will fulfill all the requirements for the BS in management studies. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Management Studies Degree Courses

<table>
<thead>
<tr>
<th>First Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Placement tests are required for math and English composition courses.</td>
<td></td>
</tr>
<tr>
<td>EDCP 100</td>
<td>Principles and Strategies of Successful Learning</td>
</tr>
<tr>
<td>(strongly recommended as first course)</td>
<td></td>
</tr>
<tr>
<td>LIBS 150</td>
<td>Information Literacy and Research Methods</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>Introduction to Writing</td>
</tr>
<tr>
<td>MATH 107</td>
<td>College Algebra</td>
</tr>
<tr>
<td>or a higher-level math course</td>
<td></td>
</tr>
<tr>
<td>◆ BMGT 110</td>
<td>Introduction to Business and Management</td>
</tr>
<tr>
<td>(students with business experience should substitute a supplemental major course in the last 60 credits of study)</td>
<td></td>
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</tbody>
</table>

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<thead>
<tr>
<th>Introductory Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken within the first 30 credits)</td>
<td></td>
</tr>
<tr>
<td>GVPT 170</td>
<td>American Government</td>
</tr>
<tr>
<td>or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td></td>
</tr>
<tr>
<td>NSCI 100</td>
<td>Introduction to Physical Science</td>
</tr>
<tr>
<td>and NSCI 101</td>
<td>Physical Science Laboratory</td>
</tr>
<tr>
<td>or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement</td>
<td></td>
</tr>
<tr>
<td>◆ ECON 201</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>or ECON 203</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ENGL 291</td>
<td>Expository and Research Writing</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing requirement</td>
<td></td>
</tr>
<tr>
<td>IFSM 201</td>
<td>Introduction to Computer-Based Systems</td>
</tr>
<tr>
<td>or a foreign language course</td>
<td></td>
</tr>
<tr>
<td>PHIL 140</td>
<td>Contemporary Moral Issues</td>
</tr>
<tr>
<td>or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foundation Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken within the first 60 credits)</td>
<td></td>
</tr>
<tr>
<td>◆ STAT 230</td>
<td>Business Statistics</td>
</tr>
<tr>
<td>or STAT 200</td>
<td>Introduction to Statistics</td>
</tr>
<tr>
<td>◆ ACCT 220</td>
<td>Principles of Accounting I</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>or SOCY 100</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)</td>
<td></td>
</tr>
<tr>
<td>BIOL 101</td>
<td>Concepts of Biology</td>
</tr>
<tr>
<td>or ASTR 100</td>
<td>Introduction to Astronomy</td>
</tr>
<tr>
<td>or other course to fulfill the biological and physical sciences lecture requirement</td>
<td></td>
</tr>
<tr>
<td>HIST 142</td>
<td>History of the United States Since 1865</td>
</tr>
<tr>
<td>or HIST 157</td>
<td>History of the United States Since 1865</td>
</tr>
<tr>
<td>or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement</td>
<td></td>
</tr>
</tbody>
</table>
BACHELOR’S DEGREE CURRICULA

SPCH 100  Foundations of Speech Communication  3
or COMM 390  Writing for Managers
or other course to fulfill the communications/writing or speech requirement
IFSM 300  Information Systems in Organizations  3
or ACCT 326  Accounting Information Systems
(to fulfill the interdisciplinary issues/computing requirement)
◆ BMGT 364  Management and Organization Theory  3

Additional Required Courses (to be taken after introductory and foundation courses)
COMM 394/394X  Business Writing
or other course to fulfill the communications/upper-level intensive writing requirement
◆ HRMN 302  Organizational Communication  3
◆ MRKT 310  Marketing Principles and Organization
or other supplemental major course
◆ BMGT 380  Business Law I
or other supplemental major course
◆ HRMN 300  Human Resource Management
or other supplemental major course
◆ BMGT 392  Global Business Management
or course(s) to fulfill requirements for supplemental major coursework and international perspective
◆ BMGT 496  Business Ethics
or course(s) to fulfill requirements for supplemental major coursework and civic responsibility
◆ BMGT 495  Strategic Management
or other supplemental major course

Minor and Elective Courses (to be taken in the last 60 credits along with required major courses)  40

Total credits for BS in management studies 120

Minor in Management Studies
The management studies minor complements the skills the student gains in his or her major discipline by providing a study of management analysis and decision making across a broad range of organizations.

Objectives
The student who graduates with a minor in management studies will be able to
• Use a multidisciplinary approach to the task of researching organizational problems, issues, and opportunities.
• Analyze information, solve problems, and make decisions from a holistic, global perspective.
• Understand and apply important management concepts and theories from several disciplines.
• Evaluate various strategies and operations for business, not-for-profit, and governmental organizations to determine the best approach.

• Explain the global dimensions of various tasks: managing business, not-for-profit, and governmental organizations; analyzing global competition and competitive strategies; detecting important trends in international ventures; marketing, financing, and managing human resources; and integrating the emerging online marketplace into overall organizational strategies.
• Assess the significance of a multicultural, multinational organization.
• Develop effective written and oral communication consistent with the management and professional environment.

Requirements for the Minor
A minor in management studies requires the completion of 15 credits of coursework in management studies, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. Courses may not duplicate those used to satisfy the requirements for the major.
For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Management Studies Minor Courses Credits
(to be taken in the the last 60 credits with required and supplemental major courses)

Required Courses
BMGT 110  Introduction to Business and Management
(students with business experience should substitute a supplemental major course)  3
BMGT 364  Management and Organization Theory  3

Supplemental Courses
Any upper-level ACCT, BMGT, FSCN, HRMN, MGST, or MRKT course  3
A second upper-level supplemental course  3
A third upper-level supplemental course  3

Total credits for minor in management studies 15
Marketing

Students may seek either an academic major or minor in marketing.

Major in Marketing

The marketing major develops well-rounded individuals with the skills required of today's marketing professionals and the business acumen to function in the global business environment. The curriculum provides a balanced course of study that exposes students to a common body of knowledge and leads them to understand marketing processes and situations, think independently, communicate effectively, and appreciate their own and other cultures. Marketing graduates should be well positioned to achieve increasingly higher levels of marketing management in corporations, marketing agencies, or entrepreneurial endeavors.

Objectives

The student who graduates with a major in marketing will be able to

• Critically evaluate marketing situations and make informed marketing decisions.
• Identify information needs critical to the practice of marketing and articulate questions, gain access to relevant resources, evaluate and organize information sources, and integrate new information into the marketing decision-making process.
• Explain the eight universal marketing processes for consumer and organizational markets: (1) environmental scanning and analysis; (2) marketing research and analysis; (3) segmentation, targeting, and positioning; (4) product development and differentiation; (5) valuation and pricing; (6) channel and value-chain management; (7) integrated marketing communication; and (8) relationship building.
• Explain the significance of global markets and the application of the eight universal marketing processes to develop global marketing plans.
• Trace the historic evolution of the marketing discipline and how marketing has contributed to the political, economic, and legal environments of today’s global society.
• Develop competency in the technological applications used by the marketing profession to enhance the eight universal marketing processes.
• Describe the complex nature of corporate ethics and the social responsibility of organizations in the conduct of marketing activities, as well as the personal responsibility to understand other cultures and negotiate different perspectives.
• Examine the benefits and consequences of marketing activities on the physical environment and on the lives of others.
• Develop effective written and oral communications consistent with the professional marketing environment.
• Develop the leadership skills necessary to function as a senior staff member in a marketing department or marketing agency.

Degree Requirements

A degree with a major in marketing requires the successful completion of 120 credits of coursework, including 36 credits for the major; 41 credits in general education requirements; and 43 credits in the minor, electives, and other degree requirements. At least 18 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Marketing Major

Coursework for a major in marketing includes the following:

• Required business courses (15 credits): ACCT 221 (or 301); BMGT 364, 380, and 496; and STAT 230
• Required marketing courses (12 credits): MRKT 310, 410, 412, and 495
• Supplemental major courses (9 credits): Any MRKT courses
• Required related courses (12 credits), which may be applied anywhere in the degree: ACCT 326 (or IFSM 300), ECON 201 and 203, and MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in marketing. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Marketing Degree Courses

First Courses (to be taken within the first 18 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDCP 100</td>
<td>Principles and Strategies of Successful Learning</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150</td>
<td>Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 110</td>
<td>Introduction to Business and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Placement tests are required for math and English composition courses.
BACHELOR’S DEGREE CURRICULA

Introductory Courses (to be taken within the first 30 credits)

- ECON 201 Principles of Macroeconomics 3
  (related requirement for the major; also fulfills the first behavioral and social sciences requirement)
- NSCI 100 Introduction to Physical Science 3
  and NSCI 101 Physical Science Laboratory 1
  or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement
- ENGL 291 Expository and Research Writing 3
- IFSM 201 Introduction to Computer-Based Systems 3
- STAT 230 Business Statistics 3
  or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement

Foundation Courses (to be taken within the first 60 credits)

- PSYC 100 Introduction to Psychology 3
  or SOCY 100 Introduction to Sociology
  or other course(s) to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
- BIOL 101 Concepts of Biology 3
  or ASTR 100 Introduction to Astronomy
  or other course(s) to fulfill the biological and physical sciences lecture requirement
- HIST 142 Western Civilization II 3
  or HIST 157 History of the United States Since 1865
  or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement
- ECON 203 Principles of Microeconomics 3
  (related requirement for major)
- ACCT 301 Accounting for Nonaccounting Majors 3
  or ACCT 221 Principles of Accounting II
  (students should note prerequisite)
- SPCH 100 Foundations of Speech Communication 3
  or COMM 390 Writing for Managers
  or other course(s) to fulfill the communications/writing or speech requirement
- BMGT 364 Management and Organization Theory 3
- IFSM 300 Information Systems in Organizations 3
  or ACCT 326 Accounting Information Systems
  (students should note prerequisite)
- MRKT 310 Marketing Principles and Organization 3

Additional Required Courses (to be taken after introductory and foundation courses)

- COMM 394/394X Business Writing
  or other course(s) to fulfill the communications/writing or upper-level intensive writing requirement
- BMGT 380 Business Law I 3
- MRKT 395 Customer Service Management
  or other supplemental major course

- MRKT 354 Integrated Marketing Communications 3
  or other supplemental major course
- MRKT 410 Consumer Behavior 3
- MRKT 454 Global Marketing
  or other course(s) to fulfill the requirements for supplemental major coursework and international perspective
- MRKT 412 Marketing Research Applications 3
- BMGT 496 Business Ethics 3
  (also fulfills the civic responsibility requirement)

Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses)

- to be taken in the last 60 credits
- Capstone Course for Major (to be taken in the last 15 credits)

Minor in Marketing

The marketing minor complements the skills the student gains in his or her major discipline by enhancing the knowledge and skills related to marketing situations and processes and the emerging global marketplace.

Objectives

The student who graduates with a minor in marketing will be able to

- Explain the eight universal marketing processes for consumer and organizational markets: (1) environmental scanning and analysis; (2) marketing research and analysis; (3) segmentation, targeting, and positioning; (4) product development and differentiation; (5) valuation and pricing; (6) channel and value-chain management; (7) integrated marketing communication; and (8) relationship building.
- Describe the complexities of global markets and how the eight universal marketing processes apply to global marketing.
- Develop basic skills in identifying, gaining access to, and evaluating relevant resources and integrating new information into the marketing decision-making process.
- Develop basic skills in the technological applications used by the marketing profession to enhance the eight universal marketing processes.
- Develop effective written and oral communications consistent with the professional marketing environment.

Requirements for the Minor

A minor in marketing requires the completion of 15 credits of coursework in marketing, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed on the next page. If a specific course required for the minor is taken instead to satisfy the require-
Requirements for the Minor

A minor in mathematical sciences requires the completion of 17 credits of coursework in mathematics, at least 6 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Mathematical Sciences Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Course Sequence</td>
<td>8</td>
</tr>
<tr>
<td>MATH 130 Calculus A</td>
<td></td>
</tr>
<tr>
<td>and MATH 131 Calculus B</td>
<td></td>
</tr>
<tr>
<td>and MATH 132 Calculus C</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>MATH 140 Calculus I</td>
<td></td>
</tr>
<tr>
<td>and MATH 141 Calculus II</td>
<td></td>
</tr>
<tr>
<td>Lower-Level Course</td>
<td></td>
</tr>
<tr>
<td>One course chosen from the</td>
<td>3</td>
</tr>
<tr>
<td>following:</td>
<td></td>
</tr>
<tr>
<td>MATH 240 Introduction to Linear Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 241 Calculus III</td>
<td></td>
</tr>
<tr>
<td>MATH 246 Differential Equations</td>
<td></td>
</tr>
<tr>
<td>Upper-Level Courses</td>
<td></td>
</tr>
<tr>
<td>Note: One course in pure</td>
<td></td>
</tr>
<tr>
<td>mathematics and one in applied</td>
<td></td>
</tr>
<tr>
<td>mathematics are recommended.</td>
<td></td>
</tr>
<tr>
<td>Any upper-level MATH or STAT</td>
<td>3</td>
</tr>
<tr>
<td>course</td>
<td></td>
</tr>
<tr>
<td>Any upper-level MATH or STAT</td>
<td>3</td>
</tr>
<tr>
<td>course</td>
<td></td>
</tr>
<tr>
<td>Total credits for minor in</td>
<td>17</td>
</tr>
<tr>
<td>mathematical sciences</td>
<td></td>
</tr>
</tbody>
</table>

Mathematical Sciences

Students may seek an academic minor in mathematical sciences.

Minor in Mathematical Sciences

The mathematical sciences minor complements the skills the student gains in his or her major discipline by developing skills in solving mathematical problems and addressing complex and technical materials and by providing a mathematical background to support study in other areas, such as business and management, computer and information technology, and the biological and social sciences.

Objectives

The student who graduates with a minor in mathematical sciences will be able to

- Understand and analyze problems that need mathematical analysis.
- Use appropriate tools and software in the formulation and generation of solutions to problems.
- Demonstrate knowledge of content in diverse areas of mathematics and related fields.
- Translate real-world problems into mathematical models and demonstrate the application of mathematics in solving those problems.
- Demonstrate proficiency in written assignments and oral presentations.
Microbiology

Students may seek an academic minor in microbiology.

Minor in Microbiology

The microbiology minor complements the skills the student gains in his or her major discipline by providing a laboratory-based approach to the study of microorganisms, with applications to biotechnology, molecular and cellular biology, research and development, and public health.

Objectives

The student who graduates with a minor in microbiology will be able to

- Explain the basic taxonomy, structure, physiology, and ecology of bacteria, fungi, and viruses.
- Explain the defenses provided by the immune system against infection.
- Perform standard laboratory procedures employed in medical, industrial, and research work with microorganisms.
- Apply basic knowledge of microorganisms to problems encountered in medicine, public health, and biotechnology.

Requirements for the Minor

A minor in microbiology requires the completion of 16 credits of coursework in microbiology, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Microbiology Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken in the the last 60 credits along with required and supplemental major courses)</td>
<td></td>
</tr>
<tr>
<td>Note: No more than one course in virology (BIOL 434 or BIOL 435) may be applied toward the minor.</td>
<td></td>
</tr>
<tr>
<td><strong>Foundation Course</strong></td>
<td></td>
</tr>
<tr>
<td>BIOL 230</td>
<td>General Microbiology</td>
</tr>
<tr>
<td><strong>Core Courses</strong></td>
<td></td>
</tr>
<tr>
<td>At least 6 credits in coursework chosen from the following:</td>
<td>6</td>
</tr>
<tr>
<td>BIOL 330–339</td>
<td>Applied microbiology series</td>
</tr>
<tr>
<td>BIOL 422</td>
<td>Epidemiology of Emerging Infections</td>
</tr>
<tr>
<td>BIOL 430–439</td>
<td>Advanced microbiology series</td>
</tr>
<tr>
<td>BIOL 486A/486B</td>
<td>Internship in Life Science Through Co-op</td>
</tr>
</tbody>
</table>

Total credits for minor in microbiology 16

Natural Science

Students may seek an academic minor in natural science.

Minor in Natural Science

The natural science minor complements the skills the student gains in his or her major by providing an underlying scientific basis upon which to build a career in natural science, life science, physical science, and the allied health fields, as well as bioinformatics, environmental management, science journalism, and science education.

Objectives

The student who graduates with a minor in natural science will be able to

- Understand and articulate basic scientific principles and concepts.
- Perform standard laboratory procedures appropriate to selected scientific fields.
- Apply basic scientific knowledge to problems encountered in medicine, public health, and other science-related fields.

Requirements for the Minor

A minor in natural science requires the completion of 17 credits of coursework in natural science, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed on the next page. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.
Political Science

Students may seek an academic major in political science.

Major in Political Science

The major in political science offers systematic study of politics, including the way people are governed and govern themselves in a wide variety of settings. The curriculum focuses on fundamental principles, enduring issues of politics, forms of government, public policy, public law, and public administration from both domestic and international perspectives. It explores political, cultural and philosophical influences on public policy and policy-making. By enabling students to understand the role of government at local, state, and national levels in domestic and foreign settings, the program prepares graduates to become more effective global citizens as well as preparing them to enter or advance careers in government service, private corporations, nonprofit organizations, or advanced study in law, business, journalism, or graduate school.

Objectives

The student who graduates with a degree in political science will be able to

- Explain political theories and the forms and structures of government and discuss their impact upon the political process, policy development, and comparative and international politics.
- Discuss how public policy shapes a society’s approach to such issues as national security, health, education, wealth distribution, and the environment.
- Compare and contrast public decision making and its implementation in domestic and foreign settings.
- Describe how various governmental and nongovernmental organizations contribute to global politics.
- Analyze recurrent patterns of international political conflict, identify underlying political issues, and suggest alternative resolutions.
- Identify techniques of conflict resolution (including negotiation, compromise, and accommodation) that are appropriate at various points along the policy continuum.
- Apply critical thinking and analytic and effective communication skills (oral and written) in discussing and resolving political issues.
- Apply effectively a variety of approaches and methodologies to the analysis of political, administrative, and policy problems.
- Utilize information technology effectively for the research of political literature.

Degree Requirements

A degree with a major in political science requires the successful completion of 120 credits of coursework, including 30 credits for the major; 41 credits in general education requirements; and

<table>
<thead>
<tr>
<th>Natural Science Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken in the the last 60 credits along with required and supplemental major courses)</td>
<td></td>
</tr>
</tbody>
</table>

Foundation Course(s)
A foundation course or course combination chosen from the lists below 4
An additional foundation course from the courses list 3

Course Combinations

Note: Laboratory courses of one semester hour must be taken in conjunction with their accompanying lecture course.

| BIOL 101 | Concepts of Biology |
| BIOL 102 | Laboratory in Biology |
| GEOL 100 | Physical Geology |
| GEOL 110 | Physical Geology Laboratory |
| NSCI 100 | Introduction to Physical Science |
| NSCI 101 | Physical Science Laboratory |
| PHYS 161 | General Physics: Mechanics and Particle Dynamics |
| PHYS 195 | Introductory Physics Laboratory |

Courses
CHEM 103 General Chemistry I
CHEM 113 General Chemistry II
PHYS 121 Fundamentals of Physics I
PHYS 122 Fundamentals of Physics II

Supplemental Courses
At least three upper-level supplemental courses chosen from the following:
- Any upper-level ASTR course
- Any upper-level BIOL course
- NSCI 398 Special Topics in Natural Science

Total credits for minor in natural science 17
49 credits in the minor, electives, and other degree requirements. At least 17 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Political Science Major
Coursework for a major in political science includes the following:

- Required foundation course (3 credits): GVPT 100
- Core courses (15 credits): GVPT 101 (or 444), 170 (or 401), and 280 and STAT 200 (Note minimum requirements for upper-level coursework.)
- Supplemental major courses (12 credits): Any upper-level GVPT courses
- Required related courses (3 credits), which may be applied anywhere in the degree: MATH 107

Recommended Sequence
The following course sequence will fulfill all the requirements for the BS in political science. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Political Science Degree Courses

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Courses (to be taken within the first 18 credits)</td>
<td></td>
</tr>
<tr>
<td>EDCP 100: Principles and Strategies of Successful Learning</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150: Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X: Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107: College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>◆ GVPT 100: Introduction to Political Science</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Courses (to be taken with the first 30 credits)</td>
<td></td>
</tr>
<tr>
<td>SOCY 100: Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td></td>
</tr>
<tr>
<td>BIOL 101: Concepts of Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102: Laboratory in Biology</td>
<td>1</td>
</tr>
<tr>
<td>or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement</td>
<td></td>
</tr>
<tr>
<td>ENGL 291: Expository and Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing requirement</td>
<td></td>
</tr>
<tr>
<td>IFSM 201: Introduction to Computer-Based Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

PHIL 140: Contemporary Moral Issues or a foreign language course or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement
◆ GVPT 280: Comparative Politics and Government 3

Foundation Courses (to be taken within the first 60 credits)
HIST 142: Western Civilization II 3
or HIST 157: History of the United States Since 1865 or other course(s) to fulfill the second arts and humanities requirement (discipline must differ from first) and the historical perspective requirement
◆ GVPT 101: Introduction to Political Theory 3
or GVPT 444: American Political Theory
PSYC 100: Introduction to Psychology 3
or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
NSCI 100: Introduction to Physical Science 3
or ASTR 100: Introduction to Astronomy or other course to fulfill the biological and physical sciences lecture requirement
◆ GVPT 200: International Political Relations 3
or GVPT 401: Problems of World Politics and other course to fulfill the international perspective requirement
SPCH 100: Foundations of Speech Communication 3
or COMM 380: Language in Social Contexts or other course to fulfill the communications/writing or speech requirement
◆ STAT 200: Introduction to Statistics 3
IFSM 304: Ethics in the Information Age or other course(s) to fulfill the requirements in interdisciplinary issues/computing and civic responsibility

Additional Required Courses (to be taken after introductory and foundation courses)
ENGL 391/391X: Advanced Expository and Research Writing or other course to fulfill the communications/upper-level intensive writing requirement
◆ GVPT 475: The Presidency and the Executive Branch or GVPT 170: American Government
◆ Any upper-level GVPT course (supplemental major course) 3
◆ A supplemental major course 3
◆ A supplemental major course 3
◆ A supplemental major course 3

Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses) 46

Total credits for BS in political science 120
Minor in Political Science

The political science minor complements the skills the student gains in his or her major discipline by providing systematic study of politics and government. It exposes the student to the basic concepts, theories, policies, and the role of government at local, state, and national levels in domestic and foreign settings.

Objectives

The student who graduates with a minor in marketing will be able to

• Explain the scope and concepts of political science, political theories, the forms and structure of government, and their impact on the political process from a comparative and international perspective.
• Analyze recurrent patterns of international political conflict, identify underlying foreign policy issues, and suggest alternative resolutions.
• Identify techniques of conflict resolution (including negotiation, compromise, and accommodation) that are appropriate at various points along the policy continuum.
• Demonstrate competency in the application of social justice through effective political participation.
• Apply critical thinking and analytic and effective communication skills in oral and written work when discussing and resolving political issues.

Requirements for the Minor

A minor in political science requires the completion of 15 credits of coursework in government and politics, at least 9 of which must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a list of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Political Science Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken in the last 60 credits along with required and supplemental major courses)</td>
<td></td>
</tr>
<tr>
<td><strong>Required Foundation Course</strong></td>
<td></td>
</tr>
<tr>
<td>GVPT 100 Introduction to Political Science</td>
<td>3</td>
</tr>
<tr>
<td><strong>U.S. Government and Politics Core Course</strong></td>
<td></td>
</tr>
<tr>
<td>One course chosen from the following:</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 170 American Government</td>
<td></td>
</tr>
<tr>
<td>GVPT 210 Introduction to Public Administration and Policy</td>
<td></td>
</tr>
<tr>
<td>GVPT 399U Politics and Government in Maryland</td>
<td></td>
</tr>
<tr>
<td>GVPT 400 Business and Politics</td>
<td></td>
</tr>
</tbody>
</table>
Psychology

Students may seek either an academic major or minor in psychology.

Major in Psychology

The psychology major produces graduates with a knowledge base of theory and research in the psychological sciences and the ability to use the principles of psychology to help improve human, animal, and environmental welfare. The curriculum applies psychological knowledge to nonscientific fields and the workplace and promotes multicultural and multinational awareness. This major also introduces students to the basis of collaborative and professional relationships within psychology and identifies the foundations and delivery systems of the mental health profession.

Objectives

The student who graduates with a degree in psychology will be able to

• Recognize how knowledge of psychology can facilitate career advancement and help people improve their interpersonal relationships across cultural and national boundaries.
• Examine psychology in a broad context of interdisciplinary approaches that cover cultural diversity, historical and political perspectives, and current issues.
• Practice critical observation, experimentation, and empirical reasoning in psychology theory and research.
• Apply theory and research in psychology to practical situations and problems.
• Effectively communicate psychological concepts and critical thinking in oral and written form (such as research presentations and papers).
• Conduct scientific research, including accessing technical information, writing papers and presenting research, and using computers in psychology.

Degree Requirements

A degree with a major in psychology requires the successful completion of 120 credits of coursework, including 33 credits for the major; 41 credits in general education requirements; and 46 credits in the minor, electives, and other degree requirements. At least 17 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Psychology Major

Coursework for a major in psychology includes the following:

• Required foundation courses (9 credits): PSYC 100 and 305 and STAT 225
• Natural science psychology courses (6 credits): Chosen from BIOL 362 and PSYC 301, 310, 315, 341, 391, and 402
• Social science psychology courses (6 credits): Chosen from PSYC 321, 345, 354, 357, 361, and 424
• Clinical science psychology courses (6 credits): Chosen from PSYC 353, 432, 435, and 436
• Supplemental major courses (6 credits): Any PSYC courses (but no more than three 1-credit courses)
• Required related courses (3 credits), which may be applied anywhere in the degree: MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in psychology. Coursework for the major is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Psychology Degree Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Courses (to be taken within the first 18 credits)</td>
<td></td>
</tr>
<tr>
<td>EDCP 100 Principles and Strategies of Successful Learning</td>
<td>3</td>
</tr>
<tr>
<td>(strongly recommended as first course)</td>
<td></td>
</tr>
<tr>
<td>LIBS 150 Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107 College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or a higher-level math course</td>
<td></td>
</tr>
<tr>
<td>Introductory Courses (to be taken within the first 30 credits)</td>
<td></td>
</tr>
<tr>
<td>PHIL 140 Contemporary Moral Issues</td>
<td>3</td>
</tr>
<tr>
<td>or a foreign language course</td>
<td></td>
</tr>
<tr>
<td>or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement</td>
<td></td>
</tr>
<tr>
<td>BIOL 101 Concepts of Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102 Laboratory in Biology</td>
<td>1</td>
</tr>
<tr>
<td>or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement</td>
<td></td>
</tr>
<tr>
<td>ENGL 291 Expository and Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>or other course to fulfill the communication writing requirement</td>
<td></td>
</tr>
<tr>
<td>◆ PSYC 100 Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 201 Introduction to Computer-Based Systems</td>
<td>3</td>
</tr>
<tr>
<td>SOCY 100 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>or other ANTH, BEHS, ECON, GEOG, GYPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td></td>
</tr>
</tbody>
</table>
Minor and/or Elective Courses (to be taken in the last 60 credits along with required major courses) 40

Recommended Elective
PSYC 415 History of Psychology (for students who plan to go on to graduate school)

Total credits for BS in psychology 120

Minor in Psychology

The psychology minor complements the skills the student gains in his or her major discipline by investigating the nature of mind and behavior, including the biological basis of behavior, perception, memory and cognition, the influence of environmental and social forces on the individual, personality, life-span development and adjustment, research methods, and statistical analysis.

Objectives

A student who graduates with a minor in psychology will be able to:

• Recognize how knowledge of psychology can facilitate career advancement and help people improve their interpersonal relationships across cultural and national boundaries.
• Demonstrate knowledge of the origins and development of the discipline of psychology and explain some of the issues of world diversity in behavioral research.
• Use critical observation, experimentation, empirical reasoning, and appropriate information technology and information resources.
• Apply psychological theory and research to practical situations and problems.
• Think critically and communicate an understanding of psychology.
• Access databases for psychological literature and identify psychological resources online.

Requirements for the Minor

A minor in psychology requires the completion of 15 credits of coursework in psychology, including at least 3 credits each in courses in psychology as a natural science, a social science, and a clinical science. At least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed on the next page. PSYC courses earning 1 credit may not be applied to the minor. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.
For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Psychology Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken in the the last 60 credits with required and supplemental major courses)</td>
<td></td>
</tr>
<tr>
<td>Required Foundation Courses</td>
<td></td>
</tr>
<tr>
<td>PSYC 100 Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 225 Introduction to Statistical Methods in Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Supplemental Minor Courses</td>
<td></td>
</tr>
<tr>
<td>One natural science PSYC course chosen from list in major</td>
<td>3</td>
</tr>
<tr>
<td>One social science PSYC course chosen from list in major</td>
<td>3</td>
</tr>
<tr>
<td>One clinical science PSYC course chosen from list in major</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for minor in psychology 15

Social Science

Students may seek an academic major in social science.

Major in Social Science

The social science major is interdisciplinary and provides breadth of knowledge through coursework in such areas as gerontology, government and politics, and sociology. It also offers depth by giving students the opportunity to select core courses from one of these social science areas.

Objectives

The student who graduates with a major in social science will be able to

- Formulate a description of the roles of the different social science disciplines in understanding social reality, addressing social issues, and enhancing human welfare.
- Identify similarities and differences among the social science disciplines.
- Formulate an integrated analysis of social issues and/or social reality by synthesizing concepts and research methods from the different social science disciplines that relate to the particular social reality or social issue under investigation.
- Communicate social science concepts and terminology effectively.
- Apply micro and macro levels of analysis and an integrated, interdisciplinary perspective to an investigation of problems in the social sciences
- Critically analyze social science issues within larger historical and global contexts.
- Articulate the policy implications of social science research and theory for policy and programs.
- Use information technology to access and retrieve social science literature.

Degree Requirements

A degree with a major in social science requires the successful completion of 120 credits of coursework, including 30 credits for the major, 41 credits in general education requirements; and 49 credits in the minor, electives, and other degree requirements. At least 15 credits in the major must be earned in upper-level courses (numbered 300 or above).

Requirements for the Social Science Major

Coursework for a major in social science includes the following:

- Required statistics course (3 credits): STAT 230
- Required introductory courses (6 credits): BEHS 210 and SOCY 100
- Foundation course (3 credits): Chosen from CCJS 105, ECON 201 and 203, GEOG 100 and 110, GERO 100, GVPT 100, and PSYC 100
- Core courses (9 credits in a single area): Chosen from applicable CCJS courses (350, 360, 454, and 461); any ANTH and SOCY courses; any GVPT courses; any GERO courses; or any PSYC courses (Note: Anthropology and sociology are considered to constitute a single area; in all other cases, courses must be chosen from a single discipline.)
- Supplemental major courses (9 credits): Chosen from any ANTH, BEHS, ECON, GERO, GVPT, PSYC, and SOCY courses and CCJS 350, 360, 454, and 461
- Required related courses (3 credits), which may be applied anywhere in the degree: MATH 107

Recommended Sequence

The following course sequence will fulfill all the requirements for the BS in social science. Coursework for the major is indicated by •. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) and cross-curricular requirements (in civic responsibility, historical, and international perspectives) may be found on p. 9.

Social Science Degree Courses

<table>
<thead>
<tr>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>First Courses (to be taken within the first 18 credits)</td>
</tr>
<tr>
<td>EDCP 100 Principles and Strategies of Successful Learning</td>
</tr>
<tr>
<td>(strongly recommended as first course)</td>
</tr>
<tr>
<td>LIBS 150 Information Literacy and Research Methods</td>
</tr>
<tr>
<td>ENGL 101/101X Introduction to Writing</td>
</tr>
<tr>
<td>MATH 107 College Algebra</td>
</tr>
<tr>
<td>or a higher-level math course</td>
</tr>
</tbody>
</table>

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**Introductory Courses** *(to be taken within the first 30 credits)*

Note: General education courses may not be applied to major requirements.

- **GVPT 170** American Government 3
- **BIOL 101** Concepts of Biology 3 and **BIOL 102** Laboratory in Biology 1
- **ENGL 291** Expository and Research Writing 3 or other course to fulfill the communications/writing requirement
- **IFSM 201** Introduction to Computer-Based Systems 3
- **PSYC 100** Introduction to Psychology 3 or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
- **BEHS 210** Introduction to Social and Behavioral Science 3

**Foundation Courses** *(to be taken within the first 60 credits)*

- **STAT 230** Business Statistics 3
- **NSCI 100** Introduction to Physical Science 3
- **ASTR 100** Introduction to Astronomy 3
- **HIST 142** Western Civilization II 3
- **HIST 157** History of the United States Since 1865 3
- **SPCH 100** Foundations of Speech Communication 3
- **GERO 100** Introduction to Gerontology 3
- **ECON 203** Principles of Microeconomics 3
- **IFSM 304** Ethics in the Information Age 3
- **ANTH 344** Cultural Anthropology and Linguistics 3

**Additional Required Courses** *(to be taken after introductory and foundation courses)*

- **ENGL 391/391X** Advanced Expository and Research Writing 3 or other course to fulfill the communications/upper-level intensive writing requirement
  - A first core course for the major 3
  - A second core course for the major 3 *(in the same discipline as the first)*
  - A third core course for the major 3 *(in the same discipline as the first and second)*
- **Any ANTH, BEHS, ECON, GERO, PSYC, or SOCY course or qualifying CCJS course** 3 *(supplemental major course)*
- **A supplemental major course** 3
- **A supplemental major course** 3

**Minor and/or Elective Courses** *(to be taken in the last 60 credits along with required major courses)*

**Total credits for BS in social science** 120

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**Sociology**

Students may seek an academic minor in sociology.

**Minor in Sociology**

The sociology minor complements the skills the student gains in his or her major discipline by providing a study of contemporary sociological theory and research and applying it to social issues, including globalization, social inequality, diversity, health care, education, family, work, and religion.

**Objectives**

The student who graduates with a minor in sociology will be able to

- Discuss the role of sociology in understanding societal reality and social issues.
- Critically analyze theoretical orientations in sociology.
- Apply sociological theory and research to define and present alternatives for solving contemporary social problems.
- Communicate sociological concepts and terminology effectively.
- Discuss the relationship between the individual and society from a sociological perspective.
- Discuss micro and macro levels of sociological analysis and their roles in examining social reality.
- Use information technology to access and retrieve sociological literature.
- Apply sociological concepts to understand diversity in American society and the place of American society within a larger global context.
Requirements for the Minor

A minor in sociology requires the completion of 15 credits of coursework in sociology, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Sociology Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to be taken in the the last 60 credits along with required and supplemental major courses)</td>
<td></td>
</tr>
<tr>
<td><strong>Required Course</strong></td>
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<tr>
<td>SOCY 100 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Statistics Course</strong></td>
<td>3</td>
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<tr>
<td>STAT 230 Business Statistics</td>
<td></td>
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<tr>
<td>or STAT 225 Introduction to Statistical Methods in Psychology</td>
<td></td>
</tr>
<tr>
<td>or STAT 200 Introduction to Statistics</td>
<td></td>
</tr>
<tr>
<td><strong>Supplemental Courses</strong></td>
<td></td>
</tr>
<tr>
<td>Any upper-level SOCY course</td>
<td>3</td>
</tr>
<tr>
<td>Any upper-level SOCY course</td>
<td>3</td>
</tr>
<tr>
<td>Any upper-level SOCY course</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total credits for minor in sociology</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Speech Communication

Students may seek an academic minor in speech communication.

Minor in Speech Communication

The minor in speech communication complements the skills the student gains in his or her major discipline by developing communication skills, particularly oral communication, as well as providing a greater understanding of human interaction in a variety of personal and professional contexts.

Objectives

The student who graduates with a minor in speech communication will be able to:

- Apply communication theories—including both speech communication and mass communication theories—to various situations and contexts.
- Describe and use effective interaction styles in communication with others.
- Identify and apply effective strategies for creating, editing, and presenting effective messages to different audiences and within different contexts.
- Use tools and technology to gather information, as well as to develop and deliver messages.
- Critically analyze information for creating effective oral or written messages and for evaluating messages.

Requirements for the Minor

A minor in speech communication requires the completion of 15 credits of coursework in speech communication, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed on the next page. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

Note: Students should have taken SPCH 100 or have comparable public speaking experience before enrolling in courses for the speech communication minor.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.
BACHELOR’S DEGREE CURRICULA

• Discuss the major internal and external influences that should be considered in the development of organizational strategy.
• Develop and evaluate the financial resources, promotional activities, and employee recruitment and training programs necessary in beginning a new venture.
• Create a business plan for the new venture or business unit.
• Demonstrate competence in the use of databases, the World Wide Web, and other library resources to retrieve information related to strategic and general management issues.
• Develop effective written and oral communication skills appropriate for the workplace.

Requirements for the Minor

A minor in strategic and entrepreneurial management requires the completion of 15 credits of coursework in strategic and entrepreneurial management, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits for the minor. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

<table>
<thead>
<tr>
<th>Strategic and Entrepreneurial Management Minor Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses</td>
<td></td>
</tr>
<tr>
<td>COMM 300 Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 100 Foundations of Speech Communication or any SPCH course</td>
<td>3</td>
</tr>
<tr>
<td>Core Courses</td>
<td></td>
</tr>
<tr>
<td>Any upper-level SPCH course</td>
<td>3</td>
</tr>
<tr>
<td>Any upper-level SPCH course</td>
<td>3</td>
</tr>
<tr>
<td>Supplemental Course</td>
<td></td>
</tr>
<tr>
<td>One course chosen from the following:</td>
<td>3</td>
</tr>
<tr>
<td>Any upper-level SPCH course</td>
<td></td>
</tr>
<tr>
<td>COMM 380 Language in Social Contexts</td>
<td></td>
</tr>
<tr>
<td>PSYC 334 Psychology of Interpersonal Relationships</td>
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</tr>
<tr>
<td>PSYC 345 Group Dynamics</td>
<td></td>
</tr>
<tr>
<td>PSYC 424 Psychology of Persuasion</td>
<td></td>
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<tr>
<td>HRMN 302 Organizational Communication</td>
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<tr>
<td>HRMN 367 Organizational Culture</td>
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<tr>
<td>Total credits for minor in speech communication</td>
<td>15</td>
</tr>
</tbody>
</table>

Students may seek an academic minor in strategic and entrepreneurial management.

Minor in Strategic and Entrepreneurial Management

The strategic and entrepreneurial management minor complements the skills the student gains in his or her major discipline by providing a study of current issues in the effective use of information, the globalization of business, and strategic management and by exploring the mind-set of an innovator and an entrepreneur.

Objectives

The student who graduates with a minor in strategic and entrepreneurial management will be able to

• Apply key concepts and theories in strategic and entrepreneurial management areas.
• Demonstrate knowledge of domestic and global issues that affect the business environment.

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Women’s Studies

Students may seek an academic minor in women's studies.

Minor in Women’s Studies

The women’s studies minor complements the skills the student gains in his or her major discipline by providing an interdisciplinary study of the history, status, and experiences of women.

Objectives

The student who graduates with a minor in women's studies will be able to

• Examine historical and contemporary contributions by women and existing data about women.
• Discuss some of the scholarly methodologies used in the study of women, gender, and human societies.
• Explain aspects of scholarship and theory on the history, status, contributions, and experiences of women in diverse cultural communities and the significance of gender as a social construct and an analytical category.

Requirements for the Minor

A minor in women’s studies requires the completion of 15 credits of coursework in women’s studies, drawn from various disciplines as appropriate; at least 9 credits must be earned in upper-level courses (numbered 300 or above). Specific course requirements are listed below. If a specific course required for the minor is taken instead to satisfy the requirements for the major, another course in the same discipline should be substituted to fulfill the required minimum number of credits. Any course used to replace an upper-level course should also be classified as upper level.

For a listing of all the requirements for the bachelor’s degree, students should refer to their major and pp. 9–10.

Women’s Studies Minor Courses Credits
(to be taken in the the last 60 credits along with required and supplemental major courses)

<table>
<thead>
<tr>
<th>Required Course</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>WMST 200 Introduction to Women’s Studies: Women and Society</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Science Courses</th>
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</tr>
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<tbody>
<tr>
<td>A course chosen from the following:</td>
<td>3</td>
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<tr>
<td>BEHS 343 Parenting Today</td>
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<tr>
<td>BEHS 453 Domestic Violence</td>
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<tr>
<td>BMGT 312 Women in Business</td>
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</tr>
<tr>
<td>GER 311 Women and Aging</td>
<td></td>
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<tr>
<td>GVPT 436 The Legal Status of Women</td>
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</tr>
<tr>
<td>PSYC 334 Psychology of Interpersonal Relationships</td>
<td></td>
</tr>
<tr>
<td>PSYC 336 Psychology of Women</td>
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</tr>
<tr>
<td>SOCY 325 The Sociology of Gender</td>
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<table>
<thead>
<tr>
<th>Humanities Courses</th>
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</thead>
<tbody>
<tr>
<td>A course chosen from the following:</td>
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</tr>
<tr>
<td>ENGL 250 Introduction to Literature by Women</td>
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</tr>
<tr>
<td>ENGL 354 American Women Writers Since 1900</td>
<td></td>
</tr>
<tr>
<td>ENGL 358 British Women Writers Since 1900</td>
<td></td>
</tr>
<tr>
<td>HIST 375 Modern European Women’s History</td>
<td></td>
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<tr>
<td>HIST 376 Women and the Family in America to 1870</td>
<td></td>
</tr>
<tr>
<td>HIST 377 Women in America Since 1870</td>
<td></td>
</tr>
<tr>
<td>HUMN 442 Contemporary Sexual Ethics</td>
<td></td>
</tr>
<tr>
<td>PHIL 343 Sexual Morality</td>
<td></td>
</tr>
<tr>
<td>SPCH 324 Communication and Gender</td>
<td></td>
</tr>
</tbody>
</table>

A second humanities course | 3 |

Total credits for minor in women’s studies | 15 |
Associate of Arts Degree

The curricula and courses listed below are available only to active-duty military personnel and certain others who conform to special stipulations.

REQUIREMENTS

The Associate of Arts degree (AA) requires the completion of a minimum of 60 credits, at least 15 of which must be taken through UMUC. Of these 60 credits, 32 credits must be earned in courses that fulfill the general education requirements listed below. The remaining 28 credits must satisfy the requirements of the curriculum the student has selected.

A grade point average of 2.0 or higher in all courses taken through UMUC is required. A student should complete one associate’s degree before applying for another.

General Education Requirements (32 s.h.)

The general education requirements for the associate's degree generally correspond to those for the bachelor's degree (listed on p. 9), with the following exceptions:

• An upper-level intensive writing course is not required for the associate's degree.
• Only the 1-credit course in information literacy and research methods is required to fulfill the interdisciplinary or emerging issues requirement for the associate's degree.

All associate's degree curricula, except for the computer studies curriculum, require students to complete IFSM 201 (which will be applied to the general education requirement in interdisciplinary and emerging issues/computing for students who continue to the bachelor's degree). MATH 107 or a higher-level mathematics course is required to fulfill the general education requirement in mathematics for the specialized curricula in accounting and business and management.

Curriculum Requirements (28 s.h.)

In addition to the general education requirements, students must take 28 credits of coursework related to their educational goals; at least 9 credits in core or core-related coursework for the chosen curriculum must be earned through UMUC. They may choose a general curriculum (described at right) or a specialized curriculum with its own particular requirements (detailed on the following pages). Students must earn a grade of C or higher in all core or core-related curriculum courses. Students who anticipate seeking a bachelor's degree should select courses that will advance that goal.

CURIricula

General Curriculum

The Associate of Arts general curriculum is for adult students who wish to pursue their own educational goals.

Requirements for the General Curriculum

In addition to IFSM 201 (required), students may choose related courses from several disciplines, explore several interests at once, or choose a variety of courses from throughout UMUC's offerings. Students in this program accept responsibility for developing a curriculum that meets their specific objectives. They are encouraged to seek assistance from academic advisors in arranging their curriculum as appropriate to their personal interests and future educational plans.

Recommended Sequence

The following course sequence will fulfill all the requirements for the AA in general studies. Coursework for the curriculum is indicated by ◆. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

General Curriculum Courses Credits
First Courses
(to be taken within the first 18 credits)
Note: Placement tests are required for math and English composition courses.
LIBS 150 Information Literacy and Research Methods 1
ENGL 101/101X Introduction to Writing 3
MATH 105 Mathematics: Contemporary Topics and Applications 3
MATH 106 Finite Mathematics or a higher-level math course
Introductory Courses
(to be taken within the first 30 credits)
HIST 142 Western Civilization II 3
or HIST 157 History of the United States Since 1865
or other ARTH, ARTT, HIST, HUMAN, MUSC, PHIL, THET, dance, literature, or foreign language course to fulfill the first arts and humanities requirement
BIOL 101 Concepts of Biology 3
and BIOL 102 Laboratory in Biology or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement
ENGL 291 Expository and Research Writing or other course to fulfill the communications/writing requirement
ASSOCIATE'S DEGREE REQUIREMENTS

Specialized Curricula

The Associate of Arts specialized curricula are for adult students who wish to pursue a specific career or educational goal, often as a basis for further study toward the bachelor's degree. Each of the specialized curricula has its own requirements. In the following curricula, coursework for the individual curriculum is indicated by◆. Students should take careful note of course prerequisites and recommended course sequences. Curricula may be available only in limited geographic areas.

Accounting Curriculum

Requirements for the Accounting Curriculum

Coursework for the accounting curriculum includes the following (students should note prerequisites and other sequencing requirements):

- Required core courses (6 credits): ACCT 220 and 221
- Additional core courses (9 credits): Any ACCT, BMGT, or MGST courses in accounting or finance (except MGST 120 or MGST 140)
- Required computing course (3 credits): IFSM 201
- Accounting-related courses (9 credits): Chosen from any ACCT courses; BMGT 110, 364, 380, 381, and 496 and any BMGT finance courses; CMIS 102A; CMST 340; ECON 201 and 203; IFSM 300, MGST 120; MRKT 310; and STAT 200 (or 230)
- Elective (1 credit): Any course related to interests and goals

Recommended Sequence

The following course sequence will fulfill all the requirements for the AA in accounting. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

Accounting Curriculum Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIBS 150</td>
<td>Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>◆ BMGT 110</td>
<td>Introduction to Business and Management</td>
<td>3</td>
</tr>
<tr>
<td>◆ ACCT 220</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for AA with general curriculum 60
### Introductory Courses (to be taken within the first 30 credits)

- **ACCT 221** Principles of Accounting II 3
- **ECON 201** Principles of Macroeconomics 3
  or **ECON 203** Principles of Microeconomics (required for BS in accounting) 3
- **BIOL 101** Concepts of Biology 3
  and **BIOL 102** Laboratory in Biology 1
- **ENGL 291** Expository and Research Writing 3
  or other course to fulfill the communications/writing requirement 3
- **PSYC 100** Introduction to Psychology 3
  or **SOCT 100** Introduction to Sociology 3
- **NSCI 100** Introduction to Physical Science 3
  or **ASTR 100** Introduction to Astronomy 3
- **PHIL 140** Contemporary Moral Issues 3
  or a foreign language course
- **HIST 142** Western Civilization II 3
  or **HIST 157** History of the United States Since 1865 3
- **SPCH 100** Foundations of Speech Communication 3
  or **COMM 390** Writing for Managers 3
- **BMGT 380** Business Law I 3
  or **STAT 230** Business Statistics 3
- **BMGT 364** Management and Organization Theory 3
  or **MGST 120** Fundamentals of the Accounting Process 3
- **A core course for the curriculum** 3
- **A core course for the curriculum** 3
- **Elective Course (to be chosen from any course to complete the 60 credits for the degree)** 1

**Total credits for AA with accounting specialization** 60

### Business and Management Curriculum

#### Requirements for the Business and Management Curriculum

Coursework for the business and management curriculum includes the following:

- **Core courses (15 credits):** Chosen from BMGT 110 (required for students with no previous business experience), ACCT 220 and 221, ECON 201 and 203, and STAT 230 (or 200)
- **Required computing course (3 credits):** IFSM 201
- **Management-related courses (6 credits):** Chosen from any ACCT, BMGT, CMIS, ECON, IFSM, and MGST courses; any 3-credit CMST courses; GVPT 210; HRMN 300; MRKT 310; PSYC 321 and 361; and SOCY 461
- **Electives (4 credits):** Any courses related to interests and goals

#### Recommended Sequence

The following course sequence will fulfill all the requirements for the AA in business and management. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

### Business and Management Curriculum

#### First Courses (to be taken within the first 18 credits)

**Note:** Placement tests are required for math and English composition courses.

- **LIBS 150** Information Literacy and Research Methods 1
- **ENGL 101/101X** Introduction to Writing 3
- **MATH 107** College Algebra 3
  or a higher-level math course
- **BMGT 110** Introduction to Business and Management (required core course for the curriculum for students with no prior business experience; also required for BS in business administration)

#### Introductory Courses (to be taken within the first 30 credits)

- **ECON 201** Principles of Macroeconomics 3
  (required for BS in business administration; strongly recommended)
  or other ANTH, BEHS, ECON, GEOS, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement
- **BIOL 101** Concepts of Biology 3
  and **BIOL 102** Laboratory in Biology 1
  or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement
- **ENGL 291** Expository and Research Writing 3
  or other course to fulfill the communications/writing requirement
ASSOCIATE’S DEGREE REQUIREMENTS

Computer Studies Curriculum

Requirements for the Computer Studies Curriculum

Coursework for the computer studies curriculum includes the following:

- Required core courses (6 credits): CMIS 102/102A (or IFSM 201) and CMIS 141/141A (or other appropriate programming language course)
- Additional core courses (6 credits): Chosen from CMIS 241 and 310, IFSM 300, and any CMST courses (up to 3 credits)
- Computer studies-related course (3 credits): Any CMIS, CMST, CMIT, CMSC, IFSM course
- Electives (13 credits): Any courses related to interests and goals

Recommended Sequence

The following course sequence will fulfill all the requirements for the AA in computer studies. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

Computer Studies Curriculum Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIBS 150</td>
<td>Information Literacy and Research Methods</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>Introduction to Writing</td>
</tr>
<tr>
<td>MATH 107</td>
<td>College Algebra</td>
</tr>
<tr>
<td>or a higher-level math course</td>
<td></td>
</tr>
<tr>
<td>CMIS 102</td>
<td>Introduction to Problem Solving and Algorithm Design</td>
</tr>
<tr>
<td>or CMIS 102A</td>
<td>Fundamentals of Programming I</td>
</tr>
<tr>
<td>(first required core course for the curriculum; required for BS in computer studies)</td>
<td></td>
</tr>
<tr>
<td>CMIS 141</td>
<td>Introductory Programming</td>
</tr>
<tr>
<td>or CMIS 141A</td>
<td>Fundamentals of Programming II</td>
</tr>
<tr>
<td>(required core course for the curriculum)</td>
<td></td>
</tr>
<tr>
<td>PHIL 140</td>
<td>Contemporary Moral Issues</td>
</tr>
<tr>
<td>or a foreign language course</td>
<td></td>
</tr>
<tr>
<td>ACCT 220</td>
<td>Principles of Accounting I</td>
</tr>
<tr>
<td>(core course for the curriculum)</td>
<td></td>
</tr>
<tr>
<td>or ACCT 221</td>
<td>Principles of Accounting II</td>
</tr>
<tr>
<td>(core course for the curriculum)</td>
<td></td>
</tr>
<tr>
<td>or STAT 230</td>
<td>Business Statistics</td>
</tr>
<tr>
<td>or PSYC 100</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>or SOCY 100</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)</td>
<td></td>
</tr>
<tr>
<td>or NSCI 100</td>
<td>Introduction to Physical Science</td>
</tr>
<tr>
<td>or ASTR 100</td>
<td>Introduction to Astronomy</td>
</tr>
<tr>
<td>or other course to fulfill the biological and physical sciences lecture requirement</td>
<td></td>
</tr>
<tr>
<td>or ECON 203</td>
<td>Introduction to Microeconomics</td>
</tr>
<tr>
<td>(core course for the curriculum)</td>
<td></td>
</tr>
<tr>
<td>or HIST 142</td>
<td>Western Civilization II</td>
</tr>
<tr>
<td>or HIST 157</td>
<td>History of the United States Since 1865</td>
</tr>
<tr>
<td>or other course to fulfill the second arts and humanities requirement (discipline must differ from first)</td>
<td></td>
</tr>
<tr>
<td>or SPCH 100</td>
<td>Foundations of Speech Communication</td>
</tr>
<tr>
<td>or COMM 390</td>
<td>Writing for Managers</td>
</tr>
<tr>
<td>or other course to fulfill the communications/writing or speech requirement</td>
<td></td>
</tr>
<tr>
<td>or Management-related course for the curriculum</td>
<td></td>
</tr>
<tr>
<td>(courses required for BS in business administration are recommended)</td>
<td></td>
</tr>
<tr>
<td>or Management-related course for the curriculum</td>
<td></td>
</tr>
<tr>
<td>(courses required for BS in business administration are recommended)</td>
<td></td>
</tr>
<tr>
<td>or Elective Courses (to be chosen from any courses to complete the 60 credits for the degree—courses applicable to the BS in business administration are recommended)</td>
<td></td>
</tr>
</tbody>
</table>

Total credits for AA with business and management specialization 60
Requirements for the Criminal Justice Curriculum

Courswork for the criminal justice curriculum includes the following:

- Core courses (12 credits): Any CCJS courses
- Required computing course (3 credits): IFSM 201
- Electives (13 credits): Any courses related to interests and goals

Recommended Sequence

The following course sequence will fulfill all the requirements for the AA in criminal justice. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

### Criminal Justice Curriculum Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 291</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 170</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 201</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 100</td>
<td>3</td>
</tr>
<tr>
<td>HIST 142</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 100</td>
<td>3</td>
</tr>
<tr>
<td>Elective Courses</td>
<td>13</td>
</tr>
<tr>
<td>Total credits</td>
<td>60</td>
</tr>
</tbody>
</table>

**First Courses** (to be taken within the first 18 credits)

**Note:** Placement tests are required for math and English composition courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIBS 150</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>3</td>
</tr>
<tr>
<td>MATH 105</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 106</td>
<td>3</td>
</tr>
<tr>
<td>or CCJS 100</td>
<td>3</td>
</tr>
<tr>
<td>or CCJS 105</td>
<td>3</td>
</tr>
<tr>
<td>or any course</td>
<td></td>
</tr>
</tbody>
</table>

**Introductory Courses** (to be taken within the first 30 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVPT 170</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 101</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 291</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 201</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 230</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 140</td>
<td>3</td>
</tr>
<tr>
<td>or any course</td>
<td></td>
</tr>
</tbody>
</table>

*Visit [www.umuc.edu/ugp](http://www.umuc.edu/ugp) for more information.*
ASSOCIATE’S DEGREE REQUIREMENTS

Additional Required Courses (to be taken after first and introductory courses)

- PSYC 100 Introduction to Psychology 3
- or SOCY 100 Introduction to Sociology
- or other course to fulfill the second general education requirement in behavioral and social sciences (discipline must differ from first)

- NSCI 100 Introduction to Physical Science 3
- or ASTR 100 Introduction to Astronomy
- or other course to fulfill the biological and physical sciences requirement

- HIST 142 Western Civilization II 3
- or HIST 157 History of the United States Since 1865
- or other course to fulfill the second arts and humanities requirement (discipline must differ from first)

- SPCH 100 Foundations of Speech Communication 3
- or COMM 380 Language in Social Contexts
- or other course to fulfill the communications/writing or speech requirement

- CCJS 320 Introduction to Criminalistics 3
- or other core course for the curriculum

- CCJS 350 Juvenile Delinquency 3
- or other core course for the curriculum

Elective Courses (chosen from any courses to complete 60 credits for the degree—courses that may be applied to the BS in criminal justice are recommended) 13

Total credits for AA with criminal justice specialization 60

Foreign Language Area Studies Curriculum

Requirements for the Foreign Language Area Studies Curriculum

Coursework for the foreign language area studies curriculum includes the following (see also the specific requirements for each language area):

- Language core courses (12 credits): Sequential courses in a single language, usually numbered 111–112 and 114–115 (or 211 and 212)

- Related area studies courses (12 credits): Any courses in the culture, history, language, literature, or government and politics of the area (see specific courses for each language area)

- Required computing course (3 credits): IFSM 201

- Elective (1 credit): Any courses related to interests and goals

Recommended Sequence

The following course sequence will fulfill all the requirements for the AA in foreign language area studies if the appropriate core and related courses for the specific language area are selected. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

Foreign Language Area Studies Curriculum Courses

First Courses (to be taken within the first 18 credits)

Note: Placement tests are required for math and English composition courses.

- LIBS 150 Information Literacy and Research Methods 1
- ENGL 101/101X Introduction to Writing 3
- MATH 105 Mathematics: Contemporary Topics and Applications 3
- or MATH 106 Finite Mathematics or a higher-level math course

- Language core course (numbered 111) for the curriculum 3

Introductory Courses (to be taken within the first 30 credits)

- BIOL 101 Concepts of Biology 3
- or BIOL 102 Laboratory in Biology 1
- or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement

- ENGL 291 Expository and Research Writing 3
- or other course to fulfill the communications/writing requirement

- HIST 157 History of the United States Since 1865
- or other course(s) to fulfill the biological and physical sciences lecture requirement

- Language core course (numbered 112) for the curriculum 3

- Language core course (numbered 114) for the curriculum 3

- GVPT 200 International Political Relations 3
- or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first arts and humanities requirement

- Language core course (numbered 115) for the curriculum 3

Additional Required Courses (to be taken after first and introductory courses)

- Related area studies course for the curriculum 3
- IFSM 201 Introduction to Computer-Based Systems 3
- (required computing course for the curriculum)

- Related area studies course for the curriculum 3
- NSCI 100 Introduction to Physical Science 3
- or ASTR 100 Introduction to Astronomy
- or other course to fulfill the biological and physical sciences lecture requirement

- ANTH 102 Introduction to Anthropology;
- Cultural Anthropology and Linguistics or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)

- Related area studies course for the curriculum 3

- PHIL 140 Contemporary Moral Issues 3
- or other course to fulfill the second arts and humanities requirement (discipline must differ from first)
ASSOCIATE’S DEGREE REQUIREMENTS

BIOL 101 Concepts of Biology 3
and BIOL 102 Laboratory in Biology 1
or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement
ENGL 291 Expository and Research Writing or other course to fulfill the communications/writing requirement
◆ IFSM 201 Introduction to Computer-Based Systems (required computing course for the curriculum)
CCJS 100 Introduction to Criminal Justice 3
or SOCY 100 Introduction to Sociology or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)

Legal Studies Curriculum

Requirements for the Legal Studies Curriculum
Coursework for the legal studies curriculum includes the following:
• Required core courses (12 credits): LGST 101, 200, 201, and 204
• Legal studies-related courses (6 credits): Any LGST courses
• Required computing course (3 credits): IFSM 201
• Electives (7 credits): Any courses related to interests and goals

Recommended Sequence
The following course sequence will fulfill all the requirements for the AA in legal studies. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

Legal Studies Curriculum Courses

First Courses (to be taken within the first 18 credits)
Note: Placement tests are required for math and English composition courses.
LIBS 150 Information Literacy and Research Methods 1
ENGL 101/101X Introduction to Writing 3
MATH 105 Mathematics: Contemporary Topics and Applications 3
or MATH 106 Finite Mathematics or a higher-level math course

Introductory Courses (to be taken within the first 30 credits)
PHIL 140 Contemporary Moral Issues 3
or a foreign language course or other ARTH, ARTT, HIST, HUMN, MUSC, PHIL, THET, dance, or literature course to fulfill the first arts and humanities requirement
GVPT 170 American Government 3
or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement

Total credits for AA with foreign language area studies specialization 60

Elective Courses (to be chosen from any courses to complete the 60 credits for the degree)

Total credits for AA with legal studies specialization 60
Management Studies Curriculum

Requirements for the Management Studies Curriculum

Coursework for the management studies curriculum includes the following:

- Management-related courses (15 credits): Chosen from any ACCT, BMGT, CMIS, CMST, ECON, IFSM, and MGST courses; COMM 390; GVPT 210; PSYC 321 and 361; SOCY 461; and STAT 230 (or 200)
- Required computing course (3 credits): IFSM 201
- Electives (10 credits): Any courses related to interests and goals

Recommended Sequence

The following course sequence will fulfill all the requirements for the AA in management studies. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

Management Studies Curriculum Courses

<table>
<thead>
<tr>
<th>First Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Placement tests are required for math and English composition courses.&lt;br&gt;&lt;br&gt;LIBS 150 Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 105 Mathematics: Contemporary Topics and Applications</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 106 Finite Mathematics or a higher-level math course</td>
<td>3</td>
</tr>
<tr>
<td>♦ BMGT 110 Introduction to Business and Management (recommended management studies-related course for the curriculum for students with no prior business experience; also required for BS in business administration)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Introductory Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Placement tests are required for math and English composition courses.&lt;br&gt;&lt;br&gt;GVPT 170 American Government or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 101 Concepts of Biology or other course(s) to fulfill the biological and physical sciences lecture and laboratory requirement</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 102 Laboratory in Biology</td>
<td>1</td>
</tr>
<tr>
<td>ECON 201 Principles of Macroeconomics or ECON 203 Principles of Microeconomics (required for BS in management studies) or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 291 Expository and Research Writing or other course to fulfill the communications/writing requirement</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦ STAT 230 Business Statistics (recommended management studies-related course for the curriculum; required for BS in management studies)</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 100 Introduction to Physical Science or ASTR 100 Introduction to Astronomy or other course to fulfill the biological and physical sciences lecture requirement</td>
<td>3</td>
</tr>
<tr>
<td>HIST 142 Western Civilization II or HIST 157 History of the United States Since 1865 or other course to fulfill the second arts and humanities requirement (discipline must differ from first)</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 100 Foundations of Speech Communication or COMM 394/394X Business Writing or other course to fulfill the communications/writing or speech requirement</td>
<td>3</td>
</tr>
</tbody>
</table>

| Management-related course for the curriculum (courses that may be applied to BS in management studies are recommended) | 3 |
| Management-related course for the curriculum (courses that may be applied to BS in management studies are recommended) | 3 |

<table>
<thead>
<tr>
<th>Elective Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chosen from any courses to complete 60 credits for the degree—courses that may be applied to BS in management studies are recommended</td>
<td>10</td>
</tr>
</tbody>
</table>

Total credits for AA with management studies specialization 60
Mathematics Curriculum

Requirements for the Mathematics Curriculum
Coursework for the mathematics curriculum includes the following:

- Required mathematics core courses (18–20 credits): MATH 130, 131, and 132 (or 140 and 141); 240 (or 246); 241; and STAT 230 (or 200)
- Math-related course (3 credits): Chosen from any ACCT courses; any BMGT finance courses; CHEM 103 and 113; CMIS 102A, 141A, 160, and 241; ECON 201, 203, 430, and 440; and PHYS 111 or higher
- Required computing course (3 credits): IFSM 201
- Electives (2–4 credits): Any courses related to interests and goals

Recommended Sequence
The following course sequence will fulfill all the requirements for the AA in mathematics. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

Mathematics Curriculum Courses

<table>
<thead>
<tr>
<th>First Courses (to be taken within the first 18 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Placement tests are required for math and English composition courses.</td>
<td></td>
</tr>
<tr>
<td>LIBS 150 Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 107 College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Note: Courses applied to general education requirements may not be applied to the major.</td>
<td></td>
</tr>
<tr>
<td>MATH 108 Trigonometry and Analytical Geometry (prerequisite for later courses)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Introductory Courses (to be taken within the first 30 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 142 History of the U.S. Since 1865 or HIST 157 History of the U.S. Since 1865</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 100 Introduction to Physical Science and NSCI 101 Physical Science Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 291 Expository and Research Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Required Courses (to be taken after first and introductory courses)

- MATH 130 Calculus A (required core course for the curriculum) 3
- MATH 131 Calculus B (required core course for the curriculum) 3
- MATH 132 Calculus C (required core course for the curriculum) 3

BIOL 101 Concepts of Biology 3
- or ASTR 100 Introduction to Astronomy or other course to fulfill the biological and physical sciences lecture requirement
- or PSYC 100 Introduction to Psychology 3
- or SOCY 100 Introduction to Sociology or other course to fulfill the second behavioral and social sciences requirement (discipline must differ from first)
- or PHIL 140 Contemporary Moral Issues 3
- or a foreign language course or other course to fulfill the second arts and humanities requirement (discipline must differ from first)
- or SPCH 100 Foundations of Speech Communication 3
- or other course to fulfill the communications/writing or speech requirement
- or MATH 241 Calculus III (required core course for the curriculum) 4
- or MATH 240 Introduction to Linear Algebra or MATH 246 Differential Equations (required core course for the curriculum) 3–4
- or STAT 230 Business Statistics or STAT 200 Introduction to Statistics (required core course for the curriculum) 3
- or IFSM 201 Introduction to Computer-Based Studies (required computing course for the curriculum) 3
- or a mathematics-related course for the curriculum 3

Total credits for AA with mathematics specialization 60
## Women's Studies Curriculum

### Requirements for the Women's Studies Curriculum

Coursework for the women's studies curriculum includes the following:

- **Required core course (3 credits):** WMST 200
- **Women's studies–related courses (15 credits):** Chosen from ARTH 199U, ENGL 250, HUMN 120, and related women's studies and special topics courses (with prior approval)
- **Required computing course (3 credits):** IFSM 201
- **Electives (7 credits):** Any courses related to interests and goals

### Recommended Sequence

The following course sequence will fulfill all the requirements for the AA in women's studies. Since some recommended courses fulfill more than one requirement, substituting courses for those listed may make it necessary to take additional courses to meet degree requirements. Students should consult an advisor whenever taking advantage of other options. Information on alternate courses (where allowable) to fulfill general education requirements (in communications, arts and humanities, behavioral and social sciences, biological and physical sciences, mathematics, and interdisciplinary issues) may be found on p. 9.

### Women's Studies Curriculum Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMST 200</td>
<td>Introduction to Women's Studies: Women and Society (required core course for the curriculum)</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 150</td>
<td>Information Literacy and Research Methods</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 101/101X</td>
<td>Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 105</td>
<td>Mathematics: Contemporary Topics and Applications</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 106</td>
<td>Finite Mathematics or a higher-level math course</td>
<td></td>
</tr>
<tr>
<td>WMST 200</td>
<td>Introduction to Women’s Studies: Women and Society (required core course for the curriculum)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Introductory Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 101</td>
<td>Concepts of Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 102</td>
<td>Laboratory in Biology</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 291</td>
<td>Expository and Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>HIST 141</td>
<td>Western Civilization I</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 142</td>
<td>Western Civilization II</td>
<td></td>
</tr>
<tr>
<td>IFSM 201</td>
<td>Introduction to Computer-Based Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

### Electives Courses (chosen from any courses to complete 60 credits for the degree)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMST 200</td>
<td>Introduction to Women’s Studies: Women and Society (required core course for the curriculum)</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 100</td>
<td>Foundations of Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 100</td>
<td>Introduction to Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>or ASTR 100</td>
<td>Introduction to Astronomy</td>
<td></td>
</tr>
<tr>
<td>ANTH 102</td>
<td>Introduction to Anthropology: Cultural Anthropology and Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 140</td>
<td>Contemporary Moral Issues</td>
<td>3</td>
</tr>
</tbody>
</table>

### Additional Required Courses (to be taken after first and introductory courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMN 120</td>
<td>America in Perspective or other women’s studies–related course for the curriculum</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 200</td>
<td>International Political Relations or other ANTH, BEHS, ECON, GEOG, GVPT, PSYC, SOCY, or eligible AASP, CCJS, GERO, or WMST course to fulfill the first behavioral and social sciences requirement</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 250</td>
<td>Introduction to Literature by Women or other women’s studies–related course for the curriculum</td>
<td>3</td>
</tr>
</tbody>
</table>

### Total credits for AA with women’s studies specialization

| Total        | 60 |
Certificate Programs

To help nontraditional students meet their educational goals, UMUC offers a full range of certificate programs that respond to current trends in today’s demanding job market. Certificate programs offer working adults a convenient, flexible way to earn credentials for career advancement. Many programs are available online.

The undergraduate certificate programs generally require 16 to 21 credits (except for the certificate in Paralegal Studies, which requires 60 credits). All courses for the certificate programs carry college credit and may be applied toward a degree.

<table>
<thead>
<tr>
<th>CURRICULA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting—Introductory</td>
</tr>
<tr>
<td>Accounting—Advanced</td>
</tr>
<tr>
<td>Bio-Security</td>
</tr>
<tr>
<td>Business Project Management</td>
</tr>
<tr>
<td>Computer Applications</td>
</tr>
<tr>
<td>Computer Graphics and Design</td>
</tr>
<tr>
<td>Computer Networking</td>
</tr>
<tr>
<td>Correctional Administration</td>
</tr>
<tr>
<td>Customer Service Communications</td>
</tr>
<tr>
<td>Customer Service Management</td>
</tr>
<tr>
<td>Database Design and Implementation</td>
</tr>
<tr>
<td>Database Management</td>
</tr>
<tr>
<td>Desktop Publishing</td>
</tr>
<tr>
<td>E-Commerce in Small Business</td>
</tr>
<tr>
<td>E-Commerce Management</td>
</tr>
<tr>
<td>Environmental and Occupational Health and Safety Management</td>
</tr>
<tr>
<td>Financial Management</td>
</tr>
<tr>
<td>Gerontology</td>
</tr>
<tr>
<td>Human Resource Management</td>
</tr>
<tr>
<td>Information Assurance</td>
</tr>
<tr>
<td>Information Management</td>
</tr>
<tr>
<td>Internet Technologies</td>
</tr>
<tr>
<td>Laboratory Management</td>
</tr>
<tr>
<td>Management Foundations</td>
</tr>
<tr>
<td>Negotiation and Conflict Management</td>
</tr>
<tr>
<td>Object-Oriented Design and Programming</td>
</tr>
<tr>
<td>Object-Oriented Programming Using Java</td>
</tr>
<tr>
<td>Paralegal Studies</td>
</tr>
<tr>
<td>Project Management for IT Professionals</td>
</tr>
<tr>
<td>Public Fire-Protection Management and Administration</td>
</tr>
<tr>
<td>Security Management</td>
</tr>
<tr>
<td>Security Operations</td>
</tr>
<tr>
<td>Software Engineering</td>
</tr>
<tr>
<td>Systems Approach to Fire Safety</td>
</tr>
<tr>
<td>Technology and Management</td>
</tr>
<tr>
<td>Terrorism and Institutions: Prevention and Response</td>
</tr>
<tr>
<td>UNIX System Administration</td>
</tr>
<tr>
<td>Visual Basic Programming</td>
</tr>
<tr>
<td>Web Design</td>
</tr>
<tr>
<td>Web Programming</td>
</tr>
<tr>
<td>Women in Business</td>
</tr>
<tr>
<td>Workplace Communications</td>
</tr>
<tr>
<td>Workplace Spanish</td>
</tr>
</tbody>
</table>

**REQUIREMENTS**

- Students pursuing certificate programs must be admitted as UMUC students.
- Students are responsible for notifying UMUC of their intention to complete certificate work before completion of their last course. (The application is available at [https://my.umuc.edu](https://my.umuc.edu).)
- Students may pursue a degree and certificate simultaneously or pursue a degree after completing the certificate, but the application for any certificate completed while in progress toward the bachelor's degree must be submitted before award of the bachelor's degree.
- Students may not use the same course toward completion of more than one certificate. In cases where the same course is required for two certificates, the student must replace that course with an approved substitute for the second certificate.
- No more than half of the total credits for any certificate may be earned through credit by examination, prior-learning portfolio credit, internship/cooperative education credit, or transfer credit from other schools.
- Certificates consisting primarily of upper-level coursework may assume prior study in that area. Students should check prerequisites for certificate courses. Prerequisites for certificate courses may be satisfied by coursework, credit by examination, or prior-learning portfolio credit, under current policies for such credit.
- At least half of the total credits for any certificate must be earned through graded coursework.
- Students must complete all required coursework for the certificate with a minimum grade of C in all courses. Certificate courses may not be taken pass/fail.

The individual certificate coursework requirements specified in the following section are applicable to students enrolling on or after August 1, 2006. However, should certificate requirements change, students must either complete these requirements within two years of the change or fulfill the new requirements.
CERTIFICATE PROGRAMS

CERTIFICATE DESCRIPTIONS

Unless otherwise specified or necessitated by prerequisites, course sequences for each certificate suggest but do not require that courses be taken in a prescribed order.

Accounting—Introductory

The introductory accounting certificate is designed to meet the needs of nonaccounting personnel and managers who feel they require knowledge of accounting to advance in their professions. It can also be used by individuals who are interested in pursuing new careers in accounting and need to learn the major elements. Students without a background in economics, basic mathematics, and statistics are encouraged to take courses in those subjects before starting the certificate program. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in accounting.

Accounting—Introductory Certificate Requirements Credits

| Five required courses: | 
|-----------------------|--------------------------------------------------|
| ACCT 220              | Principles of Accounting I                      | 3 |
| ACCT 221              | Principles of Accounting II                      | 3 |
| ACCT 321              | Cost Accounting                                  | 3 |
| ACCT 323              | Taxation of Individuals                          | 3 |
| ACCT 328              | Accounting Software                              | 3 |

One supporting elective chosen from the following: 3

| ACCT 326 | Accounting Information Systems
| ACCT 411 | Ethics and Professionalism in Accounting
| ACCT 417 | Taxation of Corporations and Other Entities
| ACCT 422 | Auditing Theory and Practice
| ACCT 425 | International Accounting
| BMGT 340 | Business Finance
| BMGT 341 | Finance for the Nonfinancial Manager

Total credits for certificate in Accounting—Introductory 18

Accounting—Advanced

The advanced accounting certificate is designed to meet the needs of accounting professionals who want to enhance their accounting skills. In addition to course prerequisites, students are encouraged to take courses in economics, basic mathematics, and statistics before starting the certificate program. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in accounting.

Accounting—Advanced Certificate Requirements Credits

| Four required courses: | 
|-----------------------|--------------------------------------------------|
| ACCT 310              | Intermediate Accounting I                       | 3 |
| ACCT 311              | Intermediate Accounting II                       | 3 |
| ACCT 417              | Taxation of Corporations and Other Entities      | 3 |
| ACCT 422              | Auditing Theory and Practice                     | 3 |

A supporting elective chosen from the following: 3

| ACCT 321 | Cost Accounting
| ACCT 323 | Taxation of Individuals
| ACCT 326 | Accounting Information Systems
| ACCT 410 | Accounting for Government and Not-for-Profit Organizations
| ACCT 411 | Ethics and Professionalism in Accounting
| ACCT 424 | Advanced Accounting
| ACCT 425 | International Accounting
| ACCT 426 | Advanced Cost Accounting
| ACCT 436 | Internal Auditing
| BMGT 340 | Business Finance

A second supporting elective chosen from the above list 3

Total credits for certificate in Accounting—Advanced 18

Bio-Security

The bio-security certificate provides a foundation in the basic scientific and managerial principles required to deal with infectious outbreaks and contamination in the context of terrorist acts. It is useful for public health and safety administrators and officers, epidemiologists, emergency management personnel, and biological surveillance and decontamination professionals in today’s society. Students acquire scientific knowledge of the structure, function, and infectious nature of microorganisms; the ability of microorganisms to be genetically manipulated; and the factors contributing to the re-emergence of once eradicated infectious agents. Students also gain an understanding of the institutional and emergency management, investigative, and communication principles associated with effective preparation for and response to bioterrorism incidents. With appropriate choice of major and elective courses, this certificate may be completed while pursuing the Bachelor of Technical and Professional Studies in biotechnology.
Bio-Security Certificate
Requirements

A supporting elective chosen from the following: 3
ACCT 220 Principles of Accounting I
ACCT 221 Principles of Accounting II
BMGT 304 Managing E-Commerce in Organizations
BMGT 317 Problem Solving for Managers
BMGT 339 Government and Business Contracting
BMGT 340 Business Finance
BMGT 346 Risk Management
BMGT 366 Managing in the Public Sector
COMM 492 Grant and Proposal Writing
HRMN 363 Negotiation Strategies

A second supporting elective chosen from the above list 3
A third supporting elective chosen from the above list 3

Total credits for certificate in Bio-Security 18

Business Project Management

The business project management certificate prepares students for supervisory and midlevel management positions involving project management and team management. It enables project managers, project team members, and other employees assigned to project teams within a private- or public-sector organization to upgrade their skills with the theory and practical knowledge to advance to a higher level.

Business Project Management
Certificate Requirements

Three required courses:
BMGT 484 Managing Teams in Organizations 3
BMGT 487 Project Management I 3
BMGT 488 Project Management II 3

A second supporting elective chosen from the above list 3

Total credits for certificate in Business Project Management 18
## Computer Graphics and Design

The computer graphics and design certificate is for students who seek to develop design and composition skills in a computer environment. Emphasis is on integrating effective design principles with Internet applications and mixed media.

### Computer Graphics and Design Certificate Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTT 250</td>
<td>Elements of Commercial Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTT 354</td>
<td>Elements of Computer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>ARTT 479</td>
<td>Advanced Computer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>CMST 386</td>
<td>Internet: An Advanced Guide</td>
<td>3</td>
</tr>
</tbody>
</table>

**A supporting elective chosen from the following:**

- CMST 310 Desktop Publishing
- CMST 311 Advanced Desktop Publishing
- CMST 450 Web Design Methodology and Technology
- CMST 493 Graphics/Text Integration

**A second supporting elective chosen from the above list**

**Total credits for certificate in Computer Graphics and Design** 18

## Computer Networking

The computer networking certificate is appropriate for students who want to work as network administrators for a business, government agency, or nonprofit organization. The program provides hands-on training in state-of-the-art computer technology. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in computer information technology.

### Computer Networking Certificate Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIT 265</td>
<td>Networking Essentials</td>
<td>3</td>
</tr>
<tr>
<td>CMIT 368</td>
<td>Windows Server 2003</td>
<td>3</td>
</tr>
<tr>
<td>CMIT 376</td>
<td>Windows Network Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>CMIT 377</td>
<td>Windows Directory Services Infrastructure</td>
<td>3</td>
</tr>
</tbody>
</table>

**A supporting elective chosen from the following:**

- CMIT 320 Network Security
- CMIT 350 Interconnecting Cisco Devices
- CMIT 480 Designing Security for a Windows Network
- CMIT 499W Wireless Network Administration

**A second supporting elective chosen from the above list**

**Total credits for certificate in Computer Networking** 18

## Correctional Administration

The certificate in correctional administration is designed to prepare students to work in adult, juvenile, and community corrections. The program considers emerging legal and ethical issues relating to offenders and correctional staff and emerging best practices for maintaining constitutionally sound environments. With appropriate choice of major and elective courses, this certificate may be completed while pursuing the Bachelor of Science in criminal justice.

### Correctional Administration Certificate Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJS 105</td>
<td>Introduction to Criminology</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 497</td>
<td>Correctional Administration</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 431</td>
<td>Legal and Ethical Issues in Corrections</td>
<td>3</td>
</tr>
</tbody>
</table>

**A supporting elective chosen from the following:**

- CCJS 350 Juvenile Delinquency
- CCJS 432 Law of Corrections
- CCJS 433 Communicating in the Correctional Culture
- CCJS 461 Psychology of Criminal Behavior
- CCJS 486A Internship in Criminal Justice Through Co-op

**A second supporting elective chosen from the above list**

**A third supporting elective chosen from the above list**

**Total credits for certificate in Correctional Administration** 18
Customer Service Communications

The certificate in customer service communications combines courses in communications and customer service with technological skills to prepare students for careers with management potential in such technology-related customer service areas as marketing, testing, planning, training, and customer assistance. Emphasis is on applying continuous improvement principles to communication between the customer and the organization and on honing the ability to communicate technical information to nontechnical audiences.

Note: Courses assume some basic knowledge of computers and business. Students without previous computer experience should first take CMST 103 Introduction to Microcomputer Software or IFSM 201 Introduction to Computer-Based Systems. Students with no work experience should take BMGT 110 Introduction to Business and Management.

Customer Service Communications
Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 385</td>
<td>Internet: A Practical Guide</td>
<td>3</td>
</tr>
<tr>
<td>COMM 393/393X</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 303</td>
<td>Human Factors in Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MRKT 395</td>
<td>Customer Service Management</td>
<td>3</td>
</tr>
<tr>
<td>MRKT 396</td>
<td>Customer Consultation and Needs Analysis</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 397</td>
<td>Organizational Presentations</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for certificate in Customer Service Communications 18

Customer Service Management

The customer service management certificate prepares students for supervisory and midlevel management positions in customer service and customer relations. It provides both e-commerce and team-management skills. The program allows customer service/customer relations employees working in public- and private-sector organizations to upgrade their knowledge and skills in relation to key organizational, management, and customer issues.

Customer Service Management
Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGT 484</td>
<td>Managing Teams in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 487</td>
<td>Project Management I</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 488</td>
<td>Project Management II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 495</td>
<td>Seminar in Workplace Communication</td>
<td>3</td>
</tr>
<tr>
<td>MRKT 395</td>
<td>Customer Service Management</td>
<td>3</td>
</tr>
<tr>
<td>MRKT 396</td>
<td>Customer Consultation and Needs Analysis</td>
<td>3</td>
</tr>
<tr>
<td>A supporting elective chosen from the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMGT 317</td>
<td>Problem Solving for Managers</td>
<td></td>
</tr>
<tr>
<td>HRMN 363</td>
<td>Negotiation Strategies</td>
<td></td>
</tr>
<tr>
<td>HRMN 365</td>
<td>Conflict Management in Organizations</td>
<td></td>
</tr>
<tr>
<td>MRKT 310</td>
<td>Marketing Principles and Organization</td>
<td></td>
</tr>
<tr>
<td>MRKT 318</td>
<td>Exploring Internet Marketing</td>
<td></td>
</tr>
<tr>
<td>MRKT 457</td>
<td>Using Web-Enhanced Marketing Techniques</td>
<td></td>
</tr>
</tbody>
</table>

Total credits for certificate in Customer Service Management 19

Database Design and Implementation

The certificate in database design and implementation is appropriate for technical professionals who want to work as advanced users or database designers or administrators. Students are taught Structured Query Language (SQL) and learn about issues in database design and implementation. With appropriate choice of major and elective courses, this certificate may be completed while pursuing the Bachelor of Science in computer studies or in computer and information science.

Database Design and Implementation
Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 160</td>
<td>Discrete Mathematics for Computing</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 320</td>
<td>Relational Databases</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 420</td>
<td>Advanced Relational Databases</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 485</td>
<td>Web Database Development</td>
<td>3</td>
</tr>
<tr>
<td>A supporting elective chosen from the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMIS 355</td>
<td>Database Forms</td>
<td></td>
</tr>
<tr>
<td>CMIS 375</td>
<td>Programming in Perl</td>
<td></td>
</tr>
<tr>
<td>CMST 385</td>
<td>Internet: A Practical Guide</td>
<td></td>
</tr>
</tbody>
</table>

Total credits for certificate in Database Design and Implementation 18
Database Management

The database management certificate offers an introduction to the design and management of database systems in a business environment. In-depth practice in the use of Structured Query Language (SQL) is provided in the context of business-related case studies. The program covers advanced database concepts, including database administration, database technology, and selection and acquisition of database management systems. Supporting elective courses include database mining and the systems analysis required to begin developing the information technology (IT) infrastructure in a business environment. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in computer studies.

Database Management
Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 102</td>
<td>Introduction to Problem Solving and Algorithm Design</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 102A</td>
<td>Fundamentals of Programming I</td>
<td>3</td>
</tr>
<tr>
<td>CMST 306</td>
<td>Introduction to Visual Basic .NET Programming or previous workplace experience with C, C++, Visual Basic, Ada, COBOL, or another high-level language plus an additional supporting elective from the list below</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 410</td>
<td>Database Concepts</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 411</td>
<td>SQL</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 420</td>
<td>Advanced Database Concepts</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 485</td>
<td>Web Database Development</td>
<td>3</td>
</tr>
<tr>
<td>CMIT 361</td>
<td>Developing PL/SQL Applications</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 304</td>
<td>Ethics in the Information Age</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 461</td>
<td>Systems Analysis and Design</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for certificate in Database Management 18

E-Commerce in Small Business

The e-commerce in small business certificate prepares entrepreneurs and managers of small businesses to utilize e-commerce for entrepreneurial ventures. It helps them consider the implementation issues associated with strategy, planning, organizational structure, supportive organizational culture, operations, hardware and software, control systems, customer service infrastructure, and administrative support systems. It enables entrepreneurs, small-business owners, non-IT managers, and others in small business to upgrade their skills with the theory and practical knowledge necessary for organizing e-commerce efforts within a small business.

Desktop Publishing

The desktop publishing certificate is designed for entry-level personnel whose goal is to become proficient using popular software programs in desktop publishing. It includes study of both desktop publishing techniques and design elements.

Desktop Publishing
Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 310</td>
<td>Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>ARTT 354</td>
<td>Elements of Computer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>COMM 493</td>
<td>Graphics/Text Integration</td>
<td>3</td>
</tr>
<tr>
<td>CMST 311</td>
<td>Advanced Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 201</td>
<td>Introduction to Computer-Based Systems</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 278F</td>
<td>Introduction to Principles of Text Editing</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for certificate in Desktop Publishing 18

Total credits for certificate in Database Management 18
Environmental and Occupational Health and Safety Management

The certificate in environmental and occupational health and safety management provides environmental and business personnel the education they need to manage health and safety issues effectively. Students learn to recognize and appreciate the characteristics of hazardous materials; address the health and safety issues in a cost-effective way; understand and apply federal, state, and local health and safety regulations; and communicate risk and be prepared for emergencies. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in environmental management.

<table>
<thead>
<tr>
<th>Environmental and Occupational Health and Safety Management Certificate Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENMT 303 Environmental Regulations and Policy</td>
<td>3</td>
</tr>
<tr>
<td>ENMT 305 Hazardous Materials Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>ENMT 310 Emergency Planning and Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>ENMT 321 Environmental Health</td>
<td>3</td>
</tr>
<tr>
<td>ENMT 322 Occupational Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>ENMT 340 Environmental Technology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total credits for certificate in Environmental and Occupational Health and Safety Management</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Financial Management

The financial management certificate is designed to meet the needs of new financial managers, other managers who feel they require greater knowledge of finance to advance in their professions, individuals interested in pursuing new careers in financial management, and financial management professionals who want to upgrade their skills. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in finance.

<table>
<thead>
<tr>
<th>Financial Management Certificate Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGT 411 Business Performance</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 412 Business Evaluation and Reengineering</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 487 Project Management I</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 488 Project Management II</td>
<td>3</td>
</tr>
<tr>
<td>MRKT 318 Exploring Internet Marketing</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total credits for certificate in Financial Management</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>
Gerontology

The gerontology certificate is designed for students who seek the knowledge and skills necessary to effectively work with older adults in a variety of roles. The certificate integrates gerontological knowledge and skills from the fields of health/biology, sociology, psychology, and policy/services and provides the opportunity to apply these skills to work with older adults. The certificate includes two options: one that helps students seeking a bachelor’s degree in another area to integrate gerontology knowledge with knowledge in their major area of academic study and one that is vocationally oriented for students not seeking a higher education degree. Through a practicum or Co-op experience, students work with professionals to apply knowledge acquired through coursework to practical experience with aging individuals or aging issues in different settings that address the needs of older adults (e.g., assisted living centers, retirement communities, nursing homes, hospitals, senior centers, companies producing products and services for seniors, or area agencies on aging).

Financial Management
Certificate Requirements

A finance course chosen from the following: 3
- BMGT 340 Business Finance
- BMGT 341 Finance for the Nonfinancial Manager

Four required courses:
- BMGT 343 Investments 3
- BMGT 346 Risk Management 3
- BMGT 440 Financial Management 3
- BMGT 446 International Finance 3

A supporting elective chosen from the following: 3
- ACCT 301 Accounting for Nonaccounting Managers
- BMGT 342 Fundamentals of Building Wealth
- BMGT 345 Property and Liability Insurance
- BMGT 347 Life Insurance
- BMGT 443 Security Analysis and Valuation
- BMGT 444 Futures Contracts and Options
- BMGT 445 Commercial Bank Management

Total credits for certificate in Financial Management 18

Human Resource Management

The human resource management certificate prepares students for supervisory and midlevel management positions in human resource management and enables employees in public- and private-sector organizations to upgrade their skills with the theory and practical knowledge necessary to advance to a higher level. The certificate prepares the student for the Professional in Human Resources (PHR) and Senior Professional in Human Resources (SPHR) certification examinations. With appropriate choice of major and elective courses, this certificate may be completed while pursuing the Bachelor of Science in human resource management.
Human Resource Management
Certificate Requirements Credits
Three required courses:
BMGT 364 Management and Organization Theory 3
HRMN 300 Human Resource Management 3
HRMN 400 Human Resource Management: Analysis and Problems 3
A labor management course chosen from the following: 3
HRMN 362 Labor Relations
HRMN 365 Conflict Management in Organizations
A supporting elective chosen from the following: 3
BMGT 391 Motivation, Performance, and Productivity
BMGT 464 Organizational Behavior
BMGT 465 Organization Development and Change
BMGT 484 Managing Teams in Organizations
HRMN 367 Organizational Culture
HRMN 390 Contemporary Compensation Management
HRMN 406 Employee Training and Development
HRMN 463 Public-Sector Labor Relations
HRMN 495 Contemporary Issues in Human Resource Management Practice
A second supporting elective chosen from the above list 3

Total credits for certificate in Human Resource Management 18

Information Assurance
Certificate Requirements Credits
Two required courses:
IFSM 430 Information Systems and Security 3
IFSM 450 Telecommunication Systems in Management 3
A supporting elective chosen from the following: 3
IFSM 431 Policy Planning for Security Architects
IFSM 432 Disaster Recovery Planning
IFSM 433 Information Security Needs Assessment and Planning
IFSM 435 Information Security and E-Commerce
IFSM 454 Information System Security Mechanisms
IFSM 457 Cyberterrorism
IFSM 459 Security Issues and Emerging Technologies
A second supporting elective chosen from the above list 3
A third supporting elective chosen from the above list 3
A fourth supporting elective chosen from the above list 3

Total credits for certificate in Information Assurance 18

Information Assurance
Certificate Requirements Credits
Two required courses:
IFSM 430 Information Systems and Security 3
IFSM 450 Telecommunication Systems in Management 3
A supporting elective chosen from the following: 3
IFSM 431 Policy Planning for Security Architects
IFSM 432 Disaster Recovery Planning
IFSM 433 Information Security Needs Assessment and Planning
IFSM 435 Information Security and E-Commerce
IFSM 454 Information System Security Mechanisms
IFSM 457 Cyberterrorism
IFSM 459 Security Issues and Emerging Technologies
A second supporting elective chosen from the above list 3
A third supporting elective chosen from the above list 3
A fourth supporting elective chosen from the above list 3

Total credits for certificate in Information Assurance 18

Information Management
The information management certificate offers an overview of information systems, their role in organizations, and the relation of information systems to the objectives and structure of an organization. An introduction to the design and management of database systems in a business environment is provided. A study of the methods used in analyzing information needs and specifying application system requirements is complemented with a study of the concepts and techniques used in specifying the physical design of the targeted system. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in information systems management.
Laboratory Management

The laboratory management certificate helps prepare science professionals for roles as managers in research and development laboratories in the basic sciences. It focuses on management and communication skills appropriate for the lab setting. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Technical and Professional Studies in laboratory management.

Laboratory Management
Certificate Requirements Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSCI 301</td>
<td>Laboratory Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>COMM 393</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 300</td>
<td>Information Systems in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 487</td>
<td>Project Management I</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 488</td>
<td>Project Management II</td>
<td>3</td>
</tr>
<tr>
<td>A supporting elective chosen from the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEHS 398L</td>
<td>Introduction to Mediation</td>
<td></td>
</tr>
<tr>
<td>BMGT 305</td>
<td>Knowledge Management</td>
<td></td>
</tr>
<tr>
<td>HRMN 363</td>
<td>Negotiation Strategies</td>
<td></td>
</tr>
<tr>
<td>PSYC 308E</td>
<td>Psychology of Motivating People at Work</td>
<td></td>
</tr>
<tr>
<td>PSYC 309K</td>
<td>Managing Interpersonal Stress and Conflict</td>
<td></td>
</tr>
<tr>
<td>SPCH 426</td>
<td>Negotiation and Conflict Management</td>
<td></td>
</tr>
<tr>
<td>SPCH 482</td>
<td>Intercultural Communication</td>
<td></td>
</tr>
</tbody>
</table>

Total credits for certificate in Laboratory Management 16

Management Foundations

The management foundations certificate prepares students for supervisory and midlevel management positions and enables employees in public- and private-sector organizations to upgrade their skills with the theory and practical knowledge necessary to advance to a higher level. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in business administration.

Management Foundations
Certificate Requirements Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFSM 300</td>
<td>Information Systems in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 364</td>
<td>Management and Organization Theory</td>
<td>3</td>
</tr>
<tr>
<td>MRKT 310</td>
<td>Marketing Principles and Organization</td>
<td>3</td>
</tr>
<tr>
<td>HRMN 300</td>
<td>Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>A second supporting elective chosen from the above list:</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for certificate in Management Foundations 18

Internet Technologies

The Internet technologies certificate is designed to provide an introduction to Internet applications and their design and development. Hands-on experience is provided in Web site management and design, with an emphasis on subject-related projects.

Internet Technologies
Certificate Requirements Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 385</td>
<td>Internet: A Practical Guide</td>
<td>3</td>
</tr>
<tr>
<td>CMST 386</td>
<td>Internet: An Advanced Guide</td>
<td>3</td>
</tr>
<tr>
<td>CMST 430</td>
<td>Web Site Management</td>
<td>3</td>
</tr>
<tr>
<td>CMST 450</td>
<td>Web Design Methodology and Technology</td>
<td>3</td>
</tr>
<tr>
<td>A supporting elective chosen from the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMIS 241</td>
<td>Data Structures and Abstraction</td>
<td></td>
</tr>
<tr>
<td>CMIS 340</td>
<td>Programming in Java</td>
<td></td>
</tr>
<tr>
<td>CMIS 345</td>
<td>Object-Oriented Design and Programming</td>
<td></td>
</tr>
<tr>
<td>CMIS 375</td>
<td>Programming in Perl</td>
<td></td>
</tr>
<tr>
<td>CMSC 480</td>
<td>Advanced Programming in Java</td>
<td></td>
</tr>
<tr>
<td>CMST 498F</td>
<td>Web Application Development Using ColdFusion</td>
<td></td>
</tr>
<tr>
<td>IFSM 390</td>
<td>Multimedia Design and Evaluation for Information Systems Managers</td>
<td></td>
</tr>
<tr>
<td>IFSM 455</td>
<td>IT Infrastructure of E-Commerce</td>
<td></td>
</tr>
</tbody>
</table>

Total credits for certificate in Internet Technologies 18
Object-Oriented Design and Programming

The certificate in object-oriented design and programming is appropriate for technical professionals who will be working as programmer/analysts or application developers. Students are taught introductory and advanced features of object-oriented languages, as well as program design concepts. Students should check course descriptions to ensure that they have taken all prerequisites for each course. With appropriate choice of major and elective courses, this certificate may be completed while pursuing the Bachelor of Science in computer and information science.

Object-Oriented Design and Programming
Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 141</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 241</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 345</td>
<td>3</td>
</tr>
</tbody>
</table>

A supporting elective chosen from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 330</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 340</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 430</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 440</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 455</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 460</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 465</td>
<td>3</td>
</tr>
</tbody>
</table>

A second supporting elective chosen from the above list

A third supporting elective chosen from the above list

Total credits for certificate in Object-Oriented Design and Programming 18

Object-Oriented Programming Using Java

The certificate in object-oriented programming using Java is designed for technically oriented professionals who need a deep understanding of how to develop and write programs in the Java programming language. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in computer science.

Negotiation and Conflict Management

The interdisciplinary certificate in negotiation and conflict management is designed for middle managers, customer service personnel, union stewards, work team representatives, contract managers, negotiators, and others whose jobs involve resolving differences between individuals and groups. They may assist in resolving differences in work teams, handle employee disputes, facilitate community discussions where broad differences are likely, assist in negotiating labor differences and contracts, or mediate disputes as an alternative to costly legal confrontations. The goal is to provide students with an understanding of group dynamics, problem solving, team building, and communication strategies that can lead to the effective resolution of conflicts. With appropriate choice of major and elective courses, this certificate may be completed while pursuing the Bachelor of Arts in communication studies.

Negotiation and Conflict Management
Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 345</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 420</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 426</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 470</td>
<td>3</td>
</tr>
<tr>
<td>LGST 327</td>
<td>3</td>
</tr>
</tbody>
</table>

A supporting elective chosen from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGT 317</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 484</td>
<td>3</td>
</tr>
<tr>
<td>HRMN 362</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 472</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 482</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for certificate in Negotiation and Conflict Management 18
### Object-Oriented Programming Using Java

<table>
<thead>
<tr>
<th>Certificate Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four required courses:</td>
<td></td>
</tr>
<tr>
<td>CMSC 130 Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 150 Introduction to Discrete Structures</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 230 Computer Science II</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 335 Object-Oriented and Concurrent Programming</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 420 Advanced Data Structures and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CMSC 480 Advanced Programming in Java</td>
<td>3</td>
</tr>
<tr>
<td>Total credits for certificate in Object-Oriented Programming Using Java</td>
<td>18</td>
</tr>
</tbody>
</table>

### Paralegal Studies

The paralegal studies certificate focuses on the legal concepts, procedures, and skills used in a wide variety of legal environments. The program addresses the organization, functions, and processes of institutions in the U.S. legal system, roles and issues in the paralegal field, legal ethics, and selected specialty areas. The curriculum emphasizes important skills, including legal analysis, communication, legal research, computer competence, legal drafting, investigation, organization, and specialized legal skills. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in legal studies. No more than 12 credits in certificate courses may be earned through transfer or prior-learning credit.

<table>
<thead>
<tr>
<th>Paralegal Studies</th>
<th>Certificate Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General education and other college coursework</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>This requirement may be fulfilled through transfer credit, and up to 30 credits may be earned through credit by examination or prior-learning portfolio credit. Total must include 18 credits in general education courses (described on p. 9) covering at least three different disciplines and ENGL 101/101X (unless the student already has earned an associate’s or bachelor’s degree before taking the first legal studies course). No more than six 1-credit courses may be applied toward this certificate.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four required legal studies courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LGST 101 Introduction to Law</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGST 200 Techniques of Legal Research</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGST 201 Legal Writing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGST 204 Legal Ethics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total credits for certificate in Paralegal Studies</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

### Project Management for IT Professionals

The certificate in project management for IT professionals offers an overview of information systems, their role in organizations, and the relationship of information systems to the objectives and structure of an organization. The planning, scheduling, and controlling of a system project during its life cycle is explored. A survey of techniques for improving the productivity of workplace practices and procedures is included. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in information systems management.

<table>
<thead>
<tr>
<th>Project Management for IT Professionals</th>
<th>Certificate Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four required courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFSM 201 Introduction to Computer-Based Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IFSM 300 Information Systems in Organizations</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IFSM 438 Project Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IFSM 461 Systems Analysis and Design</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Security Management

The security management certificate provides management training relevant to modern security organizations. It focuses on administrative, legal, and management issues related to security.

Security Management Certificate Requirements

Five required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJS 357</td>
<td>Industrial and Retail Security Administration</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 430</td>
<td>Legal and Ethical Issues in Security Management</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 445</td>
<td>Introduction to Security Management</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 463</td>
<td>Security: A Management Perspective</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 486B</td>
<td>Internship in Criminal Justice Through Co-op</td>
<td>6</td>
</tr>
</tbody>
</table>

Total credits for certificate in Security Management: 18

A supporting elective chosen from the following:

- IFSM 302 Workplace Productivity
- IFSM 303 Human Factors in Information Systems
- IFSM 304 Ethics in the Information Age
- IFSM 390 Multimedia Design and Evaluation for Information Systems Managers
- IFSM 430 Information Systems and Security
- IFSM 455 IT Infrastructure of E-Commerce

A second supporting elective chosen from the above list: 3

Security Operations

The security operations certificate provides training in current practice in commercial and government security. Focus is on recognition of security threats and protection of assets.

Security Operations Certificate Requirements

Five required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJS 496</td>
<td>Computer Crime and Security</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 491</td>
<td>Institutional Security</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 462</td>
<td>Protection of Business Assets</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 399H</td>
<td>Counterterrorism</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 486B</td>
<td>Internship in Criminal Justice Through Co-op</td>
<td>6</td>
</tr>
</tbody>
</table>

Total credits for certificate in Security Operations: 18

Public Fire-Protection Management and Administration

The public fire-protection management and administration certificate prepares students for supervisory and midlevel positions in public fire service management. It also enables employees in public fire-protection organizations to enhance their skills with the administrative, management, planning, and legal knowledge necessary to advance to a higher level. With appropriate choice of courses, this certificate may be completed while pursuing the Bachelor of Science in fire science.

Public Fire-Protection Management and Administration Certificate Requirements

Six required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSCN 302</td>
<td>Advanced Fire Administration</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 304</td>
<td>Fire-Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 305</td>
<td>Fire Prevention Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 401</td>
<td>Disaster and Fire Defense Planning</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 412</td>
<td>Political and Legal Foundations of Fire Protection</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 413</td>
<td>The Community and Fire Threat</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for certificate in Public Fire-Protection Management and Administration: 18

A supporting elective chosen from the following:

- IFSM 302 Workplace Productivity
- IFSM 303 Human Factors in Information Systems
- IFSM 304 Ethics in the Information Age
- IFSM 390 Multimedia Design and Evaluation for Information Systems Managers
- IFSM 430 Information Systems and Security
- IFSM 455 IT Infrastructure of E-Commerce

A second supporting elective chosen from the above list: 3

A second supporting elective chosen from the above list: 3
Software Engineering

The software engineering certificate is intended for professionals who will be working in a team environment while developing large-scale software projects. Students learn about the methods used in the systematic design, development, testing, and maintenance of software products. They study models used to specify requirements, strategies used in software development, and methods of testing and formal verification. (Two semesters of Java or C++ programming are prerequisites to the certificate coursework.)

Software Engineering Certificate Requirements Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 330</td>
<td>Software Engineering Principles and Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 335</td>
<td>Software Safety</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 345</td>
<td>Object-Oriented Design and Programming</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 455</td>
<td>Requirements Development</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 460</td>
<td>Software Design and Development</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 465</td>
<td>Software Verification and Validation</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for certificate in Software Engineering 18

Systems Approach to Fire Safety

The systems approach to fire safety certificate prepares students for supervisory and midlevel management positions in fire safety. It also enables individuals in public- and private-sector fire safety organizations to upgrade their skills with the theory and practical knowledge necessary to advance to a higher level. With appropriate choice of major and elective courses, this certificate may be completed while pursuing the Bachelor of Science in fire science.

Systems Approach to Fire Safety Certificate Requirements Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSCN 303</td>
<td>Analytic Approaches to Public Fire Protection</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 306</td>
<td>Incendiary-Fire Analysis and Investigation</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 402</td>
<td>Fire-Related Human Behavior</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 411</td>
<td>Fire-Protection Structure and Systems Design</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 414</td>
<td>Fire Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>FSCN 415</td>
<td>Application of Fire Research</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for certificate in Systems Approach to Fire Safety 18

Technology and Management

The technology and management certificate prepares students for supervisory and midlevel management positions in technology fields and enables employees in public- and private-sector organizations to upgrade their skills with the theory and practical knowledge necessary to advance to a higher level.

Technology and Management Certificate Requirements Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGT 317</td>
<td>Problem Solving for Managers</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 487</td>
<td>Project Management I</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 488</td>
<td>Project Management II</td>
<td>3</td>
</tr>
<tr>
<td>CMST 385</td>
<td>Internet: A Practical Guide</td>
<td>3</td>
</tr>
<tr>
<td>CMST 340</td>
<td>Computer Applications in Management</td>
<td></td>
</tr>
<tr>
<td>CMST 386</td>
<td>Internet: An Advanced Guide</td>
<td></td>
</tr>
<tr>
<td>IFSM 390</td>
<td>Multimedia Design and Evaluation for Information Systems Managers</td>
<td></td>
</tr>
<tr>
<td>IFSM 461</td>
<td>Systems Analysis and Design</td>
<td></td>
</tr>
</tbody>
</table>

A second supporting elective chosen from the above list 3

Total credits for certificate in Technology and Management 18

Terrorism and Institutions: Prevention and Response

The certificate in terrorism and institutions explores how institutions confront terrorism and the aftermath of terrorist acts. Institutions examined include government agencies, private security organizations, schools, and commercial enterprises. The certificate addresses emerging terrorist threats and the institutional response to terrorist acts. It can benefit security individuals who are in charge of protecting government facilities, private security agency employees, police officers, detective agents, public health and public safety administrators and officers, counterterrorism professionals, and the general public.
## UNIX System Administration

The UNIX system administration certificate is designed to provide an understanding of the UNIX operating system, its maintenance and security, and related theory and implementation issues.

### UNIX System Administration Certificate Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 141</td>
<td>Introductory Programming</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 325</td>
<td>UNIX with Shell Programming</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 375</td>
<td>Programming in Perl</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 415</td>
<td>Advanced UNIX and C</td>
<td>3</td>
</tr>
<tr>
<td>CMT 391</td>
<td>UNIX/Linux System Administration</td>
<td>3</td>
</tr>
<tr>
<td>CMT 491</td>
<td>Advanced UNIX/Linux System Administration</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total credits for certificate in UNIX System Administration:** 18

## Terrorism and Institutions: Prevention and Response

### Terrorism and Institutions: Prevention and Response Certificate Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJS 491</td>
<td>Institutional Security</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 401A</td>
<td>International Political Terrorism</td>
<td>3</td>
</tr>
<tr>
<td>GVPT 498X</td>
<td>Terrorism, Antiterrorism, and Prevention Laws</td>
<td>3</td>
</tr>
</tbody>
</table>

An institutional response elective chosen from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVPT 240</td>
<td>Political Ideologies</td>
</tr>
<tr>
<td>GVPT 399H</td>
<td>Counterterrorism</td>
</tr>
<tr>
<td>GVPT 401B</td>
<td>State Terrorism</td>
</tr>
<tr>
<td>GVPT 401C</td>
<td>Urban Terrorism</td>
</tr>
<tr>
<td>HIST 319A</td>
<td>History of Terrorism</td>
</tr>
<tr>
<td>PSYC 386</td>
<td>Psychology of Stress</td>
</tr>
</tbody>
</table>

A specialized supporting elective chosen from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJS 462</td>
<td>Protection of Business Assets</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 463</td>
<td>Security: A Management Perspective</td>
<td></td>
</tr>
<tr>
<td>ENMT 305</td>
<td>Hazardous Materials Toxicology Management</td>
<td></td>
</tr>
<tr>
<td>ENMT 310</td>
<td>Emergency Planning and Operations</td>
<td></td>
</tr>
<tr>
<td>FSCN 306</td>
<td>Incendiary-Fire Analysis and Investigation</td>
<td></td>
</tr>
<tr>
<td>FSCN 401</td>
<td>Disaster and Fire Defense Planning</td>
<td></td>
</tr>
<tr>
<td>CCJS 496</td>
<td>Computer Crime and Security</td>
<td></td>
</tr>
<tr>
<td>CMIS 335</td>
<td>Software Safety</td>
<td></td>
</tr>
<tr>
<td>IFSM 432</td>
<td>Disaster Recovery Planning</td>
<td></td>
</tr>
</tbody>
</table>

A second specialized supporting list chosen from the above list

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJS 462</td>
<td>Protection of Business Assets</td>
<td>3</td>
</tr>
<tr>
<td>CCJS 463</td>
<td>Security: A Management Perspective</td>
<td></td>
</tr>
<tr>
<td>ENMT 305</td>
<td>Hazardous Materials Toxicology Management</td>
<td></td>
</tr>
<tr>
<td>ENMT 310</td>
<td>Emergency Planning and Operations</td>
<td></td>
</tr>
<tr>
<td>FSCN 306</td>
<td>Incendiary-Fire Analysis and Investigation</td>
<td></td>
</tr>
<tr>
<td>FSCN 401</td>
<td>Disaster and Fire Defense Planning</td>
<td></td>
</tr>
<tr>
<td>CCJS 496</td>
<td>Computer Crime and Security</td>
<td></td>
</tr>
<tr>
<td>CMIS 335</td>
<td>Software Safety</td>
<td></td>
</tr>
<tr>
<td>IFSM 432</td>
<td>Disaster Recovery Planning</td>
<td></td>
</tr>
</tbody>
</table>

**Total credits for certificate in Terrorism and Institutions: Prevention and Response:** 18

## Visual Basic Programming

The Visual Basic programming certificate is designed for students seeking entry-level programming positions. Hands-on experience using Visual Basic software is provided. With appropriate choice of major and elective courses, this certificate may be completed while pursuing the Bachelor of Science in computer studies.

### Visual Basic Programming Certificate Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 102</td>
<td>Introduction to Problem Solving and Algorithm Design</td>
<td>3</td>
</tr>
<tr>
<td>CMST 306</td>
<td>Introduction to Visual Basic .NET Programming</td>
<td>3</td>
</tr>
<tr>
<td>CMST 416</td>
<td>Advanced Visual Basic .NET Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

A computer systems course chosen from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 310</td>
<td>Computer Systems and Architecture</td>
<td></td>
</tr>
<tr>
<td>IFSM 310</td>
<td>Software and Hardware Concepts</td>
<td></td>
</tr>
</tbody>
</table>

A supporting elective chosen from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 241</td>
<td>Data Structures and Abstraction</td>
<td></td>
</tr>
<tr>
<td>CMIS 340</td>
<td>Programming in Java</td>
<td></td>
</tr>
<tr>
<td>CMIS 345</td>
<td>Object-Oriented Design and Programming</td>
<td></td>
</tr>
<tr>
<td>CMSC 480</td>
<td>Advanced Programming in Java</td>
<td></td>
</tr>
<tr>
<td>CMST 385</td>
<td>Internet: A Practical Guide</td>
<td></td>
</tr>
<tr>
<td>CMST 386</td>
<td>Internet: An Advanced Guide</td>
<td></td>
</tr>
<tr>
<td>IFSM 410</td>
<td>Database Concepts</td>
<td></td>
</tr>
<tr>
<td>IFSM 420</td>
<td>Advanced Database Concepts</td>
<td></td>
</tr>
<tr>
<td>IFSM 455</td>
<td>IT Infrastructure of E-Commerce</td>
<td></td>
</tr>
</tbody>
</table>

A second supporting elective chosen from the above list

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 241</td>
<td>Data Structures and Abstraction</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 340</td>
<td>Programming in Java</td>
<td></td>
</tr>
<tr>
<td>CMIS 345</td>
<td>Object-Oriented Design and Programming</td>
<td></td>
</tr>
<tr>
<td>CMSC 480</td>
<td>Advanced Programming in Java</td>
<td></td>
</tr>
<tr>
<td>CMST 385</td>
<td>Internet: A Practical Guide</td>
<td></td>
</tr>
<tr>
<td>CMST 386</td>
<td>Internet: An Advanced Guide</td>
<td></td>
</tr>
<tr>
<td>IFSM 410</td>
<td>Database Concepts</td>
<td></td>
</tr>
<tr>
<td>IFSM 420</td>
<td>Advanced Database Concepts</td>
<td></td>
</tr>
<tr>
<td>IFSM 455</td>
<td>IT Infrastructure of E-Commerce</td>
<td></td>
</tr>
</tbody>
</table>

**Total credits for certificate in Visual Basic Programming:** 18
Web Programming

The Web programming certificate is designed for technical professionals who want to learn some of the important tools used in Web programming. Students are taught introductory and advanced features of Perl and Common Gateway Interface (CGI) programming, as well as skills in databases, UNIX, and JavaScript or Web site management and design. Students should check the course descriptions to ensure that they have taken all prerequisites for each course.

Web Programming
Certificate Requirements Credits

Three required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 141</td>
<td>Introductory Programming</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 375</td>
<td>Programming in Perl</td>
<td>3</td>
</tr>
<tr>
<td>CMIS 475</td>
<td>Advanced Programming in Perl</td>
<td>3</td>
</tr>
</tbody>
</table>

A supporting elective chosen from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIS 320</td>
<td>Relational Databases</td>
<td></td>
</tr>
<tr>
<td>CMIS 325</td>
<td>UNIX with Shell Programming</td>
<td></td>
</tr>
<tr>
<td>CMST 385</td>
<td>Internet: A Practical Guide</td>
<td></td>
</tr>
<tr>
<td>CMST 386</td>
<td>Internet: An Advanced Guide</td>
<td></td>
</tr>
<tr>
<td>CMST 430</td>
<td>Web Site Management</td>
<td></td>
</tr>
<tr>
<td>CMST 450</td>
<td>Web Design Methodology and Technology</td>
<td></td>
</tr>
<tr>
<td>IFSM 455</td>
<td>IT Infrastructure of E-Commerce</td>
<td></td>
</tr>
</tbody>
</table>

A second supporting elective chosen from the above list

A third supporting elective chosen from the above list

Total credits for certificate in Web Programming 18

Women in Business

The women in business certificate prepares students (female and male) for supervisory midlevel and senior management positions in a variety of organizational settings. The certificate focuses on business and management issues related to gender in organizations. Students with less than two years of business experience are encouraged to take BMGT 110 Introduction to Business and Management in addition to the courses listed below.

Women in Business
Certificate Requirements Credits

Four required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGT 364</td>
<td>Management and Organization Theory</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 312</td>
<td>Women in Business</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 313</td>
<td>Women as Entrepreneurs</td>
<td>3</td>
</tr>
<tr>
<td>BMGT 314</td>
<td>Women as Leaders</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for certificate in Women in Business 21
Workplace Spanish

The workplace Spanish certificate combines language and professional study to give students a language foundation that will prepare them to work and communicate in a Spanish-speaking environment.

Workplace Spanish
Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 111</td>
<td>Elementary Spanish I</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 112</td>
<td>Elementary Spanish II</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 211</td>
<td>Intermediate Spanish I</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 212</td>
<td>Intermediate Spanish II</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 318</td>
<td>Commercial and Workplace Spanish</td>
<td>4</td>
</tr>
</tbody>
</table>

Total credits for certificate in Workplace Spanish 16

Workplace Communications

The workplace communications certificate is designed to prepare students in the basics of communication vehicles and modes in the modern workplace. It introduces them to the vocabulary of the field and to the tools and techniques used to create workplace documents. With appropriate choice of major and elective courses, this certificate may be completed while pursuing the Bachelor of Arts in communication studies.

Workplace Communications
Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101/101X</td>
<td>Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>IFSM 201</td>
<td>Introduction to Computer-Based Systems</td>
<td>3</td>
</tr>
<tr>
<td>CMST 310</td>
<td>Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>COMM 495</td>
<td>Seminar in Workplace Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 393/393X</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>COMM 394/394X</td>
<td>Business Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

A writing course chosen from the following:

- COMM 393/393X Technical Writing
- COMM 394/394X Business Writing

A second supporting elective chosen from the following:

- BMGT 330 Entrepreneurship and New Venture Planning
- BMGT 365 Organizational Leadership
- BMGT 464 Organizational Behavior
- BMGT 484 Managing Teams in Organizations
- HRMN 367 Organizational Culture
- HRMN 406 Employee Training and Development
- HRMN 495 Contemporary Issues in Human Resource Management Practice
- SPCH 324 Communication and Gender

Total credits for certificate in Workplace Communications 18
Information on Courses

The Unit of Credit

The unit of credit defines the amount of university-level credit to be awarded for course completion, transfer of coursework from another institution, or evaluation of college-level prior learning. One credit is awarded on the basis of either of two sets of criteria, as follows:

• At least 15 hours (50 minutes each) of actual class meeting or the equivalent in guided learning activity (exclusive of registration and study days, holidays, and final examinations);
• At least 30 hours (50 minutes each) of supervised laboratory or studio work (exclusive of registration and study days, holidays, and final examinations).

Prerequisites

Prerequisites, normally stated in terms of numbered courses, represent the level of knowledge a student should have acquired before enrolling in a given course. It is each student’s personal responsibility to make certain he or she is academically prepared to take a course. Faculty members are not expected to repeat material listed as being prerequisite. Students may be barred from enrolling in courses for which they do not have the necessary prerequisites. Students who have not taken prerequisite courses recently should consult advisors or teachers and follow their recommendations. A teacher’s approval may be required. Faculty members are always available to discuss whether a student has the preparation necessary to perform well in a given course.

ENGL 101 Introduction to Writing is prerequisite to any higher-level course in English or communication studies. MATH 107 College Algebra is prerequisite to any higher-level course in mathematics. (Further guidance is in the section describing courses in mathematics.)

Students who have not successfully completed the equivalent of an introductory collegiate course in writing (ENGL 101) at UMUC will be tested for placement. Placement testing is also required for the required level of knowledge for any upper-level course. Students who have not successfully completed the equivalent of an introductory course in mathematics. (Further guidance is in the section describing courses in mathematics.)

Placement testing is also required for the introductory collegiate course in writing (ENGL 101) at UMUC. Students who have not successfully completed the equivalent of an introductory course in mathematics. (Further guidance is in the section describing courses in mathematics.)

Students who have not successfully completed the equivalent of an introductory collegiate course in writing (ENGL 101) at UMUC will be tested for placement. Placement testing is also required for the required level of knowledge for any upper-level course. Students who have not successfully completed the equivalent of an introductory course in mathematics. (Further guidance is in the section describing courses in mathematics.)

The Schedule of Classes gives times and locations of testing. More information may be obtained by calling 800-888-UMUC.

Another way to fulfill prerequisites is to obtain credit by course-challenge examination (described on p. 238). Advisors can explain the procedures. The goal is for students to earn college credit in areas in which they can demonstrate prior learning by successfully completing comprehensive tests of material normally covered in a term-long course. These examinations are specifically prepared for the required level of knowledge in a given subject. Students may not take course-challenge examinations for lower-level courses that are prerequisite to courses for which they have already received credit.

Prerequisites for courses are normally stated in terms of numbered courses. Students who have not taken the prerequisite course recently should consult advisors or teachers and follow their recommendations. A prerequisite is usually stated as a specific numbered course; sometimes the prerequisite calls for a specific course “or equivalent experience.”

Undergraduate courses that have been (or may be) offered by UMUC are listed on the following pages. They are arranged alphabetically by academic discipline or subject. The number of credits is shown by an arabic numeral in parentheses—e.g., (3)—after the title of the course.

Course numbers are designated as follows:

000–099 Noncredit and institutional credit courses (which do not count toward any degree or certificate)
100–199 Primarily freshman courses
200–299 Primarily sophomore courses
300–399 Junior and senior courses unacceptable for credit toward a graduate degree
400–499 Junior and senior courses acceptable for credit toward some graduate degrees

UMUC may offer courses listed in the catalogs of other institutions of the University System of Maryland if demand warrants and the academic department concerned approves.

Key to Course Descriptions

UMUC students may seek credit for only one of the following courses: CHEM 102, CHEM 103, CHEM 105, CHEM 107, or CHEM 121.

1. Explanatory material, if needed. May
   ■ Explain course sequence, purpose, or audience.
   ■ Identify courses fulfilling general education requirements (listed on p. 9).
   ■ Identify courses requiring a special fee, equipment, or materials.

2. Prerequisites represent the level of knowledge a student should have acquired before enrolling in this course. A prerequisite is usually stated as a specific numbered course; sometimes the prerequisite calls for a specific course “or equivalent experience.”

3. The course description describes the focus and level of the course.

4. Statements beginning “Students may receive credit for only one of the following courses” are designed to avoid course duplication and, therefore, loss of credit. The courses listed are courses that duplicate or significantly overlap the content of this course. If a course in the list is not described elsewhere in the catalog, that means that the course has changed designator or number over the years or that the course is offered at all UMUC locations.

CHEM 103 General Chemistry I (4)

(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Fulfills the laboratory science requirement.)

Prerequisite: MATH 107 or MATH 115. A study of the nature and composition of matter. Elements, inorganic compounds, and chemical calculations are covered. Students may receive credit for only one of the following courses: CHEM 102, CHEM 103, CHEM 105, CHEM 107, or CHEM 121.
# Information on Courses

The courses summarized in the following pages are listed alphabetically by discipline or subject, as follows. The discipline designators that precede the course numbers are listed in parentheses.

Students should check the course descriptions carefully to avoid duplicating previous coursework. UMUC will not award credit for courses that repeat material the student has already been credited with learning.

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* Only a limited number of courses are available each term in this discipline.
ACCT 221 Principles of Accounting II (3)
Prerequisite: ACCT 220. Continuation of the study of financial accounting (emphasizing accounting for liabilities, equity, and corporate forms of ownership), followed by an introduction to managerial accounting. Topics include responsibility accounting, budgets, cost control, and standard costing procedures and variances. Emphasis is on management reporting. Students may receive credit for only one of the following courses: ACCT 221, ACCT 301, BMGT 221, MGMT 301, or MGST 301.

ACCT 301 Accounting for Nonaccounting Managers (3)
(May not be applied toward a major or minor in accounting.)
A survey of principles of accounting relevant in making managerial decisions on the basis of accounting information. Topics include internal controls, financial planning and reporting, analysis of financial statements, and elements of managerial cost accounting and budgeting. Students may receive credit for only one of the following courses: ACCT 221, ACCT 301, BMGT 221, MGMT 301, or MGST 301.

ACCT 310 Intermediate Accounting I (3)
(Students should be cautious about enrolling in ACCT 310 or ACCT 311. These are professional courses requiring intensive study and analysis and are not to be undertaken casually.) Prerequisites: BMGT 110 (or at least two years of business or management experience) and ACCT 221. A comprehensive analysis of financial accounting topics involved in preparing financial statements and in external reporting. Students may receive credit for only one of the following courses: ACCT 310 or BMGT 310.

ACCT 311 Intermediate Accounting II (3)
(A continuation of ACCT 310. Students should be cautious about enrolling in ACCT 310 or ACCT 311. These are professional courses requiring intensive study and analysis and are not to be undertaken casually.) Prerequisite: ACCT 310. A comprehensive analysis of financial accounting topics, including preparation of financial statements and external reports. Students may receive credit for only one of the following courses: ACCT 311 or BMGT 311.
ACCT 321 Cost Accounting (3)
Prerequisites: BMGT 110 (or at least two years of business or management experience) and ACCT 221. A study of the basic concepts of determining, setting, and analyzing costs for purposes of managerial planning and control. Emphasis is on the role of the accountant in the management of organizations and in the analysis of cost behavior, standard costing, budgeting, responsibility accounting, and costs that are relevant for making decisions. Various techniques are used to study cost and managerial accounting concepts; these may include the use of problem sets, case studies, computer applications, and other materials. Students may receive credit for only one of the following courses: ACCT 321 or BMGT 321.

ACCT 323 Taxation of Individuals (3)
Prerequisite: ACCT 220. An introduction to federal taxation of the income of individuals. Examples and problems illustrate tax laws. Computer applications may be used to analyze specific examples. Students may receive credit for only one of the following courses: ACCT 323 or BMGT 323.

ACCT 326 Accounting Information Systems (3)
Prerequisite: ACCT 221. A study of the control aspects of accounting systems. Topics include setting standards; defining and imposing administrative, operational, and security controls; and judging cost-effectiveness of systems. Various techniques are used to study accounting information-systems concepts; these may include the use of problem sets, case studies, computer applications, and other materials. Students may receive credit for only one of the following courses: ACCT 326, BMGT 320, or BMGT 326.

ACCT 328 Accounting Software (3)
Prerequisite: ACCT 221. An introduction to accounting software, focusing on evaluation of the benefits, costs, and risks of specific programs. Topics include payroll, inventory, accounts payable, accounts receivable, job cost, and point-of-sale applications. Popular software packages in the areas of tax and financial statement preparation are introduced. Projects and assignments integrate the principles of accounting information systems with the evaluation of accounting software. Students may receive credit for only one of the following courses: ACCT 328 or ACCT 398A.

ACCT 410 Accounting for Government and Not-for-Profit Organizations (3)
Prerequisite: ACCT 310. An introduction to the theory and practice of accounting and auditing as applied to governmental entities and not-for-profit organizations. Various techniques are used to study fund accounting concepts; these may include the use of problem sets, case studies, computer applications, and other materials. Students may receive credit for only one of the following courses: ACCT 410 or BMGT 410.

ACCT 411 Ethics and Professionalism in Accounting (3)
Prerequisite: ACCT 311. Analysis and discussion of issues relating to ethics and professionalism in accounting. The AICPA Code of Professional Conduct and the reasoning, philosophy, and application of that code are examined.

ACCT 417 Taxation of Corporations and Other Entities (3)
Prerequisites: ACCT 311 and 323. Examination of the federal taxation of corporations, partnerships, fiduciaries, and gifts, with information on the tools and techniques of tax research for compliance and planning. Various techniques are used to study tax concepts; these may include the use of problem sets, case studies, computer applications, and other materials. Students may receive credit for only one of the following courses: ACCT 417 or BMGT 417.

ACCT 422 Auditing Theory and Practice (3)
Prerequisite: ACCT 311. Recommended: ACCT 326. A study of the independent accountant's attest function. Topics include generally accepted auditing standards, tests of controls and substantive tests, and report forms and opinions. Various techniques are used to study auditing concepts and practices; these may include the use of problem sets, case studies, computer applications, and other materials. Students may receive credit for only one of the following courses: ACCT 422 or BMGT 422.

ACCT 424 Advanced Accounting (3)
Prerequisite: ACCT 311. Recommended: ACCT 326. A study of advanced accounting theory, applied to specialized topics and contemporary problems. Emphasis is on consolidated statements and partnership accounting. Various techniques are used to study accounting theory and practice; these may include the use of problem sets, case studies, computer applications, and other materials. Students may receive credit for only one of the following courses: ACCT 424 or BMGT 424.
ACCT 425 International Accounting (3)
(Fulfills the international perspective requirement.) Prerequisite: ACCT 311. A study of accounting in a multinational context. Topics include evolving international accounting and reporting standards, problems of foreign exchange and taxation, inter-company transfer pricing, and emerging issues in international accounting. Students may receive credit for only one of the following courses: ACCT 425 or ACCT 498A.

ACCT 426 Advanced Cost Accounting (3)
Prerequisite: ACCT 321. A study of advanced cost accounting that emphasizes the managerial aspects of internal systems of recordkeeping, performance management, and control. Various techniques are used to study cost and managerial accounting practices and problems; these may include the use of problem sets, case studies, computer applications, and other materials. Students may receive credit for only one of the following courses: ACCT 426 or BMGT 426.

ACCT 427 Advanced Auditing (3)
Prerequisite: ACCT 422. An examination and a thorough study of special auditing topics. Topics include statistical sampling, information systems auditing, attestation standards, assurance services, and SEC accounting. Various techniques are used to study auditing theory and practice; these may include the use of problem sets, case studies, computer applications, and other materials. Students may receive credit for only one of the following courses: ACCT 427 or BMGT 427.

ACCT 436 Internal Auditing (3)
Prerequisite: ACCT 311. An introduction to internal auditing, its rapid growth, and its role in the modern corporation. Topics include internal auditing standards, scope, responsibilities, ethics, controls, techniques, and reporting practices. Consideration is given to the material included in the Certified Internal Auditor examination. Various techniques are used to study internal auditing theory and practice; these may include the use of problem sets, case studies, computer applications, and other materials. Students may receive credit for only one of the following courses: ACCT 436, ACCT 498E, or BMGT 498E.

ACCT 486A Internship in Accounting Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in accounting. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to accounting and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

ACCT 486B Internship in Accounting Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in accounting. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to accounting and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
ACCT 495 Contemporary Issues in Accounting Practice (3)
(Intended as a final, capstone course to be taken in a student’s last 15 credits.) Prerequisites: ACCT 311, 321, and 422 and BMGT 364. A study of accounting that integrates knowledge gained through previous coursework and experience and builds on that conceptual foundation through integrative analysis, practical application, and critical thinking. Emerging issues in accounting, business transactions, and financing are considered. Web accounting and business technology, accounting theory, and management techniques are used to research and analyze developing issues in the workplace. Topics include e-commerce, financial derivatives, balanced scorecards, and the changing nature of financial reporting and risk management. Students may receive credit for only one of the following courses: ACCT 495 or ACCT 498C.

African American Studies
Courses in African American studies (designated AASP) may be applied as appropriate (according to individual program requirements) toward
• a minor in African American studies; and
• electives.
A description of the curriculum for the African American studies minor begins on p. 17.

AASP 201 Introduction to African American Studies (3)
(Fulfills the general education requirement in behavioral and social sciences.) An interdisciplinary study of significant aspects of African American history and culture, emphasizing the development of African American communities from the Middle Passage to the present. Topics include definitions of African American identity, influences and achievements within American culture, and issues confronting African Americans. Students may receive credit for only one of the following courses: AASP 100 or AASP 201.

Anthropology
Courses in anthropology (designated ANTH) may be applied as appropriate (according to individual program requirements) toward
• the general education requirement in the behavioral and social sciences;
• a major in social science;
• a major or minor in Asian studies; and
• electives.
Descriptions of related curricula may be found on the following pages: Asian studies (p. 19) and social science (p. 80).

ANTH 101 Introduction to Anthropology: Archaeology and Physical Anthropology (3)
A survey of general patterns in the development of human culture, addressing the biological and morphological aspects of humans viewed in their cultural setting. Students who complete both ANTH 101 and 102 may not receive credit for ANTH 340, BEHS 340, or BEHS 341.

ANTH 102 Introduction to Anthropology: Cultural Anthropology and Linguistics (3)
(Fulfills the international perspective requirement.) A survey of social and cultural principles inherent in ethnographic descriptions, coupled with the study of language in the context of anthropology. Students who complete both ANTH 101 and 102 may not receive credit for ANTH 340, BEHS 340, or BEHS 341.

ANTH 298 Special Topics in Anthropology (1–3)
A presentation of anthropological perspectives on selected topics of broad general interest. May be repeated to a maximum of 6 credits when topics differ.

ANTH 343 Physical Anthropology and Archaeology (3)
An interdisciplinary, intermediate-level exploration of contemporary and applied issues in physical anthropology and archaeology. Discussion covers evolution, human biological variation, primate studies, and archaeological frameworks and challenges. Focus is on theory and its application in dealing with concerns in our global society. Students may receive credit for only one of the following courses: ANTH 340, ANTH 343, or BEHS 340.
ANTH 486A Internship in Anthropology Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in anthropology. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to anthropology and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

ANTH 486B Internship in Anthropology Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in anthropology. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to anthropology and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
Arabic

Courses in Arabic (designated ARAB) may be applied as appropriate (according to individual program requirements) toward

• the general education requirements in the arts and humanities and for international perspective coursework;
• a major or minor in humanities; and
• electives.

UMUC offers a limited number of foreign language courses each term.

A description of the curriculum for the humanities major and minor begins on p. 56.

**ARAB 111 Elementary Arabic I (3)**

(Fulfills the international perspective requirement.) A basic foundation in listening, speaking, reading, and writing in modern standard Arabic. Arabic culture, history, current events, and geography provide the context for instruction in grammatical structures, vocabulary, pronunciation, and writing. Focus is on acquiring the skills necessary to communicate with native Arabic speakers orally and in writing at an elementary level.

**ARAB 112 Elementary Arabic II (3)**

(Fulfills the international perspective requirement.) Prerequisite: ARAB 111. A continuation of the development of basic skills in listening, speaking, reading, and writing in modern standard Arabic. Arabic culture, history, current events, and geography provide the context for instruction in grammatical structures, vocabulary, pronunciation, and writing. Focus is on acquiring the skills necessary to communicate with native Arabic speakers orally and in writing at an advanced elementary level. Much of the class is conducted in Arabic.

**ARAB 114 Elementary Arabic III (3)**

(Fulfills the international perspective requirement.) Prerequisite: ARAB 112. Further integrated study of modern standard Arabic. Reading and writing skills are developed.

Art

Courses in art (designated ARTT) may be applied as appropriate (according to individual program requirements) toward

• the general education requirement in the arts and humanities;
• a minor in art;
• a major or minor in humanities;
• a certificate in Computer Graphics and Design, Desktop Publishing, or Web Design; and
• electives.

A description of the curriculum for the humanities major and minor begins on p. 56.

**ARTT 100 Two-Dimensional Art Fundamentals (3)**

An exploration of the principles and elements of pictorial space through the manipulation and organization of various materials.

**ARTT 110 Elements of Drawing I (3)**

An introduction to various media and related techniques. Problems for study are based on the figure, still life, and nature.

**ARTT 150 Introduction to Art Theory (3)**

An examination of contemporary art, including a review of the dominant aesthetic, philosophic, and critical positions that inform the various works of art studied.

**ARTT 152 Basics of Photography (3)**

An introduction to basic photographic procedures. Discussion covers the historical development of photography. Students may receive credit for only one of the following courses: ARTT 152 and PHOT 198.

**ARTT 200 Elements of Three-Dimensional Form and Space (3)**

(A continuation of ARTT 100.) Prerequisite: ARTT 100 or ARTT 110. Further study of pictorial space, focusing on problems that are more individually structured in terms of form, composition, and meaning.
ARTT 210 Elements of Drawing II (3)
Prerequisite: ARTT 100 or ARTT 110. Drawing taught with an emphasis on understanding organic form as related to study of the human figure and pictorial composition. Students may receive credit for only one of the following courses: ARTS 210 or ARTT 210.

ARTT 220 Color in Composition (3)
Development of a student’s work on an intermediate level. The principles of color in composition and pictorial construction are covered. Students may receive credit for only one of the following courses: ARTT 208C or ARTT 220.

ARTT 250 Elements of Commercial Design (3)
A study of essential design concepts focusing on the creative skills needed to better solve internal corporate and external advertising/marketing problems in visual media. Theoretical and practical applications include corporate/institutional identity programs, collateral corporate and marketing materials, and advertising campaigns. Discussion also covers the primary relationship between word and image communications. Emphasis is on creative problem solving in media communications. An exploration of symbolism and its relationship to image addresses visual structure, continuity, and coherence. Psychological and sociocultural questions are also examined as they relate to ethical standards and practices.

ARTT 298 Watercolors/Landscapes (3)
Practice in basic techniques and processes of painting nature and landscapes using watercolors.

ARTT 320 Elements of Painting (3)
Prerequisite: ARTT 110. Practice in the basic tools and vocabulary of painting. Oil and/or water-based paints are used.

ARTT 350 Elements of Illustration (3)
An introduction to a variety of media and techniques used in illustration, that is, drawing and painting created for reproduction in books, advertisements, art prints, and periodicals.

ARTT 354 Elements of Computer Graphics (3)
Recommended: One lower-level ARTT course (or equivalent experience in graphic design) and experience in art fundamentals, Microsoft Office applications, and Windows. An introduction to computer graphics programs and basic concepts in electronic design. Focus is on creating artwork in various formats, including print and the Web. Projects require six hours of computer work per week, some of which must be completed independently.

ARTT 418 Drawing (3)
Prerequisite: ARTT 210. Creation of original compositions based on the figure and nature, supplemented by problems of personal and expressive drawing. May be repeated to a maximum of 12 credits.

ARTT 428 Painting (3)
Prerequisite: ARTT 320. Creation of original compositions based on the figure, nature, and still life, as well as expressive painting. Emphasis is on the development of personal directions. May be repeated to a maximum of 12 credits.

ARTT 458 Graphic Design and Illustration (3)
An introduction to the basic elements of design. Projects focus on problems central to the commercial arts. Basic skills with a variety of media and techniques are developed.

ARTT 470 Watercolor (3)
An opportunity for further development of painting in watercolors at beginning or advanced levels. May be repeated to a maximum of 6 combined credits in ARTT 470 and ARTT 489B.

ARTT 479 Advanced Computer Graphics (3)
Prerequisite: ARTT 354. A study of advanced techniques in and the theory behind computer imaging, graphics, illustration, and mixed media. Projects require six hours of computer work per week, some of which must be completed independently.

ARTT 486A Internship in Art Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in art. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to art and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
ARTT 486B Internship in Art Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in art. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to art and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

ARTT 498 Directed Studies in Art (2–3)
(For advanced students.) May be repeated to a maximum of 6 credits when topics differ.

Art History
Courses in art history (designated ARTH) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in the arts and humanities;
- a minor in art history;
- a major or minor in humanities; and
- electives.

UMUC offers a limited number of ARTH courses each term. To complete a minor, students may need to take courses at other institutions in the University System of Maryland or extend the time spent in fulfilling the degree requirements. Students are advised to consult an advisor before selecting this discipline.

A description of the curriculum for the art history minor begins on p. 18. A description of the curriculum for a major or minor in humanities begins on p. 56.

ARTH 100 Introduction to Art (3)
(Does not satisfy the historical perspective requirement.) A grounding in the basic tools of understanding visual art. Focus is on major approaches (such as techniques, subject matter, form, and evaluation). Discussion covers painting, sculpture, architecture, and the graphic arts.

ARTH 335 17th-Century Art in the Netherlands (3)
(Fulfills the historical perspective requirement.) An exploration of painting from the Dutch Golden Age—the age of Rembrandt, Vermeer, Hals, Steen, and Leyster. History painting, still life, landscape, portraiture, and scenes of everyday life are studied. Discussion also covers issues of collecting art. Students may receive credit for only one of the following courses: ARTH 335 or ARTH 435.

ARTH 370 History of World Art I (3)
(Fulfills the historical or international perspective requirement.) A survey of the development of world visual art in its various forms, examining and comparing the expression of cultural and aesthetic values in different parts of the world from prehistory to 1400, when the European Age of Exploration began and world cultures came into contact.

ARTH 371 History of World Art II (3)
(Fulfills the historical perspective requirement.) A survey of the development of world visual art in its various forms, examining and comparing the expression of cultural and aesthetic values in different parts of the world from 1400, when the European Age of Exploration began, to modern day. The effects of contact among world cultures on both the form and content of artistic expression is examined.

ARTH 380 Masterpieces of Painting (3)
(Fulfills the historical or international perspective requirement.) Analysis of selected masterworks of painting, intended to reveal the creative process, the personality of the artist, and the cultural context. Students may receive credit for only one of the following courses: ARTH 320 or ARTH 380.

ARTH 381 Masterpieces of Sculpture (3)
(Fulfills the historical perspective requirement.) Analysis of selected sculptural masterworks, intended to reveal the creative process, the personality of the artist, and the cultural context. Students may receive credit for only one of the following courses: ARTH 330 or ARTH 381.
ARITH 382 Masterpieces of Architecture (3)
(Fulfills the historical perspective requirement.) Analysis of selected masterworks of architecture, intended to reveal the creative process, the personality of the artist, and the cultural context. Students may receive credit for only one of the following courses: ARTH 340 or ARTH 382.

ARITH 455 20th-Century Art to 1945 (3)
(Fulfills the historical perspective requirement.) An overview of painting, sculpture, and architecture in Europe and America from the late 19th century to the end of World War II. Students may receive credit for only one of the following courses: ARTH 350, ARTH 450, or ARTH 455.

ARITH 456 20th-Century Art from 1945 (3)
(Fulfills the historical perspective requirement.) An overview of painting, sculpture, and architecture in Europe and North America from 1945 to the present. Students may receive credit for only one of the following courses: ARTH 351, ARTH 451, or ARTH 456.

ARITH 486A Internship in Art History Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in art history. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to art history and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

ARITH 486B Internship in Art History Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in art history. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to art history and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

ARITH 488D The Art of China: The UMUC Collection (1)
A gallery study tour of UMUC's Art of China collection, which includes scroll paintings, ceramics, and sculpture dating from the 16th to 20th centuries.

ARITH 489 Advanced Special Topics in Art History (3)
Advanced study of selected topics in art history. Assignments include advanced reading and research. Students may receive credit for a given topic in either ARTH 199 or ARTH 489 only once.
Asian Studies
Courses in Asian studies (designated ASTD) may be applied as appropriate (according to individual program requirements) toward
- the general education requirements in the arts and humanities or the behavioral and social sciences (based on course content);
- a major or minor in Asian studies or humanities; and
- electives.
UMUC offers a limited number of courses each term in this discipline. To complete a major or minor, students may need to take courses at other institutions in the University System of Maryland or extend the time spent in fulfilling the degree requirements. Students are advised to consult an advisor before selecting this discipline.

A description of the curriculum for the Asian studies major and minor begins on p. 19. A description of the curriculum for the humanities major and minor begins on p. 56.

ASTD 150 Introduction to Asian Studies I (3)
(The first course in the two-course sequence ASTD 150–160. Fulfills the international perspective requirement, and the general education requirements in the arts and humanities or the social sciences.) An interdisciplinary examination of the classical Asian tradition, encompassing a general survey of the region.

ASTD 160 Introduction to Asian Studies II (3)
The second course in the two-course sequence ASTD 150–160. Fulfills the international perspective requirement, and the general education requirements in the arts and humanities or the social sciences.) Recommended: ASTD 150. An interdisciplinary examination of the modern period in Asian history, beginning approximately with the 17th century.

ASTD 198 Special Topics in Asian Studies (3)
An investigation of a special topic, problem, or issue of particular relevance to countries or peoples of the Pacific Rim or Indian Ocean. Typical investigations include historical or contemporary subjects focusing on cultural, economic, military, or political issues.

ASTD 398 Advanced Special Topics in Asian Studies (3)
An investigation of a special topic, problem, or issue of particular relevance to countries or peoples of the Pacific Rim or Indian Ocean. Typical investigations include historical or contemporary subjects focusing on cultural, economic, military, or political issues. Assignments include advanced reading and research.

ASTD 485 Great Issues in Asian Studies (3)
(Fulfills the international perspective requirement. Intended as a final, capstone course to be taken in a student’s last 15 credits.) Prerequisites: ASTD 150 and 160. A study of Asia that integrates knowledge gained through previous coursework and experience and builds on that conceptual foundation through integrative analysis, practical application, and critical thinking. Emerging issues in Asian studies are considered. Focus is on the broad issue of modernization in Asian nations.

Astronomy
Courses in astronomy (designated ASTR) may be applied as appropriate (according to individual program requirements) toward
- the general education requirement in the biological and physical sciences;
- a minor in natural science; and
- electives.
A description of the curriculum for the natural science minor begins on p. 74.

ASTR 100 Introduction to Astronomy (3)
(Not open to students who have taken or are taking any astronomy course numbered 250 or higher. For students not majoring or minoring in a science.) Prerequisite: MATH 012 or higher. A discussion of the major areas of astronomy. Topics include the solar system, stars and stellar evolution, and galaxies. Current topics in astronomy are also discussed. Students may receive credit for only one of the following courses: ASTR 100, ASTR 101, ASTR 120, or GNSC 125.
INFORMATION ON COURSES

Behavioral and Social Sciences

Courses in behavioral and social sciences (designated BEHS) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in the behavioral and social sciences;
- a major in social science;
- a minor in women's studies; and
- electives.

A description of the curriculum for the social science major begins on p. 80. A description of the curriculum for the women's studies minor may be found on p. 84.

Most BEHS courses require extensive writing. Students should complete a writing course (such as COMM 390, 393, 393X, 394, and 394X and ENGL 101, 101X, 391, and 391X) or have equivalent writing experience before enrolling.

BEHS 210 Introduction to Social and Behavioral Science (3)

An interdisciplinary introduction to the study of society that addresses the issues of what it is to be a social scientist from a variety of social science perspectives. Empirical and theoretical contributions of the different social science disciplines are used to better understand the nature of society. Survey covers culture, geography, the individual, family, education, stratification in society, government and politics, and economics. Topics also include the scientific method and research methods in the social science disciplines and the current relationships among the different social science disciplines. A historical overview of the development of the social sciences is provided, and an analysis of social phenomena that integrates insights from the social sciences is presented. Students may receive credit for only one of the following: BEHS 201 or BEHS 210.

BEHS 343 Parenting Today (3)

An overview of critical issues of parenthood in the United States today. Topics include characteristics of effective parenting styles and capable parents, the role of nontraditional parenting techniques, and the social forces that cause changes in parent/child relationships and give rise to varying styles of parenting as developed in the United States. Some cross-cultural comparisons are included.
BEHS 364 Alcohol in U.S. Society (3)
An interdisciplinary examination of the use and abuse of alcoholic beverages from the perspectives of psychology, physiology, sociology, medicine, and public health. The effects of alcohol on all age groups throughout the life span are explored, with special emphasis on gender, families, race, the workplace, and public safety. Analysis covers current research and trends in the treatment of alcoholism, including prevention, assessment, and intervention, as well as legal aspects.

BEHS 453 Domestic Violence (3)
An examination of the complex phenomenon of domestic violence from a systems perspective that integrates individual, social, political, cultural/ethnic, economic, legal, and medical viewpoints from the past and present. Topics include the physical, emotional, and sexual abuse of children, partners, and the elderly. Discussion also covers response systems and mechanisms to prevent and treat violence. Students may receive credit for only one of the following courses: BEHS 453 or BEHS 454.

BEHS 486A Internship in Behavioral Science Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in behavioral and social sciences. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to behavioral and social sciences and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

BEHS 486B Internship in Behavioral Science Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in behavioral and social sciences. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to behavioral and social sciences and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
Biology

Courses in biology (designated BIOL) may be applied as appropriate (according to individual program requirements) toward
• the general education requirement in the biological and physical sciences;
• a major in biotechnology, investigative forensics, or laboratory management;
• a minor in biology, forensics, microbiology, or natural science;
• a certificate in Bio-Security; and
• electives (including related requirements for the environmental management major).

A description of the curriculum for the biology minor begins on p. 21. Descriptions of related curricula may be found on the following pages: biotechnology (p. 21), environmental management (p. 41), forensics (p. 47), investigative forensics (p. 63), laboratory management (p. 65), microbiology (p. 74), and natural science (p. 74).

BIOL 101 Concepts of Biology (3)
(For students not majoring in a science.) An introduction to living things in light of knowledge of physical, chemical, and biological principles. The organization, processes, interdependence, and variety of living organisms are explored. Emphasis is on understanding the impact of biological knowledge on human societies. Consideration is given to current events that involve biological systems. Students may receive credit for only one of the following courses: BIOL 101, BIOL 105, or BSCI 105.

BIOL 102 Laboratory in Biology (1)
(For students not majoring in a science. Fulfills the laboratory science requirement only with previous or concurrent credit for BIOL 101.) Prerequisite or corequisite: BIOL 101. A laboratory study of the concepts underlying the structure and functioning of living organisms. Laboratory exercises emphasize the scientific method and explore topics such as the chemical foundations of living organisms, pH, cell structure and function, metabolism, DNA structure and function, mechanisms and patterns of inheritance, evolution, classification, and population biology and ecosystems. Students may receive credit for only one of the following courses: BIOL 102, BIOL 105, or BSCI 105.

BIOL 160 Human Biology (3)
(Science background not required.) A general introduction to human structure, functions, genetics, evolution, and ecology. The human organism is examined from the basic cellular level and genetics, through organ systems, to interaction with the outside world. Pertinent health topics are also discussed. Students may receive credit for only one of the following courses: BIOL 160 or GNSC 160.

BIOL 181 Life in the Oceans (3)
A study of the major groups of plants and animals in various marine environments, as well as their interactions with each other and the nonliving components of the ocean. The impact of human activity on life in the ocean and the potential uses and misuses of the ocean are discussed. Students may receive credit for only one of the following courses: BIOL 181 or ZOOL 181.

BIOL 211 Environmental Science (3)
A survey of ecological principles as they apply to the interrelated dilemmas of sustainability. Topics include overpopulation, pollution, over-consumption of natural resources, and the ethics of land use. Students may receive credit for only one of the following courses: BIOL 211, BOTN 211, or PBIO 235.

BIOL 215 Population Biology and General Ecology (3)
A general introduction to population and community biology. Topics include evolution, population genetics, population growth and steady states, age structure of populations, multispecies dependencies, and ecosystem energetics. Illustrations are drawn both from both natural and human populations. Students may receive credit for only one of the following courses: BIOL 215 or ZOOL 270.

BIOL 220 Human Genetics (3)
(For students not majoring in a science.) An introduction to genetics, focusing on the human organism. Topics include transmission and biochemical genetics, mutation, the behavior of genes in populations, and genetic engineering. The roles of recent discoveries in the treatment of genetic diseases, cancer, and organ transplantation are examined. Students may receive credit for only one of the following courses: BIOL 220, BIOL 346, ZOOL 146, or ZOOL 346.
**BIOL 222 Principles of Genetics (3)**
Prerequisites: BIOL 105 (or BSCI 105) and CHEM 103. A study of the principles and mechanisms of heredity and gene expression. Plant, animal, and microbial organisms are considered. Students may receive credit for only one of the following courses: BIOL 220, BIOL 222, or BSCI 222.

**BIOL 226 Evolution (3)**
Prerequisite: BIOL 101, BIOL 105, BIOL 161, or BSCI 105. An introduction to biological evolution, its principles, and their application to understanding the history of life on Earth. Discussion covers the history and evidence for modern evolutionary concepts and mechanisms, the origin of life, the molecular mechanisms of evolution, the evolution of plants, the evolution of animals (including man), the relationship between ontogeny and phylogeny, and the reciprocal relationships of evolution to the environment (including human culture).

**BIOL 301 Human Health and Disease (3)**
(For students not majoring in a science.) A survey of the mechanisms of disease and their expression in major organ systems of the human body. Topics include infections, cancer, heart disease, lung disease, diabetes, stroke, malnutrition, poisoning by environmental toxins, stress, inflammation, disorders of the immune system, and aging. Emphasis is on prevention of disease through control of risk factors and early detection. Students may receive credit for only one of the following courses: BIOL 301 or BIOL 398H.

**BIOL 302 Bacteria, Viruses, and Health (3)**
An introductory study of the basic structure, genetic and regulatory systems, and life cycles of bacteria and viruses. Students may receive credit for only one of the following courses: BIOL 398G, BSCI 223, MICB 200, or MICB 388A.

**BIOL 304 The Biology of Cancer (3)**
(For students not majoring in a science.) An overview of the biological basis of cancer. The development and progression of cancer are considered at the level of cell structure and function. The roles of genes and proteins are also examined. Students may receive credit for only one of the following courses: BIOL 304 or GNSC 398C.

**BIOL 305 The Biology of AIDS (3)**
(For students not majoring in a science.) An overview of Acquired Immune Deficiency Syndrome (AIDS) from a biological perspective. The development and treatment of AIDS and human immunodeficiency virus (HIV) infection are considered with respect to cells, viruses, genes, and proteins.

**BIOL 307 The Biology of Aging (3)**
(For students not majoring or minoring in a science.) An overview of the biological basis of aging. Topics include typical changes that occur in cells, molecules, metabolism, and structure during the aging process. The development and progression of several diseases associated with aging (including cancer, neurodegenerative diseases such as Alzheimer’s and Parkinson’s disease, osteoporosis, and loss of visual acuity and memory) are discussed with respect to the role of genes, proteins, and environmental influences. Students may receive credit for only one of the following courses: BIOL 307 or BIOL 398V.

**BIOL 320 Forensic Biology (3)**
An introduction to the basic principles of biology as applied to the field of forensic science. Topics include the biological features and characteristics of various types of evidentiary materials, as well as the basic principles of chemistry, cell biology, microbiology, and genetics that underlie various types of forensic analysis.

**BIOL 334 Vaccines and Society (3)**
(For students not majoring in a science.) An overview of the development and testing of vaccines, the prevention of disease by vaccines, and the role of vaccines in society. The scientific, clinical, and practical aspects of vaccines and vaccination are considered with regard to the immune system. Topics include the use of vaccines in disease prevention, epidemics, emerging infectious agents, and biological terrorism. Topics are considered from a historical perspective, as well as in the context of current vaccine development research. Students may receive credit for only one of the following courses: BIOL 334, BIOL 335, BIOL 398R, GNSC 398H, or MICB 388D.

**BIOL 350 Molecular and Cellular Biology (3)**
Prerequisite: BIOL 101, BIOL 105, BIOL 230, BSCI 105, or BSCI 223. An introduction to the basic structure and function of cells, with an emphasis on eukaryotic cell biology. Topics include cell-cycle growth and death; protein structure and metabolism; gene replication, repair, recombination, and expression; RNA processing and metabolism; and molecular transport, traffic, and signaling. The principles and uses of recombinant DNA and genetic engineering technology are also discussed. Students may receive credit for only one of the following courses: BIOL 350 or BIOL 3985.
**BIOL 356 Molecular Biology Laboratory (4)**
(For students majoring or minoring in a science. Fulfills the laboratory science requirement.) Prerequisite: BIOL 222, BIOL 230, BIOL 350, or BSCI 223. A laboratory study of current molecular biology and genetic engineering procedures, including the isolation of DNA, RNA, and proteins; electrophoresis; the use of restriction enzymes; cloning procedures; polymerase chain reaction (PCR) analysis; and gene expression analysis. Students may receive credit for only one of the following courses: BIOL 355 or BIOL 356.

**BIOL 357 Bioinformatics (3)**
Recommended: Some background in either computer science or introductory biology. An introduction to the use of computers in the analysis of DNA and protein sequences and the significance of these analyses. Topics include genome analysis, evolutionary relationships, structure-function identification, pattern recognition, database searches and structures, and algorithms. Students may receive credit for only one of the following: BIOL 357 or BIOL 398U.

**BIOL 360 Developmental Biology (3)**
Prerequisite: BIOL 101, BIOL 105, or BSCI 105. An overview of animal development, with an emphasis on the underlying cellular and molecular mechanisms that guide it. Topics include fertilization, embryonic cleavage, gastrulations, early vertebrate morphogenesis, neural development, fate determination by cytoplasm specification and cell-cell interactions, transcriptional and post-transcriptional gene regulation mechanisms that mediate developmental processes, homeobox gene families, protein gradients, pattern formation, and sex determination and gametogenesis. Students may receive credit for only one of the following: BIOL 360 or BIOL 398T.

**BIOL 362 Neurobiology (3)**
(For students majoring or minoring in a natural science or psychology.) Prerequisite: BIOL 101, BIOL 105, or BSCI 105. An in-depth discussion of the biology and development of the nervous system. Topics include neuronal structure and function, communication at the synapse, membrane receptors and intracellular signaling systems, gene regulation, gross organization of the brain and spinal cord, the processing of sensory information, the programming of motor responses, and higher functions such as learning, memory, cognition, and speech.

**BIOL 398C Regulation of Gene Expression (1)**
Prerequisite: BIOL 101 or BIOL 105. An analysis of the mechanisms by which gene expression is regulated. Topics include the role of DNA sequence and structure, transcription factors, and cell signaling in gene expression. Regulation is also considered in the context of development, environmental influences, and human diseases.

**BIOL 398D The Ecology of Deep Sea Hydrothermal Vents (1)**
A study of the trench ecosystem and the organisms inhabiting the oceans' deepest biological realm—home of the “black smokers” and the animals who live without benefit of sunlight and its associated photosynthetic activity. Topics include the geological, metabolic, and evolutionary significance of these remote regions; the methods used to study them (including the use of manned and unmanned submersibles); and the possible use of trenches as refuge during global extinction events.

**BIOL 398F Extremeophiles (1)**
A survey of microbes that thrive in extreme environments, including extremes in temperature, pH, hydration, and metal concentration. Topics include the utility of these organisms to industry and medicine and the possibility of life in outer space.

**BIOL 398I Biotechnology and Genetic Engineering (1)**
(Science background not required.) An introduction to the basic principles and applications of biotechnology and genetic engineering to medicine, agriculture, and industry. Topics include gene therapy, cloning, the identification and isolation of genes involved in human health and disease, diagnostic and forensic testing, the human genome project, bioremediation, microbial and plant bioengineering, and bioinformatics. Students may receive credit for only one of the following courses: BIOL 398I or GNSC 398B.

**BIOL 398K Stem Cells in Society (1)**
An introduction to the biological principles that govern the origin, development, and utility of stem cells. Topics include the features of stem cells, their various sources, and potential uses in medicine, agriculture, and industry. The risks and legal and ethical issues associated with stem cell technologies are also examined.
BIOL 398M Biology and Behavior of Monkeys and Apes (1)
An introduction to the study of nonhuman primates, including prosimians, New World and Old World monkeys, and apes. Focus is on primate natural history, behavior, and adaptations to varied environments. Topics include the evolutionary foundations of primate behavior, primate social life, primate cognition, and primate conservation. A descriptive survey of living primates is provided. Discussion also covers various observational and data collection techniques used in primate behavioral research and field studies.

BIOL 399 Independent Study in Life Science (1–6)
Prerequisite: 6 credits in upper-level BIOL courses and agreement of faculty member to act as supervisor. Directed independent study of topics of special interest not covered by regularly scheduled courses in life sciences. May be repeated to a maximum of 6 credits when topics differ.

BIOL 400 Life Science Seminar (3)
(For students majoring or minoring in a science.) Prerequisite: BIOL 101, BIOL 105, or BSCI 105. An examination of current topics in the life sciences through seminars and discussions based on representative publications in the recent and primary literature.

BIOL 422 Epidemiology of Emerging Infections (3)
Prerequisite: BIOL 230, BIOL 398G, or BSCI 223. An investigation of factors contributing to the emergence of new infectious diseases and the resurgence of diseases once thought to have been controlled. Disease symptoms, patterns of spread, and possible control measures are examined for new infectious diseases (such as Lyme disease and AIDS and those caused by E. coli 0157, the Ebola virus, hantaviruses, and cryptosporidium). Resurgent diseases (such as small pox, anthrax, botulism, bubonic plague, dengue, influenza, tuberculosis, cholera, and malaria) and those caused by flesh-eating bacteria are also discussed. Students may receive credit for only one of the following courses: BIOL 422 or MICB 388E.

BIOL 430 Microbial Physiology (3)
Prerequisite: BIOL 230, BIOL 240, or BSCI 223. An investigation of the processes of growth in microbial cells and populations. Processes studied include the metabolism of fermentation, the physiology of anaerobiosis, and the conservation and transformation of energy in bacterial membranes. Exploration covers the efficiency with which energy is used for growth and the structure and transport of membranes. Topics also include bacterial chemotaxis and the regulation of replication in bacterial chromosomes, the connections between RNA and protein synthesis, and the control of metabolic pathways. Students may receive credit for only one of the following courses: BIOL 430 or MICB 470.

BIOL 431 Microbial Ecology (3)
Prerequisites: CHEM 243 and BIOL 230 (or BSCI 223). A study of the interaction of microorganisms with the environment, with other microorganisms, and with higher organisms. Exploration covers the roles of microorganisms in the biosphere and the relation of microorganisms to current environmental problems. Students may receive credit for only one of the following: BIOL 431 or MICB 480.

BIOL 434 General Virology (3)
(Students seeking to satisfy the laboratory science requirement should take BIOL 435.) Prerequisite: BIOL 230 or BSCI 223. A broad investigation of viruses. Topics include the physical and chemical nature of viruses, methods of cultivation and assay, modes of replication, characteristics of the major viral groups, and the types of viral diseases. Emphasis is on viral genetics and the oncogenic viruses. Students may receive credit for only one of the following courses: BIOL 434, BIOL 435, MICB 460, or MICB 461.

BIOL 435 General Virology with Laboratory (4)
(Fulfills the laboratory science requirement.) Prerequisite: BIOL 230 or BSCI 223. Comprehensive survey of viruses and techniques for their investigation. Topics include the physical and chemical nature of viruses, methods of cultivation and assay, modes of replication, characteristics of the major viral groups, and the types of viral diseases. Emphasis is on viral genetics and the oncogenic viruses. Students may receive credit for only one of the following courses: BIOL 434, BIOL 435, MICB 460, or MICB 461.
INFORMATION ON COURSES

Business and Management

Courses in business and management (designated BMGT) may be applied as appropriate (according to individual program requirements) toward

- a major in business administration, finance, global business and public policy, human resource management, laboratory management, management studies, or marketing;
- a minor in business administration, business law and public policy, business supply chain management, customer service management, finance, human resource management, international business management, management studies, marketing, or strategic and entrepreneurial management;
- a certificate in various business-related areas; and
- electives.

A description of the curriculum for the business administration major and minor begins on p. 23. Descriptions of other related curricula may be found on the following pages: business law and public policy (p. 25), business supply chain management (p. 26), customer service management (p. 38), finance (p. 43), global business and public policy (p. 52), human resource management (p. 58), international business management (p. 62), laboratory management (p. 65), management studies (p. 68), marketing (p. 71), and strategic and entrepreneurial management (p. 83).

BMGT 110 Introduction to Business and Management (3)
(For students with little or no business background. Recommended preparation for many other BMGT courses.) A survey of the field of business management. Topics include human relations, technology in business, ethical behavior, the environment, global and economic forces, organization, quality, products and services, functional management, and current issues and developments.

BMGT 304 Managing E-Commerce in Organizations (3)
An introduction to the history and design of Internet-based business models (i.e., e-commerce) in organizations. Topics include e-commerce management principles, management of different types of organizations, integration of human and information technology resources, training and development, and use of information systems. Investigation also covers knowledge management strategies; the management of business units to implement technological marketing (or e-marketing); the creation of new roles and responsibilities for managers in the e-commerce environment of organizations; relationships among the Internet, government, and society; and future prospects of e-commerce. Students may receive credit for only one of the following courses: BMGT 304 or BMGT 388M.
BMGT 305 Knowledge Management (3)
An introduction to the ways in which organizations create, identify, capture, process, and distribute knowledge. Topics include knowledge generation and coordination, knowledge markets, knowledge transfer and skills, and knowledge management principles. Discussion also covers new organizations and intellectual capital; the integration of human resources, training and development, information systems and security, and business units to implement knowledge management strategies; and new roles and responsibilities for knowledge workers. Students may receive credit for only one of the following courses: BMGT 305 or BMGT 388C.

BMGT 309 Operations Research for Management Decisions (3)
Prerequisite: BMGT 230, MATH 220, or STAT 230. A survey of the philosophy and techniques of operations research and how they relate to managerial decision making. Techniques covered include linear programming, transportation and assignment models, Markov processes, and inventory and queuing models. Emphasis is on formulating and solving decision problems in the functional areas of management. Students may receive credit for only one of the following courses: BMGT 309 or BMGT 332.

BMGT 312 Women in Business (3)
Prerequisite: BMGT 110. An examination of women's evolving roles in the business world and the forces that have created change and opportunities. Discussion explores how organizational theory, human resource practices, industrialization, and information technology have created new paths for professional growth. Students may receive credit for only one of the following courses: BMGT 312, BMGT 398I, or MGMT 398I.

BMGT 313 Women as Entrepreneurs (3)
A study of the qualities that help women excel in business. Topics include the rapid increase in female-owned companies, especially small businesses, and ways women have overcome the barriers they face in starting a business. Discussion also covers the reasons for female exclusion from traditional financing alternatives and current funding options for women. Inspirational real-life examples of women who have achieved success are presented. Students may receive credit for only one of the following courses: BMGT 313 or BMGT 388H.

BMGT 314 Women as Leaders (3)
A study of the opportunities and challenges for women in leadership positions. Focus is on increasing awareness of the unique talents and skills of women and identifying ways to help women change historically self-limiting beliefs. Topics include personal perceptions, traditional stereotypes of femininity, and the evaluation of leadership and coaching skills. Success stories of leading women managers illustrate the key principles. Students may receive credit for only one of the following courses: BMGT 314 or BMGT 388J.

BMGT 317 Problem Solving for Managers (3)
Presentation of the theoretical and practical aspects of strategies used in solving problems, an activity that takes up much of the manager's day. Approaches evaluated include holistic thinking, the use of analogy, internal brainstorming and other methods of creative thinking, the development of an ability to shift perspectives, the scientific method, the analysis of language, systems analysis, and graphic representations. Case studies illustrate the definition of the problem, the formulation of hypotheses, the collection and analysis of data, and application to improve quality. Students may receive credit for only one of the following courses: BMGT 317 or TMGT 310.

BMGT 324 Home-Based Business (1)
An introduction to the concept of the home-based business as a small business. Topics include the costs and benefits of operating a small home-based business venture and the types of businesses that can be successfully operated from the home. Special considerations and laws that apply to home-based business operations are also covered. Students may receive credit for only one of the following courses: BMGT 324, BMGT 398F, MGMT 324, MGMT 398B, or SBUS 398B.

BMGT 325 The Small-Business Plan (1)
An introduction to the preparation of a business plan for entry into small business. Topics include locating and using primary and secondary research to prepare a business plan, assessing formats for presenting it, finding sources of assistance in preparing it, writing it, and identifying who should prepare it. Students may receive credit for only one of the following courses: BMGT 325, BMGT 398G, MGMT 325, MGMT 330, MGMT 398C, SBUS 200, or SBUS 398C.
BMGT 330 Entrepreneurship and New Venture Planning (3)
Recommended: BMGT 364. An overview of entrepreneurship and planning new business ventures for prospective entrepreneurs and managers. Topics include developing entrepreneurial ideas and innovations; strategic planning; marketing research, analysis, and planning; advertising, promotion, and sales; financial planning and financing; operations and services planning; human resources planning and management; analysis of risk; information management strategy and the Internet; legal aspects of new venture formation; and global venturing. Entrepreneurial theory, profiles and roles of entrepreneurs, business life cycles, entrepreneurial behavior, use of computer software to aid in planning, and entrepreneurial management and technology issues are explored. Discussion and group activities focus on development of a business plan, the factors that should be considered, and the entrepreneur’s role in developing and operating a new business. Students may receive credit for only one of the following courses: BMGT 330, MGMT 330, or SBUS 200.

BMGT 334 Managing New Ventures (3)
Prerequisite: Familiarity with new venture planning. Recommended: BMGT 330. An exploration of the start-up and development of business ventures using an integrated approach to entrepreneurship, growth, and management. Topics include opportunities at different stages, legal structure, production of goods and services, marketing strategies, access to capital and capital formation, policy formation, and development of a management philosophy. Exploration also covers how entrepreneurs make decisions on growth of the venture, organizational structure, information systems, software and hardware use, hiring key employees, and building of corporate culture. Problems and pitfalls to avoid, implementation and periodic review of the business plan, global issues, cultural diversity, and the use of new technologies are considered. Students may receive credit for only one of the following courses: BMGT 334 or MGMT 334.

BMGT 336 Managing Strategic Venture Growth and Industry (3)
Prerequisite: Familiarity with the business functions and factors involved with planning and managing a new venture. Recommended: BMGT 330. A study of business ventures during the growth and maturity phases of development using an integrated approach to entrepreneurial management. Growth problems, major issues, and management strategies for businesses in the later stages of development are explored. Topics include budgeting and planning for continued growth; developing new products, features, and product enhancements; and identifying new sources of capital and expanding into other domestic and global markets. Discussion covers how to implement cost controls, reorganize to rekindle entrepreneurial intensity, encourage innovation, and make staffing changes to achieve growth, as well as issues of cultural diversity and the use of new technologies. Students may receive credit for only one of the following courses: BMGT 336 or MGMT 336.

BMGT 339 Government and Business Contracting (3)
(Designed for entrepreneurs in the public and private sectors involved in evaluating contracting and grant opportunities in domestic and global environments.) An investigation of the opportunities available for new business development and government and business contracting, as well as the problems involved. Topics include various methods governments and businesses use in determining requirements, choosing the procurement method, evaluating contractors and grant proposals, setting terms and conditions for contracts, awarding contracts, and administering contracts. Both theory and practice are examined with respect to procurement; purchasing procedures; types of contracts; cost and price analysis; and methods of writing proposals, obtaining helpful information, and establishing and maintaining internal controls. Students may receive credit for only one of the following courses: BMGT 339, MGMT 220, or MGMT 339.

BMGT 340 Business Finance (3)
Prerequisites: ACCT 221 and STAT 230 (or BMGT 230). An overview of the theory, principles, and practices of financial management in a business environment. Topics include financial analysis and financial risk, characteristics and valuations of securities, capital investment analysis and decision making, the capital structure of the firm, financial leverage, and international finance. Emphasis is on the application of financial theory and methods for solving the problems of financial policy that managers face. Students may receive credit for only one of the following courses: BMGT 340, MGMT 398D, or TMGT 320.
 BMGT 341 Finance for the Nonfinancial Manager (3)
(May be used as either a stand-alone survey course in finance or an introduction to higher-level finance courses for those who wish to pursue the subject further.) An introduction to the financial fundamentals needed by functional experts and upwardly mobile managers in human resources, marketing, production, and general management. Focus is on preparing to assume higher-level corporate positions or undertaking entrepreneurial activities that require a basic knowledge of finance. The world of finance and its argot and operations are presented in a simple, step-by-step manner. Topics include financial statements and forecasting, capital budgeting, project evaluation, working capital management, and international financial management. Emphasis is on practical applications more than theory. Students may receive credit for only one of the following courses: BMGT 341, MGMT 398D, or TMGT 320.

 BMGT 342 Fundamentals of Building Wealth (3)
(For students majoring in both business and nonbusiness disciplines.) A practical overview of personal finance management and creation of wealth that blends financial theory and applications. The development of personal financial management skills (e.g., budgeting income and expenditures and planning for financial security and retirement) is encouraged, while an understanding of elements of the U.S. financial structure (including savings and investment alternatives, financing and credit sources, the role of insurance in protecting income and assets, and federal income tax issues) is provided. Students may receive credit for only one of the following courses: BMGT 342, BMGT 388F, or BMGT 388N.

 BMGT 343 Investments (3)
Prerequisite: BMGT 340. An introduction to financial investments. Topics include securities and securities markets; the risks of investments, as well as returns and constraints on investments; portfolio policies; and institutional investment policies.

 BMGT 345 Property and Liability Insurance (3)
Prerequisites: ACCT 221 and STAT 230 (or BMGT 230). Analysis of the major types of property and casualty insurance, including fire, indirect loss, crime, automobile, ocean and inland marine, and liability insurance. Discussion covers substandard, residual, and reinsurance markets and current issues.

 BMGT 346 Risk Management (3)
Prerequisites: ACCT 221 and STAT 230 (or BMGT 230). A study focusing on recognizing and evaluating the pure risks facing organizations. Guides for risk-management decisions concerning the retention, control, and transfer of risk (including insurance) are discussed.

 BMGT 347 Life Insurance (3)
Prerequisite: ACCT 221. A study of the products and principles of life insurance and health insurance in financial planning for businesses. Topics include pension-planning strategies, such as deferred-compensation and profit-sharing plans; use of trusts in business and in planning individual estates; and comprehensive analysis of the effects of income taxes, estate taxes, and gift taxes on life-insurance programming and estate planning.

 BMGT 361 Health Management (3)
Conceptual and functional analysis and application of management principles and theories for effective leadership in the health care services environment. Focus is on relevant theories of organization and management, leadership, communication, motivation, and decision making; organizational change and strategic planning; human resource administration; and management control systems. Discussion covers the structure of health systems in the United States and in other countries, current policy issues, and advocacy for public health and health care reform. Students may receive credit for only one of the following courses: BMGT 361 or HMGT 320.

 BMGT 364 Management and Organization Theory (3)
Prerequisite: BMGT 110 or at least two years of business and management experience. A study of the development of theories about management and organizations. Processes and functions of management discussed include the communication process, the role of the manager as an organizer and director, the determination of goals, and the allocation of responsibilities. Students may receive credit for only one of the following courses: BMGT 364, TEMN 202, TEMN 300, TMGT 301, or TMGT 302.

 BMGT 365 Organizational Leadership (3)
Prerequisite: BMGT 364. An exploration of the challenges to effective leadership and management that the contemporary manager faces in a rapidly changing environment. Focus is on leadership styles and motivational techniques conducive to high performance in various organizational settings with a very diverse workforce. Topics include issues in the design of organizations, the corporate/organizational culture, the design and enrichment of jobs, and communication within organizations. Students may receive credit for only one of the following courses: BMGT 365, MGMT 300, MGST 310, or TEMN 310.
BMGT 366 Managing in the Public Sector (3)
Conceptual and functional analysis and application of management principles and strategies encompassing not-for-profit, state, and nonstate institutional and organizational actors, such as intergovernmental and nongovernmental organizations (IGOs and NGOs), in the domestic and global environments. Focus is on the nature and scope of public management. Topics include theoretical, administrative, ethical, and policy models of decision making and accountability; the dynamics of organizational behavior, bureaucratic structures, and processes; core functionalities, strategies, and issues involving public-sector management, planning, leadership, human resources, collective bargaining, communications, and e-government; marketing; public finance; international development projects; and governance. Students may receive credit for only one of the following courses: BMGT 366 or TMGT 305.

BMGT 369 Health Practice Management (3)
Prerequisite: BMGT 361. Examination and application of health care practice theories and concepts in the management of medicine, health, and dental group services. Topics include both managed care and fee-for-service payment arrangements and the influence of insurance. Group practices examined include preferred provider organizations, physician hospital organizations, independent practice associations, management service organizations, and dental group practice networks. Analysis covers applied issues such as structuring compensation packages for professionals; negotiating contractual arrangements with insurance companies; and implementing regulatory guidelines for medical equipment, pharmaceutical storage, and dispensing. Discussion also reviews policy issues relevant to managed care, public financing, insurance, the employment of healthcare professionals, and legislative politics that affect health care management and practice. Students may receive credit for only one of the following courses: BMGT 369 or HMGT 498E.

BMGT 372 Supply Chain and Logistics Management (3)
Prerequisite: BMGT 364. An examination of logistics and supply chain systems. Focus is on analyzing, designing, and implementing systems. Topics include supply chain management strategy, planning, and operations; the role of e-commerce; and financial factors that influence decisions. Discussion also covers the trade-offs between cost and service and between the purchase and supply of raw materials; the warehousing and control of inventory; industrial packaging; materials handling within warehouses; and the distribution of finished goods to customers required to minimize costs, maximize profits, or increase customer service levels.

BMGT 375 Procurement Management (3)
Prerequisite: BMGT 364. An overview of the procurement process in industry and its strategic importance in the global marketplace. Topics include the purchasing process, requirements planning, pricing analysis, global competition, distribution, and value analysis. Students may receive credit for only one of the following courses: BMGT 375, MGMT 347, MGMT 375, or TEMN 360.

BMGT 378 Legal Environment of Business (3)
(For students with little or no legal background.) An overview of fundamental legal concepts and principles that affect business in the relevant functional and regulatory environments in domestic and global settings. Emphasis is on the definition and application of legal principles and concepts through illustrative examples and cases. Topics include the interplay among business, ethics, and law; legal reasoning and research; the judicial system and conflict resolution; and torts and business crimes. Key concepts relating to transactional aspects of business are defined; these include contracts and business organizations, property, and government regulations in the human resource, marketing, and financial dimensions of business. Assignments include conducting relevant research using computer databases and networks (such as Lexis and the Web) as well as other methods for accessing information. Students may receive credit for only one of the following courses: BMGT 378 or BMGT 480.

BMGT 380 Business Law I (3)
(Strongly recommended for students seeking careers as CPAs, lawyers, or managers.) A conceptual and functional analysis and application of legal principles relevant to the conduct and understanding of commercial business transactions in the domestic and global environment. Topics include the legal, ethical, and social environment of business; agencies, partnerships, and other forms of business organizations; and contracts and sales agreements.

BMGT 381 Business Law II (3)
(Strongly recommended for students seeking careers as CPAs, lawyers, or managers.) Further conceptual and functional analysis and application of legal principles relevant to the conduct and understanding of commercial business transactions in the domestic and global environment. Topics include personal and real property, government regulations affecting employment and marketing, negotiable instruments, debtor/creditor relationships, and bankruptcy and reorganization.
BMGT 384 Managing for Quality (3)
(Not open to students who have previously taken MGST 398L, MGST 398M, or MGST 398N.) Prerequisites: BMGT 364 and STAT 230 (or BMGT 230). A survey of methods used to apply principles of total quality management (TQM) in various organizational settings to improve quality and productivity. Emphasis is on quality process, management issues in achieving quality, stabilizing quality, and improving quality. Topics include the evolution of TQM theory; TQM models, tools, and techniques; the development of TQM teams; the production of graphs and charts; strategies for meeting customer expectations; benchmarking; six sigma principles; and comparison of TQM applications. Spreadsheet and statistical software may be used to develop statistical process control charts and graphs. Students may receive credit for only one of the following courses: BMGT 384, BMGT 425, or MGMT 425.

BMGT 388B Virtual Management (3)
An overview of the key organizational and individual issues involved in technology-assisted organization and employee management, i.e., virtual or distance management. Discussion covers principles of distance management, technology, and dos and don’ts. Topics include gauging organization and employee readiness for technology-enabled communication and telecommuting; identifying appropriate job types and flexibility options; applying effective communication strategies and methods when utilizing computers and telecommunication technologies; and implementing and evaluating management procedures and policies in flexible organizations.

BMGT 388F Personal Financial Management (1)
(For students specializing in both business and nonbusiness disciplines.) A practical overview of personal finance management that blends financial theory and applications. The development of personal financial management skills (e.g., budgeting income and expenditures, planning for financial security and retirement) is encouraged, while an understanding of elements of the U.S. financial structure, such as savings and investment alternatives, financing and credit sources, the role of insurance in protecting income and assets, and federal income tax issues, is provided. Students may receive credit for only one of the following courses: BMGT 342, BMGT 388F, or BMGT 388N.

BMGT 388G Effective Business Presentations (1)
An overview of the process of creating and delivering effective business presentations. Focus is on the importance of effective communication in business. Topics include audience analysis, presentation planning, outline development, style alternatives, presentation structure (i.e., the beginning, body, ending, and questions and answers), visual aids, and delivery techniques.

BMGT 391 Motivation, Performance, and Productivity (3)
Prerequisite: BMGT 364. An examination of the challenges of motivating employees. Topics include effective principles for job design, theories and practices of successful leadership, the setting of goals and objectives, the development of reward systems, and the attributes of effective managerial communication. The causes and impact of performance problems and methods for measuring management practices are explored. Students may receive credit for only one of the following courses: BMGT 391, BMGT 398S, or HRMN 394.

BMGT 392 Global Business Management (3)
(Fulfills the international perspective requirement.) Prerequisites: BMGT 110 (or at least two years of business and management experience) and ECON 203. Examination and analysis of global business in its historical, theoretical, environmental, and functional dimensions. Focus is on understanding the growing economic interdependence of nations and its impact on managerial and corporate policy decisions that transcend national boundaries. Topics include the nature and scope of international business; the institutional, sociocultural, political, legal, ethical, and economic environments; trade, foreign investment, and development; transnational management (including global operations), strategic planning, human resources, marketing, and finance; and international business diplomacy and conflict resolution. Students may receive credit for only one of the following courses: BMGT 392, MGMT 305, or TMGT 390.

BMGT 393 Real Estate Principles I (3)
(Designed to fulfill the requirements for the Maryland licensing examination to sell real estate.) Prerequisite: ECON 203 or ECON 205. A survey of the principles, definitions, and uses of real estate. Topics include real estate as a business, problems of construction and home ownership, city planning, and public control and ownership of real estate.

BMGT 394 Real Estate Principles II (3)
(Designed to fulfill the requirements for the Maryland licensing examination to sell real estate.) Prerequisite: BMGT 393. A continuation of the study of real estate. Topics include principles, definitions, professional issues and problems, construction and ownership problems, and other major aspects of real estate sales. Students may receive credit for only one of the following courses: BMGT 394 or BMGT 398H.

BMGT 398 Special Topics in Business and Management (1–3)
Intensive inquiry into special topics in business and management that reflect the changing needs and interests of students and faculty.
BMGT 405 Environmental Management and Business (3)
(Formerly BMGT 498E) Examination and analysis of salient environmental issues and their impact on business management and institutional policies and strategies in both domestic and global settings. Topics include air- and water-quality controls, toxic substances, hazardous waste, energy and natural resources, deforestation, biological diversity, global warming, and ozone depletion. These issues are examined from the perspectives of ecology, ethics, the law, and public policy. Discussion covers the implications of sociopolitical and economic issues (e.g., population, poverty, trade, business growth, sustainable development, and competitiveness) on the environment. Students may receive credit for only one of the following courses: BMGT 405, BMGT 498F or MGMT 498F.

BMGT 407 Global Commerce (3)
(Formerly BMGT 498S) An examination and analysis of global commerce involving the flow of goods and services among nations and the use of e-commerce in the transactional process. Topics include international trade policy and structure; export-import strategies; documentary sales transactions and standard international commercial terms; commercial financing, letters of credit, and transnational banking; technology transfer; transportation logistics; global e-commerce; and current policy issues. Students may receive credit for only one of the following courses: BMGT 407 or BMGT 498S.

BMGT 411 Business Performance (3)
Presentation of analytical approaches to comprehend and solve business performance problems. Focus is on powerful techniques for solving problems of managing people and for understanding their behavior in organizations. Topics include how to recognize, pinpoint, analyze, develop, and make decisions. Complex real-world situations that confront managers and supervisors in a business environment or organization are considered. Discussion covers techniques for identifying and choosing among goals and strategies, resolving operational and structural difficulties, and making decisions based on knowns and unknowns and pros and cons using a practical approach toward problems. The techniques provided are applicable to knowledge-, manufacturing-, service-, or government-based organizations. Students may receive credit for only one of the following courses: BMGT 411 or TMGT 411.

BMGT 412 Business Evaluation and Reengineering (3)
A survey of the techniques and methodologies used to determine whether business processes are operating successfully and how to reengineer them for efficiency, economy, productivity, and competitive advantage. Topics include identifying the goals and objectives of a business program, examining the use of specific research designs for collecting data, collecting and using data/information for analysis and evaluation, and recognizing the functions that statistics serve in evaluation processes. Review also covers technology and business process reengineering and some tools for business reengineering. Students may receive credit for only one of the following courses: BMGT 412 or TMGT 412.

BMGT 428 Legal Aspects of Technology Management (3)
(Formerly BMGT 498P) An examination and analysis of legal and policy issues involving the development, acquisition, application, and use of technology and their impact on business and management in the domestic and global environments. Topics include intellectual property issues encompassing patent, copyright, and trademark protections in information and biotechnology; privacy and security concerns; domain names; government regulation and antitrust; software licensing; tort and computer crimes, and computer protection. The role of global institutions is also explored. Students may receive credit for only one of the following courses: BMGT 428 or BMGT 498J.

BMGT 436 Managing Entrepreneurial Ventures (3)
Prerequisite: BMGT 330 or familiarity with the business functions and factors involved with planning and managing an entrepreneurial venture. An exploration of entrepreneurial management and strategies in various competitive situations and stages of development. Topics include the development of partnerships, joint ventures, strategic alliances, and licensing. Issues regarding management, financing, marketing, production, administration, human resources, and growth of the business are analyzed. Discussion covers strategies and tactics using environmental scanning, analysis, and planning and decision making (including reviewing relevant options and opportunities, forecasting demand and sales, estimating costs, and developing pro forma financial statements) by entrepreneurs. Potential business opportunities are assessed using exercises, case studies, and research related to new technologies, innovation, competition, economic and social change, governmental regulation and laws, major product and service features, organizational and human resource information management, global issues, financial management, marketing, operations, and customer service. Students may receive credit for only one of the following courses: BMGT 436, BMGT 461, or MGMT 461.
BMGT 437 International Business Law (3)
(Formerly BMGT 498P) Prerequisite: BMGT 380. A conceptual and functional analysis and application of transnational legal principles relevant to the conduct and understanding of global business and economic transactions. Topics include the international legal environment and process; transactional dimensions, including business forms and foreign investments; international and regional organizations; international contracts and sales; the regulation of international trade; national and international economic controls; legal aspects of management, marketing, and finance that focus on global issues related to employment, the environment, technology transfer, and trade financing; and dispute resolution. Students may receive credit for only one of the following courses: BMGT 437 or BMGT 498P.

BMGT 440 Financial Management (3)
Prerequisite: BMGT 340. Analysis and discussion of the financial decisions of national and multinational corporations, based on case studies and reading. Financial principles and concepts are applied to solve financial problems and make financial and corporate policy at the executive level. Topics include assessment of the financial health of the organization, short- and long-term financial management, project and company valuation, cost of capital, risk analysis, investment decisions, and capital markets.

BMGT 443 Security Analysis and Valuation (3)
Prerequisite: BMGT 343. A study of concepts, methods, models, and empirical findings. Theory is applied to the analysis, valuation, and selection of securities, especially common stock.

BMGT 444 Futures Contracts and Options (3)
Prerequisite: BMGT 343. A study of institutional features and the economic rationale underlying markets in futures and options. Topics include hedging, speculation, structure of futures prices, interest-rate futures, efficiency in futures markets, and stock and commodity options.

BMGT 445 Commercial Bank Management (3)
Prerequisite: BMGT 340. An analysis and discussion of cases and readings in commercial bank management. Discussion covers the loan function and the management of liquidity reserves, investments for income, and sources of funds. The objectives, functions, policies, organization, structure, services, and regulations of banks are considered.

BMGT 446 International Finance (3)
Prerequisite: BMGT 340. Analysis and discussion of financial management issues from the perspective of the multinational firm. Topics include the organization and functions of foreign exchange and international capital markets, international capital budgeting, financing foreign trade, and designing a global financing strategy. Emphasis is on how to manage financial exchange and political risks while maximizing benefits from global opportunities faced by the firm.

BMGT 454 The Global Manager and Public Policy (3)
(Formerly BMGT 498O) Prerequisite: BMGT 392. Examination and analysis of the institutional dimensions of public policy in the international arena and their strategic impact on the decisions of the global manager. Focus is on the conceptual and functional definition and application of global public policy, including the role of nongovernmental organizations (NGOs), in the context of leadership and ethical responsibilities across national borders and cultures; the transnational policy implications of global regimes spanning the relevant areas of business and global governance. Students may receive credit for only one of the following courses: BMGT 454, BMGT 498O, or MGMT 498O.

BMGT 456 Multinational Management (3)
(Formerly BMGT 498R) An examination and analysis of multinational management functions and processes (including planning, organizing, leading, and controlling) across national cultures and borders and in globally diverse transnational environments and organizations. Topics include cross-cultural strategic planning, organizational design and structures; cross-cultural leadership, decision making, motivation, communication, and business practices; headquarters-subsidiary control relationships; international staffing, employee relations and human resource management; and cross-national ethics and social responsibility. Students may receive credit for only one of the following courses: BMGT 456 or BMGT 498R.

BMGT 464 Organizational Behavior (3)
Prerequisites: BMGT 110 (or at least two years of business and management experience) and 364. An examination of research and theory on the forces underlying the way members of an organization behave. Topics include the behavior of work groups and supervisors, intergroup relations, employees’ goals and attitudes, problems in communication, the circumstances of change in an organization, and the goals and design of an organization.
BMGT 465 Organization Development and Change (3)
Prerequisite: BMGT 364. An introduction to a method of making organizations and individuals more adaptive and productive. The objective is to help organizations cope with change. Techniques of intervention (such as team building, process consultation, feedback, and conflict resolution) are introduced and explained. Students may receive credit for only one of the following courses: BMGT 465, MGMT 398K, MGMT 465, or TMGT 350.

BMGT 482 Business and Government (3)
Prerequisite: BMGT 110 (or at least two years of business and management experience). A study of the role of government in the modern economy and the intricate relationships between the public and private sectors in the domestic and global environments. Emphasis is on the regulatory and public policy dimensions of government intervention, the promotion of business, corporate responses to government action, and social responsibility and governance issues in the changing domestic and global marketplaces. Students may receive credit for only one of the following courses: BMGT 482 or TMGT 340.

BMGT 484 Managing Teams in Organizations (3)
Prerequisite: BMGT 364. An examination of how and why team development can be effective in organizations and when it is appropriate. Topics include group dynamics, stages of group development, team-building techniques, team goals and leadership, and interpersonal and individual skills to foster cohesion and effective performance. Students may receive credit for only one of the following courses: BMGT 484, BMGT 498H, or MGMT 498H.

BMGT 486A Internship in Business and Management Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in business and management. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to business and management and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

BMGT 486B Internship in Business and Management Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in business and management. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to business and management and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

BMGT 487 Project Management I (3)
(The first course in the two-course series BMGT 487–488.)
Prerequisite: BMGT 364. An introduction to project management principles, concepts, and software applications and an exploration of project management applications in introductory project situations. Project management is examined in terms of practical applications and practices. Appropriate organizational structures, such as collegial and matrix types, are described and assessed. Discussion also covers the practical considerations of designing a project management system. Students may receive credit for only one of the following courses: BMGT 487, IFSM 438, or TMGT 430.)
Career Planning

Courses in career planning (designated CAPL) may be applied toward

- electives

CAPL 398A Career Planning Management (1)

A survey of strategies for managing career change. Strategies focus on identifying and evaluating skills, self-marketing, and tapping into the hidden job market. Topics include résumé development, informational interviewing, salary negotiation, tips for career success, and the complicated federal hiring process.

Chemistry

Courses in chemistry (designated CHEM) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in the biological and physical sciences;
- a major in investigative forensics;
- a minor in natural science; and
- electives (including related requirements for the environmental management major).

A description of the curriculum for the investigative forensics major begins on p. 63. A description of the curriculum for the natural science minor begins on p. 74.

CHEM 103 General Chemistry I (4)

(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Fulfills the laboratory science requirement.) Prerequisite: MATH 107 or MATH 115. A study of the nature and composition of matter. Elements, inorganic compounds, and chemical calculations are covered. Students may receive credit for only one of the following courses: CHEM 102, CHEM 103, CHEM 105, CHEM 107, or CHEM 121.
CHEM 113 General Chemistry II (4)
(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Fulfills the laboratory science requirement.) Prerequisite: CHEM 103 or CHEM 105. A study of kinetics; homogeneous, heterogeneous, and ionic equilibria; oxidation/reduction reactions; electrochemistry; and chemistry of the elements. Students may receive credit for only one of the following courses: CHEM 113 or CHEM 115.

CHEM 131 Chemistry I: Fundamentals of General Chemistry (3)
(The first course in a four-semester sequence, for students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Formerly CHEM 103.) Prerequisite: MATH 012 or higher. Corequisite: CHEM 132. An overview of the Periodic Table, inorganic substances, ionic and covalent bonding, bulk properties of materials, chemical equilibrium, and quantitative chemistry. Students may receive credit for only one of the following courses: CHEM 102, CHEM 103, CHEM 105, CHEM 107, CHEM 121, or CHEM 131.

CHEM 132 General Chemistry I Laboratory (1)
(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Not open to students who have received credit for CHEM 102, CHEM 103, CHEM 105, CHEM 107, or CHEM 121. Fulfills the laboratory science requirement.) Corequisite: CHEM 131. Introduction to the quantification of chemical substances, including the concept of the mole and chemical stoichiometry. Additional work involves the synthesis of ionic substances and their qualitative characterization.

CHEM 231 Organic Chemistry I (3)
(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Not open to students who have completed CHEM 233 or CHEM 237. Formerly CHEM 233.) Prerequisite: CHEM 113, CHEM 135–136, or CHEM 153 with a grade of C or better. A study of the chemistry of carbon, including aliphatic compounds, aromatic compounds, stereochemistry, arenes, halides, alcohols, esters and spectroscopy. Students may receive credit for only one of the following courses: CHEM 104, CHEM 231, CHEM 233, or CHEM 235.

CHEM 232 Organic Chemistry Laboratory I (1)
(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Not open to students who have completed CHEM 104, CHEM 233, or CHEM 237. Formerly CHEM 233. Fulfills the laboratory science requirement.) Prerequisite: CHEM 113, CHEM 135–136, or CHEM 153 with a grade of C or better. Corequisite: CHEM 231. Experience in developing some basic laboratory techniques, including recrystallization, distillation, extraction, and chromatography. Students may receive credit for only one of the following courses: CHEM 104, CHEM 231, CHEM 232, or CHEM 237.

CHEM 241 Organic Chemistry II (3)
(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. A continuation of CHEM 231.) Prerequisite: CHEM 231–232, CHEM 233, or CHEM 237 with a grade of C or better. Further study of the chemistry of carbon, with emphasis on molecular structure, substitution reactions, carbonium ions, aromaticity, synthetic process, and macromolecules. Students may receive credit for only one of the following courses: CHEM 241, CHEM 243, or CHEM 247.

CHEM 242 Organic Chemistry Laboratory II (1)
(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Fulfills the laboratory science requirement.) Prerequisite: CHEM 231–232, CHEM 233, or CHEM 237 with a grade of C or better; corequisite CHEM 241. A study of synthetic organic chemistry through functional group manipulation and an introduction to instrumentation essential to analysis and structure elucidation. Students may receive credit for only one of the following courses: CHEM 242, CHEM 243, or CHEM 247.
Communication Studies

Courses in communication studies (designated COMM) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in communications;
- a major in communication studies or laboratory management;
- a minor in communication studies, journalism, or speech communication;
- a certificate in Workplace Communications; and
- electives.

All 3-credit COMM courses (except COMM 300, 379A, 380, 400, 486A, 486B, and 493) may be applied toward the general education requirement in communications for another writing course, but not toward the general education requirement in upper-level intensive writing.

COMM 293, 300, 380, 390, 395, 400, 490, 491, 492, 493, 494, 495, and 496 may be applied toward the general education requirement in communications for a third writing course or a speech communication course.

Only COMM 393, 393X, 394, and 394X (as well as ENGL 391 and 391X) are designated as writing intensive and may be applied toward the general education requirement in upper-level intensive writing.

Specific COMM courses may be recommended in relation to specific majors and minors. Students should check the descriptions of their curricula.

A description of the curriculum for the communication studies major and minor begins on p. 27. Descriptions of related curricula may be found on the following pages: journalism (p. 64), laboratory management (p. 65), and speech communication (p. 82).

COMM 293 Technical Report Writing (3)
(Formerly ENGL 293. Fulfills the general education requirement in communications.) Prerequisite: ENGL 101 or ENGL 101X. An introduction to the process of technical writing. Discussion covers conducting audience and needs analyses; organizing and writing clear, precise, grammatically correct technical prose; and producing a variety of routine technical reports and correspondence. Students may receive credit for only one of the following courses: COMM 293 or ENGL 293.

COMM 300 Communication Theory (3)
(Fulfills the general education requirement in communications, but is not a writing course.) Prerequisite: ENGL 101 or ENGL 101X. An introduction to the study of communication theory. The basic theories of human communication and their applications in the contexts of interpersonal, small-group, organizational, public, and intra/intercultural communication are analyzed. The relationship between communication theory, research, and practice is explored. Topics range from communication as a way of “knowing” to contemporary issues associated with computer-mediated communication.

COMM 319A Designing and Delivering Effective Presentations (1)
A simulation of a presentation project from conception, through creation and selection of visual aids, to delivery and evaluation. Focus is on conducting an audience analysis, developing a presentation plan, building a presentation using traditional or multimedia resources, delivering the presentation, and evaluating the results.

COMM 319C Copyright and Creativity: A Guide for Writers and Artists (1)
An introduction to the concepts and issues associated with current interpretation of intellectual property laws as they apply to the creative professions. Case studies in copyright and patent law are used to demonstrate how to protect creative work. Assignments may include a short paper and a final examination.

COMM 379A Critical Perspectives in Mass Communications (3)
(Fulfills the general education requirement in communications, but is not a writing course.) An in-depth examination of mass communications theory. Topics include media uses, interaction and impact, and ethical issues surrounding the development and dissemination of mass media. The roles, behavior, messages, and control of mass media producers are examined. Emphasis is on critical thinking and analysis of vital aspects of pervasive elements of popular culture, such as news, advertising, children’s entertainment, and a free press.
COMM 380 Language in Social Contexts (3)
(Fulfills the general education requirement in communications, but is not a writing course.) Prerequisite: ENGL 101 or ENGL 101X. An examination of the linguistic components of languages, with special emphasis on the English language, its origins, continued development, and use in speaking and writing. Categories of speech and methods of written communication are examined from the perspective of regional and social variation. Discussion covers cultural, gender, and racial variations, as well as underlying perspectives and assumptions.

COMM 390 Writing for Managers (3)
(Fulfills the general education requirement in communications.) Prerequisite: ENGL 101 or ENGL 101X. A practicum in the kinds of writing skills that managers need for the workplace. Communication skills emphasized include planning information, developing reader-based prose, improving personal writing performance and guiding the writing of subordinates, and mastering such writing tasks as strategic plans and performance appraisals. Students may receive credit for only one of the following courses: COMM 390 or HUMN 390.

COMM 393 Technical Writing (3)
(Students for whom English is a second language should consider taking COMM 393X instead. Fulfills the general education requirement in intensive upper-level writing.) Prerequisite: ENGL 101 or ENGL 101X. The writing of technical papers and reports. Focus is on building skills in critical thinking, research, and document design. Assignments include composing a total of 6,000 words (approximately 25 pages) in various formats (e.g., the oral presentation, the résumé, correspondence, manuals, procedures, instructions, and different types of reports, including proposal, progress, analytic, and feasibility). Students may receive credit for only one of the following courses: COMM 393, COMM 393X, ENGL 393, or ENGL 393X.

COMM 390X Technical Writing (3)
(Enrollment restricted to students for whom English is a second language. Fulfills the general education requirement in intensive upper-level writing.) Prerequisite: ENGL 101 or ENGL 101X. The writing of technical papers and reports. Focus is on building skills in critical thinking, research, and document design. Assignments include composing a total of 6,000 words (approximately 25 pages) in various formats (e.g., the oral presentation, the résumé, correspondence, manuals, procedures, instructions, and different types of reports, including proposal, progress, analytic, and feasibility). Students may receive credit for only one of the following courses: COMM 393, COMM 393X, ENGL 393, or ENGL 393X.

COMM 394 Business Writing (3)
(Students for whom English is a second language should consider taking COMM 394X instead. Fulfills the general education requirement in intensive upper-level writing.) Prerequisite: ENGL 101 or ENGL 101X. An introduction to professional workplace writing. Topics include context, purpose, audience, style, organization, format, technology, results, and strategies for persuasion when writing typical workplace messages. In addition to shorter assignments, a substantial formal report that incorporates data analysis and support for conclusions or recommendations is required. Assignments include composing a total of 6,000 words (approximately 25 pages). Students may receive credit for only one of the following courses: COMM 394, COMM 394X, ENGL 394, or ENGL 394X.

COMM 394X Business Writing (3)
(Enrollment restricted to students for whom English is a second language. Fulfills the general education requirement in intensive upper-level writing.) Prerequisite: ENGL 101 or ENGL 101X. An introduction to professional workplace writing. Topics include context, purpose, audience, style, organization, format, technology, results, and strategies for persuasion when writing typical workplace messages. In addition to shorter assignments, a substantial formal report that incorporates data analysis and support for conclusions or recommendations is required. Assignments include composing a total of 6,000 words (approximately 25 pages). Students may receive credit for only one of the following courses: COMM 394, COMM 394X, ENGL 394, or ENGL 394X.

COMM 400 Communication and the Law (3)
(No previous study of law required. Fulfills the general education requirement in communications, but is not a writing course.) Prerequisite: JOUR 201 or a 300-level COMM course. An examination of the important legal issues that affect professional communicators. Topics include copyright, intellectual property, fair use, privacy, freedom of information, freedom of speech, and freedom of the press, as well as issues raised by the growth of the Internet, the use of digital technologies, and the creation of media content. Students may receive credit for only one of the following courses: COMM 400 or JOUR 400.

COMM 400X Communication and the Law (3)
(Enrollment restricted to students for whom English is a second language. Fulfills the general education requirement in intensive upper-level writing.) Prerequisite: ENGL 101 or ENGL 101X. An examination of the important legal issues that affect professional communicators. Topics include copyright, intellectual property, fair use, privacy, freedom of information, freedom of speech, and freedom of the press, as well as issues raised by the growth of the Internet, the use of digital technologies, and the creation of media content. Students may receive credit for only one of the following courses: COMM 400, COMM 400X, ENGL 394, or ENGL 394X.
COMM 486A Internship in Communication Studies Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in communication studies. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to communication studies and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

COMM 486B Internship in Communication Studies Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in communication studies. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to communication studies and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

COMM 490 Seminar in Technical Communication (3)
(Intended as a final, capstone course to be taken in a student’s last 15 credits. Fulfills the general education requirement in communications.) Prerequisites: COMM 300 and either COMM 393 or COMM 394. A study of technical communication that integrates knowledge gained through previous coursework and experience and builds on that conceptual foundation through integrative analysis, practical application, and critical thinking. Emerging issues in creating, maintaining, storing, and revising technical information are considered. Topics include textual and online resources that are useful to technical communicators and the requirements for a professional portfolio. Emphasis is on professional communication practices. Assignments include oral presentations. Students may receive credit only once under this course number and for only one of the following courses: COMM 490 or ENGL 489A.

COMM 491 Technical Editing (3)
(Fulfills the general education requirement in communications.) Prerequisite: COMM 393 or COMM 394 required. Recommended: ENGL 281 or familiarity with grammar. A systematic approach to methods of preparing a document for publication or other disseminations. Discussion addresses the full range of editing levels (copyediting, substantive editing, and document design) and includes an overview of design goals that reflect specific readers and purposes. Students may receive credit for only one of the following courses: COMM 491 or ENGL 489B.

COMM 492 Grant and Proposal Writing (3)
(Fulfills the general education requirement in communications.) Prerequisite: COMM 393 or COMM 394. An advanced study of technical writing, focusing on composing competitive proposals in response to Request for Proposals (RFPs) and other funding solicitations from the federal government, community and private sources. Discussion covers stages of the proposal-development process, including researching the funding agency for its mission, target populations, and problems of interest; assessing the RFP to determine evaluation criteria; and assembling the required elements of a successful proposal. Assignments include working in teams to prepare competitive proposal. Students may receive credit for only one of the following courses: COMM 492 or ENGL 489C.
INFORMATION ON COURSES

Computer and Information Science

Courses in computer and information science (designated CMIS) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in computing;
- a major in computer and information science, computer information technology, or computer studies;
- a minor in computer studies;
- a certificate in Database Design and Development, Object-Oriented Design and Programming, Software Engineering, UNIX System Administration, or Web Programming; and
- electives.

Students without recent experience in problem solving with computers must take CMIS 102. It is recommended that for the first two terms students should not take two (or more) courses that involve programming. The suggested sequence of courses (for students who already have the prerequisite knowledge for CMIS 140) is CMIS 140 and 160 in the first term followed by CMIS 240 and 310 in the second.

A description of the curriculum for the computer and information science major begins on p. 29. Descriptions of other computer-related curricula may be found on the following pages: computer information technology (p. 31), computer science (p. 32), computer studies (p. 34), and information systems management (p. 60).

CMIS 102 Introduction to Problem Solving and Algorithm Design (3)

A study of techniques for finding solutions to problems through structured programming and step-wise refinement. Topics include principles of programming, the logic of constructing a computer program, and the practical aspects of integrating program modules into a cohesive whole. Algorithms are used to demonstrate programming as an approach to problem solving, and basic features of a modern object-oriented language are illustrated. Students may receive credit for only one of the following courses: CMIS 102, CMIS 102A, or CMSC 101.
CMIS 141 Introductory Programming (3)  
(Not open to students who have taken CMIS 340. The first in a sequence of courses in Java.) Prerequisite: CMIS 102. Recommended: MATH 107. A study of structured and object-oriented programming using the Java language. Discussion covers the discipline, methodologies, and techniques of software development. Algorithms and simple data structures are developed and implemented in Java; object-oriented concepts are applied. Students may receive credit for only one of the following courses: CMIS 141 or CMIS 141A.

CMIS 160 Discrete Mathematics for Computing (3)  
(Not open to students who have completed CMSC 150.) Recommended: MATH 107. An introduction to discrete mathematical techniques for solving problems in the field of computing. Basic principles from areas such as sets, relations and functions, logic, proof methods, and recursion are examined. Topics are selected on the basis of their applicability to typical problems in computer languages and systems, databases, networking, and software engineering.

CMIS 241 Data Structures and Abstraction (3)  
Prerequisite: CMIS 141 or CMIS 141A. A study of program design and the implementation of abstract data types in Java. Topics include data structures such as stacks, queues, lists, and trees and algorithms used for sorting and searching.

CMIS 310 Computer Systems and Architecture (3)  
(Not open to students who have completed CMSC 311.) Prerequisite: CMIS 140, CMIS 141, or CMIS 141A. Recommended: CMIS 160. A study of the fundamental concepts of computer architecture and factors that influence the performance of a system. Topics include data representation and the design and analysis of combinational and sequential circuits. Focus is on how basic hardware components (multiplexers, decoders, memories, arithmetic-logic units, etc.) are built. Discussion covers hard-wired and microprogrammed design of control units and concepts such as pipelining and memory hierarchy. Students may receive credit for only one of the following courses: CMIS 270, CMIS 310, CMSC 311, or IFSM 310.

CMIS 315 Programming and Application in C++ (3)  
Prerequisite: CMIS 241 or an equivalent course in data structures, using a language other than C++ (such as C, Pascal, Ada, Java, or PL/I). A one-semester study of the important features of the C++ programming language. Programming projects in C++ are included. Students may receive credit for only one of the following courses: CMIS 240 or CMIS 315.

CMIS 320 Relational Databases (3)  
Prerequisite: CMIS 102A, CMIS 141, or CMIS 141A. A study of the functions and underlying concepts of relationally organized database systems. Discussion covers data models and their application to database systems. The entity/relationship (E/R) model and Codd’s relational theory—including relational algebra, normalization and integrity constraints, and the Structured Query Language (SQL)—are emphasized. Physical design and data administration issues are addressed. Projects include hands-on work with E/R and relational models (using industry standard database software). Students may receive credit for only one of the following courses: CMIS 320 or IFSM 410.

CMIS 325 UNIX with Shell Programming (3)  
Prerequisite: CMIS 140, CMIS 141, or CMIS 141A. A study of the UNIX operating system. Topics include file structures, editors, pattern-matching facilities, shell commands, and shell scripts. Shell programming is presented and practiced to interrelate system components. Projects give practical experience with the system.

CMIS 330 Software Engineering Principles and Techniques (3)  
Prerequisite: CMIS 240, CMIS 241, CMIS 340, or CMIS 315. Recommended: CMIS 310. A study of the process of software engineering from initial concept through design, development testing, and maintenance to retirement of the product. Development life-cycle models are presented. Topics include issues in configuration management, integration and testing, software quality, project economics, operations, human factors, and organizational structures. Students may receive credit for only one of the following courses: CMIS 330 or CMIS 388A.
CMIS 335 Software Safety (3)
Prerequisite: CMIS 330. An examination of software safety problems (including specification errors, design/coding flaws, or lack of generic safety-critical requirements) that can contribute to or cause a system failure. The objective is to provide management and engineering guidelines to achieve a reasonable level of assurance that software will execute with an acceptable level of safety risk. Potential system hazards are analyzed as functional or generic and traced to either the software or the environment in which the software is used. Guidance on developing a process that can identify, analyze, and then prove, eliminate, or mitigate such potential system hazards according to priority is provided. Students may receive credit for only one of the following courses: CMIS 335 or CMIS 398S.

CMIS 340 Programming in Java (3)
Prerequisite: CMIS 240 or an equivalent course in data structures, using a language other than Java (such as C, C++, Pascal, Ada, or PL/I). A one-semester study of the important features of the Java programming language. Topics include design of classes, class libraries, data structures, exception handling, threads, input and output, and applet programming. Programming projects in Java are included. Students may receive credit for only one of the following courses: CMIS 241 or CMIS 340.

CMIS 345 Object-Oriented Design and Programming (3)
Prerequisite: CMIS 241 or CMIS 340. An examination of the principles, practices, and applications of programming in an object-oriented environment. Assignments include programming projects in Java that implement techniques of object-oriented design.

CMIS 355 Database Forms (3)
(Formerly CMIS 398F) Prerequisite: CMIS 320. A comprehensive study of the design and development of graphical user interface forms for modern relational databases in the client/server environment. Focus is on developing a hierarchy of form applications using both Microsoft Access and Oracle. Topics include the construction of simple forms using drop-and-drag components and advanced features of vendor form-building products. Some Visual Basic and PL/SQL programming is used to provide robust functionality to the forms. Accurate display and processing of data and user friendliness are stressed. Students may receive credit for only one of the following courses: CMIS 355 or CMIS 398F.

CMIS 370 Data Communications (3)
Prerequisite: CMIS 310. Investigation of the effects of communication technology on information systems. Major topics include components of communication systems, architectures and protocols of networks, security measures, regulatory issues, and the design of network systems. Issues and applications in local area networks and communication services are covered. Students may receive credit for only one of the following courses: CMIS 370, CMSC 370, or IFSM 450.

CMIS 375 Programming in Perl (3)
Prerequisite: CMIS 140, CMIS 141, CMIS 141A, or equivalent programming experience. An introduction to the Perl scripting language. The basic features of Perl (including data and variable types, operators, statements, regular expressions, functions, and input/output) are covered. Additional topics include object-oriented programming and Common Gateway Interface (CGI) programming. Assignments include writing Perl scripts. Students may receive credit for only one of the following courses: CMIS 375 or CMIS 398P.

CMIS 398A Programming in C# (3)
Prerequisite: CMIS 240, CMIS 241, CMIS 340, or CMIS 315. An examination of the features of the C# programming language. Topics include design of classes, class libraries, exception handling, input and output, and Windows Forms and Web Forms programming. Assignments include programming in C#.

CMIS 415 Advanced UNIX and C (3)
Prerequisites: CMIS 241 (or CMIS 240, CMIS 315, or CMIS 340) and 325. Recommended: CMIS 310. An investigation of the interaction between the UNIX operating system and the C programming language. The features of UNIX that support C, including library and system calls, UNIX utilities, debuggers, graphics, and file structure, are presented. Assignments include programming projects in C that implement UNIX command features.
CMIS 420 Advanced Relational Databases (3)
Prerequisite: CMIS 320. A study of advanced logical and physical design features and techniques of relational databases appropriate to the advanced end user, database designer, or database administrator. Topics include object-relational concepts, data modeling, challenge areas, physical design in relation to performance, and relational algebra as a basis of optimizer strategies. Future trends, advanced concurrency control mechanisms, and maintenance issues such as schema restructuring are addressed. Projects include hands-on work (using industry standard database software) in designing and implementing a small database, creating triggers, loading through forms and utility, querying through interactive and embedded Structured Query Language (SQL), restructuring schema, and analyzing performance. Students may receive credit for only one of the following courses: CMIS 420, IFSM 411, or IFSM 498I.

CMIS 435 Computer Networking (3)
Prerequisite: CMIS 370. An overview of communications topics such as signaling conventions, encoding schemes, and error detection and correction. Emphasis is on routing protocols for messages within various kinds of networks, as well as on methods that network entities use to learn the status of the entire network. Students may receive credit for only one of the following courses: CMIS 435 or CMSC 440.

CMIS 440 Advanced Programming in Java (3)
Prerequisite: CMIS 241 or CMIS 340. An exploration of advanced Java applications. Topics include networking, client/server issues, Java database connectivity, remote method invocation, and Enterprise JavaBeans. Projects include group work and an in-depth case study of a Java-based system. Students may receive credit for only one of the following courses: CMIS 440 or CMIS 498A.

CMIS 445 Distributed Systems (3)
Prerequisites: CMIS 241 (or CMIS 240, CMIS 315, or CMIS 340) and 310. Recommended: CMIS 325. An exploration of protocols and methods for allocating to more than one processor various parts of the work associated with a single task. Emphasis is on environments such as array processing, parallel processing and multiprocessor systems and communication among cooperating processes. Topics include reliability, security, and protection, as well as how these issues affect the development of programs and systems. Standards for object-oriented programming (Common Object Request Broker Architecture) are discussed. Projects include programming. Students may receive credit for only one of the following courses: CMIS 445 or CMSC 445.

CMIS 455 Requirements Development (3)
Prerequisite: CMIS 330. A study of concepts and techniques for planning and developing high-quality software products. Fundamentals of specification (including formal models and representations, documents, and standards) are examined. Methods of specifying and developing requirements for generating software are discussed. Projects using these techniques are included. Students may receive credit only once under this course number.

CMIS 460 Software Design and Development (3)
Prerequisite: CMIS 330. An in-depth treatment of the concepts and techniques for designing and developing software for large projects. Discussion covers design strategies, principles, methodologies, and paradigms, as well as evaluation and representation. Other topics include architectural models and idioms, development tools and environments, implementation guidelines and documentation, and organization of design and development functions. Issues of program quality, program correctness, and system integration are also addressed. Project work incorporates principles and techniques of software design and development.

CMIS 465 Software Verification and Validation (3)
Prerequisite: CMIS 330. A study of tools, methods, and current practices for assessing the quality and correctness of software. Topics include the roles of testing and formal verification, fundamentals and formal models of program verification, planning and documentation for quality assurance, methods of performing technical reviews, strategies of system testing and integration planning, and principles and practices used in conducting tests.

CMIS 475 Advanced Programming in Perl (3)
Prerequisite: CMIS 375 or CMIS 398P. A study of advanced Perl features such as packages, modules, classes, and objects. Focus is on creating a complete Perl database application. A Web server is used to connect front-end technology such as HTML forms with back-end server-based Perl programming for functional Web-based client/server applications. Common Gateway Interface (CGI) programming is explored to provide database connectivity for use in the client/server model. Students may receive credit for only one of the following courses: CMIS 475 or CMIS 498P.
CMIS 485 Web Database Development (3)  
(Formerly CMIS 498B.) Prerequisite: CMIS 320, knowledge of relational database design and SQL, and programming language experience. Recommended: CMIS 241 or CMIS 340. An exploration of an assortment of current Web technologies and programming language options used to interface a relational database to a Web server. Technologies such as CGI/Perl, Active Server Pages, and Java are utilized in the lab. The three-tiered architecture is studied in depth via a number of hands-on activities and projects. Students may receive credit for only one of the following courses: CMIS 485 or CMIS 398B.)

CMIS 486A Internship in Computer Information Science Through Co-op (3)  
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in computer and information science. At least 12 hours per week must be devoted to new tasks for a total of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to computer and information science and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

CMIS 486B Internship in Computer Information Science Through Co-op (6)  
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in computer and information science. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to computer and information science and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

CMIS 498 Special Topics in Computer and Information Science (3)  
Prerequisites: Vary according to topic. A seminar on topics in computer and information science. May be repeated to a maximum of 6 credits when topics differ.

Computer Information Technology

Courses in computer information technology (designated CMIT) may be applied as appropriate (according to individual program requirements) toward:

- the general education requirement in computing;
- a major in computer information technology, computer and information science, or computer studies;
- a minor in computer studies;
- a certificate in Computer Networking or UNIX System Administration; and
- electives.

A description of the curriculum for the computer information technology major begins on p. 31. Descriptions of other computer-related curricula may be found on the following pages: computer and information science (p. 29), computer science (p. 32), computer studies (p. 34), and information systems management (p. 60).

CMIT 261 Introduction to Oracle (3)  
(Formerly CMIT 261O.) An introduction to Oracle and Structured Query Language (SQL). The syntax and function of the American National Standards Institute's standard SQL are examined. SQL's data definition language is used to create tables, including constraints, and SQL's data manipulation language is used to insert, update, and delete data. Emphasis is on learning queries, ranging from the simple to the complex. Additional database objects (such as views, sequences, synonyms, aliases, and indexes) and SQL built-in functions are explored. Other topics include using the Oracle SQL command editor and the local system editor and creating simple reports with SQL Loader and SQL Plus. Students may receive credit for only one of the following courses: CMIT 261 or CMIT 261O.
CMIT 265 Networking Essentials (3)
An introduction to networking technologies for individual workstations, local area networks, wide area networks, and the Internet, with emphasis on the OSI model, security, and networking protocols. A general review of several industry-standard network operating systems is provided. Topics covered should be useful in preparing for the Network+ certification exam. Students may receive credit for only one of the following courses: CMIT 265 or CMIT 265M.

CMIT 320 Network Security (3)
Prerequisite: CMIT 265 with grade of C or better or CompTIA Network+ certification. A study of the fundamental concepts and techniques of computer network security and their implementation. Topics include authentication, remote access, Web security, intrusion detection, basic cryptography, physical security, and disaster recovery. Opportunities for hands-on exercises are provided. Course material relates to topics covered on the vendor-neutral CompTIA Security+ Certification examination, which is recognized worldwide as the standard of competency for entry-level network security professionals.

CMIT 350 Interconnecting Cisco Devices (3)
(Designed to help students prepare for the Cisco Certified Network Associate Examination 640-441.) Prerequisite or corequisite: CMIT 265. Presentation of and practice in the concepts and commands required to configure Cisco switches and routers in multiprotocol internetworks. Routing and switching concepts (Layer 2 and Layer 3 technologies) using Cisco switches and Cisco routers are covered. Focus is on developing the skills necessary to install, configure, and operate Cisco routers and switches within LAN and WAN environments. Projects include configuring various protocols including IP, IPX, RIP, IGRP and Frame Relay. Students may receive credit for only one of the following courses: CAPP 498E, CMIT 350, or CMIT 499D.

CMIT 361 Developing PL/SQL Applications (3)
Prerequisite: CMIT 261. An in-depth study of the use of PL/SQL to develop enterprise-level database applications in industry. Topics include application programs and standard third-generation language (3GL) programming constructs (such as IF-THEN-ELSE, LOOPS, record-at-a-time processing, and error handling). Students may receive credit for only one of the following courses: CMIT 361 or IFSM 498O.

CMIT 364 Windows XP Professional (3)
(Formerly CMIT 499X.) Prerequisite: CMIT 265 with a grade of C or better. An introduction to Windows XP Professional. Focus is on developing the skills necessary to install, configure, and support Windows XP Professional as a desktop operating system in a generic operating environment. Topics include review of operating systems, administration, security, transmission control protocol/Internet protocol, and troubleshooting Windows XP Professional. Hands-on exercises are included. Students may receive credit for only one of the following courses: CMIT 364 or CMIT 499X.

CMIT 368 Windows Server 2003 (3)
Prerequisite: CMIT 265 with a grade of C or better. A study of Windows Server 2003 installation and administration. Focus is on developing the skills necessary to install and configure Windows Server 2003. Topics include support, connectivity, creation and management of user accounts, management of access to resources, the NT file system, and configuration and management of disks. Hands-on exercises are included.

CMIT 376 Windows Network Infrastructure (3)
Prerequisite: CMIT 367 or CMIT 368. The development of the knowledge and skills necessary to install, configure, manage, and support the Windows network infrastructure. Topics include automating Internet protocol address assignment using dynamic host configuration protocol, implementing name resolution using domain name service and Windows Internet naming service, setting up and supporting remote access to a network, configuring network security using public key infrastructure, integrating network services, and deploying Windows Professional or XP Professional using remote installation services. Hands-on exercises are included. Students may receive credit for only one of the following courses: CMIT 376 or CMIT 376M.

CMIT 377 Windows Directory Services Infrastructure (3)
Prerequisite: CMIT 367 or CMIT 368. The development of the knowledge and skills necessary to install, configure, manage, and support the Windows Active Directory service. Topics include understanding the logical and physical structure of Active Directory, configuring the domain name service to support Active Directory, creating and administering user accounts and group resources, controlling Active Directory objects, implementing and using group policy, managing replication of Active Directory, and maintaining and restoring the Active Directory database. Hands-on exercises are included. Students may receive credit for only one of the following courses: CMIT 377 or CMIT 377M.
CMIT 381 Oracle Database Administration (3)
Prerequisite: CMIT 261. A foundation in basic database administration tasks. Focus is on gaining a conceptual understanding of the Oracle database architecture and how the architectural structures work and interact with one another. Topics include how to create an operational database and properly manage the various structures in an effective and efficient manner. Hands-on exercises include configuring network parameters so that database clients and tools can communicate with an Oracle database server. Backup and recovery techniques are introduced, and various backup, failure, and restoration and recovery scenarios are examined. Students may receive credit for only one of the following courses: CMIT 381 or CMIT 381O.

CMIT 391 UNIX/Linux System Administration (3)
Prerequisite: CMIS 325. A study of the UNIX/Linux operating system, combining theory and lab work. Discussion covers document processing, file system administration, and the boot-up/shutdown process. Topics include disk partitioning schemes, software RAID (redundant array of independent disks), and LVM (logical volume manager) configuration. Review also covers user administration, disk quotas, group restrictions, and password aging. Process management and automation are examined through “cron” and “at” commands. Practice in configuring the X Window System and client networking is provided. Network security is addressed through the use of IP tables to construct firewall rules. Students may receive credit for only one of the following courses: CMIS 390, CMIT 391, or CMIS 398U.

CMIT 392 Designing and Implementing Databases with SQL Server (3)
Recommended: An understanding of relational database concepts. The development of the knowledge and skills necessary to design and implement databases with SQL Server. Topics include developing a logical data model, deriving the physical design, devising data services, creating and executing stored procedures, and constructing and maintaining a physical database. Hands-on exercises are included. Students may receive credit for only one of the following courses: CMIT 392 or CMIT 392M.

CMIT 394 Data Warehousing Using SQL Server (3)
Recommendation: An understanding of relational database concepts. A study of design and implementation of data warehouse solutions using SQL Server. Topics include defining the technical architecture for a data warehouse solution, developing the logical design, deriving the physical design, object linking and embedding, open database connectivity, ActiveX Data Objects, file management, data integrity, online analytical processing, monitoring and optimizing performance, and backup and disaster recovery. Hands-on exercises are included. Students may receive credit for only one of the following courses: CMIT 394 or CMIT 394M.

CMIT 450 Designing Cisco Networks (3)
(Designed to help students prepare for the Cisco Certified Design Associate Examination 640-861.) Prerequisite or corequisite: CMIT 350. The development of the knowledge and skills necessary for network design using Cisco Systems technologies. Fundamentals of small- and medium-size network design are introduced. Focus is on developing the skills to identify the Cisco products, LAN/WAN technologies, routing and bridging protocols, and Cisco IOS software features that meet a customer’s requirements for performance, capacity, and scalability in small- to medium-sized networks. Projects include designing simple routed LAN, routed WAN, switched LAN, and ATM LAN networks. Students may receive credit for only one of the following courses: CAPP 398C, CMIT 450, or CMIT 499C.

CMIT 480 Designing Security for a Windows Network (3)
Prerequisite: CMIT 320, CMIT 367, or CMIT 368. The development of the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks using Windows technologies. Topics include providing secure access to local network users, partners, remote users, and remote offices and between private and public networks. Students may receive credit for only one of the following courses: CMIT 480 or CMIT 480M.
CMIT 491 Advanced UNIX/Linux System Administration (3)
Prerequisite: CMIT 391. A review of DNS (domain name system) servers and the Apache Web server. LDAP (lightweight directory access protocol) directory queries and authentication are introduced. Extensive lab work addresses the administration and configuration of server-side programming tools (such as CGI, mod_perl, PHP, JSP, Jakarta Tomcat, and Java SDK). SAMBA, FTP, Telnet, and SQUID proxy servers are configured. SMTP (simple mail transfer protocol) theory is discussed and implemented via sendmail and postfix e-mail systems. E-mail protocols such as IMAP and POP are configured; spam filtering techniques are discussed. Students may receive credit for only one of the following courses: CMIS 490, CMIT 491, or CMIS 498U.

CMIT 499 Special Topics in Computer Technology (1–5)
An inquiry into special topics in computer information technology that reflect the changing field. May be repeated when topics differ.

CMIT 499B Administering SQL Server (3)
Recommendation: An understanding of relational database concepts. The development of the knowledge and skills necessary to install, configure, and administer a database solution with the client/server database management system Microsoft SQL Server 2000. Hands-on exercises are included.

CMIT 499E Building Scalable Cisco Networks (3)
Prerequisite: CMIT 499C, CMIT 499D, or working knowledge of network routing procedures. A study of techniques for selecting and configuring Cisco router services in LANs and WANs typically found at medium to large network sites. Focus is on selecting and implementing appropriate Cisco services to build a scalable, routed network. Part of the recommended curriculum for the Cisco Certified Network Professional (CCNP) and Cisco Certified Design Professional (CCDP) certificates is covered.

CMIT 499F Building Cisco Switched Networks (3)
Prerequisite: CMIT 499D or CMIT 499E. A study of concepts and techniques for building networks using multilayer switching technologies over high-speed Ethernet connections. Topics include both routing and switching concepts and cover both Layer 2 and Layer 3 technologies.
CMIT 499G Cisco Remote Access Networks (3)
Prerequisite: CMIT 499D or CMIT 499E. The development of the knowledge and skills necessary to build, configure, and troubleshoot a remote access network to interconnect central sites to branch offices and home offices. Discussion also covers how to control access to the central site, as well as maximize bandwidth utilization over remote links.

CMIT 499M Exchange Server (3)
Prerequisite: CMIT 367 or CMIT 368. Development of the knowledge and skills needed to update and support a reliable, secure infrastructure for creating, storing, and sharing information using Microsoft Exchange Server in a medium to large (250 to 5000 seats) electronic messaging environment. Hands-on practice is provided.

CMIT 499W Wireless Network Administration (3)
Prerequisite: CMIT 265 or basic knowledge of networking. A comprehensive review of available options in transmissions over wireless technologies. Emphasis is on design and implementation of wireless networks. Topics include FDMA, TDMA, CDMA, and other 3G concepts. The benefits of wireless technologies and wireless security are explored using real-world challenges and solutions.

Computer Science

Courses in computer science (designated CMSC) may be applied as appropriate (according to individual program requirements) toward

• the general education requirement in computing;
• a major in computer science, computer information technology, or computer studies;
• a minor in computer studies;
• a certificate in Object-Oriented Programming Using Java; and
• electives.

A description of the curriculum for the computer science major begins on p. 32. Descriptions of other computer-related curricula may be found on the following pages: computer and information science (p. 29), computer information technology (p. 31), computer studies (p. 34), and information systems management (p. 60).

CMSC 101 Introductory Computer Science (3)
A study of fundamental programming concepts and constructs within an abstract (language-independent) framework. Topics include basic and structured data types, variables, and the structure of expressions. Pseudocode is used to explore the syntax and semantics of structured programming statements, functions, and the use of parameters. Programming assignments include the creation, compilation, and execution of computer programs in a modern programming language that implements these abstract concepts. The history of computing and computing ethics are also discussed. Students may receive credit for only one of the following courses: CMIS 102 or CMSC 101.

CMSC 130 Computer Science I (3)
(For students majoring in computer science. Taking CMSC 130 and 230 in consecutive terms is recommended.) Prerequisite: CMSC 101 or equivalent experience. Recommended: CMSC 150. A study of fundamental concepts that underlie object-oriented programming. Topics include the study and use of primitive and object data types and the process of creating well-designed computer programs to solve specified problems. Programming projects in Java are included.

CMSC 150 Introduction to Discrete Structures (3)
Prerequisite or corequisite: MATH 140. A survey of fundamental mathematical concepts involved in computer science. Functions, relations, finite and infinite sets, and propositional logic are explored. Proof techniques presented are those used for modeling and solving problems in computer science. Combinations, permutations, graphs, and trees are introduced, along with selected applications. Students may receive credit for only one of the following courses: CMSC 150 or CMSC 250.

CMSC 230 Computer Science II (3)
(For students majoring in computer science. Taking CMSC 130 and 230 in consecutive terms is recommended.) Prerequisites: CMSC 130 and 150. A study of the fundamental data structures in computer science. Topics include linked lists, stacks, queues, arrays, dictionaries, vectors, and trees. Algorithms that perform sorting and searching are discussed and analyzed. Programming projects in Java are included.
CMSC 311 Computer Organization (3)
(Required for students majoring in CMSC.) Prerequisites: CMSC 130 and 230. A study of the organization of memory, input/output, and central processing units, including instruction sets, register transfer operations, control microprogramming, data representation, and arithmetic algorithms. Assembly language and digital logic circuit design are introduced. Students may receive credit for only one of the following courses: CMIS 270, CMIS 310, CMSC 311, or IFSM 310.

CMSC 330 Advanced Programming Languages (3)
Prerequisite: CMSC 230 or CMSC 305. A comparative study of programming languages. Topics covered include the syntax and semantics of programming languages, and run-time support required for various programming languages. Programming projects using selected languages are required.

CMSC 335 Object-Oriented and Concurrent Programming (3)
Prerequisite: CMSC 230 or CMSC 305. A study of object-oriented and concurrent programming using features of Java. Concepts of object-oriented programming (such as composition, classification, and polymorphism) are explored. Topics include the principles of concurrent programming (such as task synchronization, race conditions, deadlock, and threads). Programming projects are implemented in Java. Students may receive credit for only one of the following courses: CMSC 300 or CMSC 335.

CMSC 411 Computer System Architecture (3)
Prerequisite: CMSC 311. A discussion of input/output processors and techniques, covering their relation to intrasystem communication, including buses and caches. Discussion covers addressing and memory hierarchies, microprogramming, parallelism, and pipelining.

CMSC 412 Operating Systems (3)
Prerequisites: CMSC 311 and 335. A study of the fundamental principles underlying modern operating systems. The essential components of a typical operating system and the interactions among them are described. Methods of managing processes and resources in computer systems are discussed in detail. Programming projects that implement parts of an operating system are required.

CMSC 415 UML and Design Patterns (3)
(Designed for software engineers, systems analysts, designers, and programmers.) Prerequisite: CMSC 335. A comprehensive study of fundamental concepts of object-oriented analysis and design focusing on Unified Modeling Language (UML) and its application to the system architectural design using selected patterns as guiding models. Activities include creation of detailed object models, in conjunction with UML views and design from system requirements, using use-case models and proven patterns to refine analysis and design models. Emphasis is on expansion of the analysis into a design that is ready for implementation, with artifacts that are testable, and that exhibits scalability to easily evolve in response to changes in a given problem domain.

CMSC 420 Advanced Data Structures and Analysis (3)
Prerequisites: CMSC 230 and 330. A study of data structures (including lists and trees) in terms of their descriptions, properties, and storage allocations. Algorithms are used to manipulate structures. Applications are drawn from the areas of information retrieval, symbolic manipulation, and operating systems.

CMSC 424 Database Design (3)
Prerequisite: CMSC 335. A study of the applicability of the database approach as a mechanism for modeling the real world. Review covers the three popular data models (hierarchical, relational, and network). Permissible structures, integrity constraints, storage strategies, and query facilities are compared. The theoretical foundations of the logic used in designing a database are presented.

CMSC 430 Theory of Language Translation (3)
Prerequisites: CMSC 330 and programming experience in C or C++. An examination of the formal translation of programming languages, syntax, and semantics. Highlights include evaluation of finite-state grammars and recognizers; context-free parsing techniques such as recursive descent, precedence, LL(K), LR(K), and SLR(K); and improvement and generation of machine-independent code and syntax-directed translation schema. Programming projects that implement parts of a compiler are required.
CMSC 450 Logic for Computer Science (3)
(Also listed as MATH 450. Accessible to advanced undergraduates majoring in computer science.) Prerequisites: CMSC 150 and MATH 241. Elementary development of propositional logic (including the resolution method) and first-order logic (including Hebrand's unsatisfiability theorem). Discussion covers the concepts of truth and interpretation; validity, provability, and soundness; completeness and incompleteness; and decidability and semidecidability. Students may receive credit for only one of the following courses: CMSC 450, MATH 444, MATH 445, or MATH 450.

CMSC 451 Design and Analysis of Computer Algorithms (3)
Prerequisites: CMSC 150 and 230. Presentation of fundamental techniques for designing and analyzing computer algorithms. Basic methods include divide-and-conquer techniques, search and traversal techniques, dynamic programming, greedy methods, and induction.

CMSC 452 Elementary Theory of Computing (3)
Prerequisite: CMSC 311. Analysis of alternative theoretical models of computation and types of automata. Their relationship to formal grammars and languages is specified.

CMSC 480 Advanced Programming in Java (3)
Prerequisite: CMSC 335 or equivalent object-oriented and Java programming experience. An examination of the principles, techniques, and applications of programming in Java in the Internet environment. Topics include threads, packages, interfaces, and exceptions. Java applets are created and incorporated into Web pages. Visual development tools are reviewed. Students may receive credit for only one of the following courses: CMIS 498J, CMSC 480, or CMSC 498J.

CMSC 486A Internship in Computer Science Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in computer science. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to computer science and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

CMSC 486B Internship in Computer Science Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in computer science. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to computer science and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

CMSC 498 Special Topics in Computer Science (1–3)
Prerequisites: Vary according to topic. A seminar on topics in computer science. May be repeated to a maximum of 6 credits when topics differ.
Computer Studies

Courses in computer studies (designated CMST) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in computing;
- a major or minor in computer studies;
- a major in computer and information science, computer information technology, or information systems management;
- a certificate in Computer Applications, Internet Technologies, Visual Basic Programming, or Web Design; and
- electives.

A description of the curriculum for the computer studies major and minor begins on p. 34. Descriptions of other computer-related curricula may be found on the following pages: computer and information science (p. 29), computer information technology (p. 31), computer science (p. 32), and information systems management (p. 60).

CMST 100A Introduction to Microcomputers: Hardware and Software (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to the hardware and software of computer systems and the terminology and functional parts of a computer. Extensive explanations of, as well as practice with, the operating system and utilities of a microcomputer are provided. Students may receive credit for only one of the following courses: CAPP 100A or CMST 100A.

CMST 100B Introduction to Microcomputers: Word Processing (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to word processing as one of the many applications of microcomputers. The characteristics of word processing are analyzed. Topics include typical features, as well as costs and trends of available software. Hands-on practice with typical word-processing software is provided. Students may receive credit for only one of the following courses: CAPP 100B, CAPP 103, CMST 100B, or CMST 103.

CMST 100D Introduction to Microcomputers: Presentation Graphics (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to the principles of presentation graphics. Topics include text and analytical charts, free-form graphics and clip art, and animation and slide shows. Hands-on practice with typical presentation graphics software is provided. Students may receive credit for only one of the following courses: CAPP 100D or CMST 100D.

CMST 100E Introduction to Microcomputers: Networks and Communication (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to the use of computer networks to interconnect microcomputers and to the current hardware, software, and communication standards and protocols that make networking possible. Hands-on practice with typical communications software and network configuration is provided. Students may receive credit for only one of the following courses: CAPP 100E or CMST 100E.

CMST 100F Introduction to Microcomputers: Databases (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to database systems, including terminology and principles of database management systems. Focus is on how best to organize, manage, and access stored data; how to protect databases; and how to extract useful information. Hands-on practice with typical database software is provided. Students may receive credit for only one of the following courses: CAPP 100F, CAPP 103, CMST 100F, or CMST 103.

CMST 100G Introduction to Microcomputers: Spreadsheets (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to the use of electronic worksheets to analyze numerical data, including basic terminology, formats, and other applications. Hands-on practice with typical spreadsheet software is provided. Students may receive credit for only one of the following courses: CAPP 100G, CAPP 103, CMST 100G, or CMST 103.

CMST 100J Introduction to Microcomputers: Security (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to computer security. Topics include both physical and software security and the types of computer viruses that afflict modern information systems. Discussion covers the use of the operating system and antiviral software tools to protect, detect, and recover from viral attacks. Hands-on practice in applying these tools is provided. Students may receive credit for only one of the following courses: CAPP 100J or CMST 100J.
CMST 100K Introduction to Microcomputers: Accessing Information via the Internet (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to the Internet and the wealth of information it contains. Focus is on practical and efficient means for gaining access to information through the use of browsers on a home computer system and search engines on the Internet. Topics include mechanisms by which the Internet operates, security issues on the Internet, intellectual property right issues, and the ethics of the Internet, as well as other current topics involving the interface between the Internet and the citizen. Students who have already earned credit for CAPP 385, CAPP 386, CMST 385, or CMST 386 cannot earn credit for CMST 100K. Students may receive credit for only one of the following courses: CAPP 100K, CAPP 101C, or CMST 100K.

CMST 100L Introduction to Microcomputers: Web Page Design (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to Web page design and site management. The characteristics of Web page design and navigation structures are analyzed, and typical features of current commercial software are presented. Hands-on practice with typical Web page design and site management software is provided. Students may receive credit for only one of the following courses: CAPP 100L or CMST 100L.

CMST 100M Introduction to Microcomputers: HTML (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to the use of HTML to create basic and advanced World Wide Web–enabled documents. Topics include creating and editing Web pages, placing HTML documents on the Web, designing Web pages with tables, and using frames in Web pages. Assignments include designing and implementing Web pages using HTML. Students may receive credit for only one of the following courses: CAPP 100M, CAPP 101H, or CMST 100M.

CMST 100N Introduction to Microcomputers: Desktop Operating Systems (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to the use and configuration of graphical user interfaces, focusing on Microsoft Windows operating systems. Topics include working with Windows programs, managing files and folders using Windows Explorer, customizing Windows using the Control Panel, using Internet services in Windows, and managing shared files and resources. Students may receive credit for only one of the following courses: CAPP 100N, CAPP 101M, CAPP 101T, or CMST 100N.

CMST 100P Introduction to Microcomputers: Using UNIX/Linux (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to configuring and using UNIX and Linux on microcomputers and workstations. Hands-on experience in configuring the desktop environment of a Linux operating system is provided. Topics include UNIX commands, file management, the X-Window graphical user interface, and window managers such as Gnome and KDE. Students may receive credit for only one of the following courses: CAPP 100P or CMST 100P.

CMST 100Q Introduction to Microcomputers: Personal Digital Assistants (1)
(Graded on a satisfactory/D/fail basis only.) An introduction to personal digital assistants (PDAs). Focus is on the two major operating systems for PDAs: Palm Pilot and Pocket PC. Topics include understanding the functions of PDAs, comparing the two operating systems, using built-in and typical third-party applications, and connecting and exchanging information with desktop computers. Students are encouraged to bring their own PDAs to class. Students may receive credit for only one of the following courses: CMST 100Q or CMST 198Q.

CMST 103 Introduction to Microcomputer Software (3)
An introduction to microcomputers and application software. Hands-on experience with software packages (including word processing, spreadsheets, and databases) is provided. Focus is on concepts, features, and business applications of those facilities. Students who have received credit for CMST 100B, CMST 100F, or CMST 100G may not receive credit for CMST 103. Students may receive credit for only one of the following courses: CAPP 103 or CMST 103.

CMST 270 Integrative Video Game Design and Technology (3)
Prerequisite: CMIS 102 or CMIS 102A. A project-oriented study of the concepts and methods for designing and developing computer games. Topics include history of games, game design, genres of games, multi-player games, online games, game development environments and employment opportunities, and ethical, social, and cultural aspects of video gaming.
CMST 303 Advanced Features of Microcomputer Application Software (3)
Prerequisite: CMST 103. A presentation of application software packages that includes advanced features of operating systems, spreadsheets, database management, and electronic information exchange for business applications. Presentation software is reviewed, and hands-on experience with the software is provided. Students may receive credit for only one of the following courses: CAPP 303 or CMST 303.

CMST 306 Introduction to Visual Basic .NET Programming (3)
Prerequisite: CMIS 102 or CMIS 102A. A structured approach to developing programs using the Visual Basic .NET programming language. Hands-on experience in implementing features of this visual interface for program design is provided. Assignments include programming projects in Visual Basic .NET.

CMST 310 Desktop Publishing (3)
Prerequisite: CMST 103 or IFSM 201. An introduction to concepts and methods of desktop publishing. Highlights include the design and layout of a publication, the choice of computer hardware and software, the integration of computer graphics, the drafting and editing of a publication, and methods of interfacing with high-level printing equipment to produce a final document. Students may receive credit for only one of the following courses: CAPP 310, CAPP 398B, or CMST 310.

CMST 311 Advanced Desktop Publishing (3)
Prerequisite: CMST 310. A project-oriented study of the concepts and methods of desktop publishing. Techniques for using color in page layouts are implemented. Emphasis is on effective transfer of electronic files to service bureaus and printers. Features essential to multimedia presentations are integrated with techniques for capturing and editing photos to produce business publications. Students learn to publish printed documents on a Web site. Students may receive credit for only one of the following courses: CAPP 311 or CMST 311.

CMST 340 Computer Applications in Management (3)
Prerequisite: CMIS 102, CMIS 102A, CMST 103, or IFSM 201. An overview of computer-based information-system concepts and operations and how these capabilities are applied by management to improve the work processes of business, government, and academic organizations. Topics include management planning at the strategic, tactical, and operational levels necessary to effect continuous improvements. The interchange of electronic information and the application of various computing tools such as spreadsheet programs are introduced. Students may receive credit for only one of the following courses: CAPP 340, CMIS 350, or CMST 340.

CMST 385 Internet: A Practical Guide (3)
Prerequisite: CMIS 102, CMIS 102A, CMST 103, or IFSM 201. An introduction to the Internet and the World Wide Web. Topics include basic principles and protocols of the Internet; configuration and use of graphical Web browsers; application programs such as Telnet, FTP, e-mail, and Net news readers; finding and retrieving information on the World Wide Web; and the use of portals and search engines. Discussion covers Internet security measures, as well as social, ethical, and legal issues related to the growth of the Internet. HTML and Web page design are introduced. Assignments include designing and publishing a Web page. Students may receive credit for only one of the following courses: CAPP 385 or CMST 385.

CMST 386 Internet: An Advanced Guide (3)
Prerequisite: CMST 302, CMST 302A, CMST 303, or IFSM 201. An introduction to the Internet and the World Wide Web. Focus is on Web page design, including features such as frames, animation, and cascading style sheets. Dynamic HTML and JavaScript are introduced. Assignments include publishing a Web page. Students may receive credit for only one of the following courses: CAPP 386 or CMST 386.
CMST 430 Web Site Management (3)
Prerequisite: CMST 386. An in-depth survey of Web site maintenance for small businesses. Topics include Web tools, including scripting, servers, editors, image manipulation tools, utilities, and traffic analysis. Focus is on Internet security and e-commerce issues. Students may receive credit for only one of the following courses: CAPP 498C or CMST 430.

CMST 450 Web Design Methodology and Technology (3)
Prerequisite: CMST 386. An in-depth survey of the design and delivery of professional Web content. Focus is on using comprehensive tools and the latest technology to enhance the Web presence of a small business. Topics include multimedia and interactivity. Online commerce and Internet security issues are discussed. Assignments include a comprehensive project. Students may receive credit for only one of the following courses: CAPP 498D or CMST 450.

CMST 486A Internship in Computer Studies Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in computer studies. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to computer studies and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

CMST 486B Internship in Computer Studies Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in computer studies. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to computer studies and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

CMST 498F Web Application Development Using ColdFusion (3)
Prerequisite: CMST 386. A structured approach to building and maintaining dynamic and interactive Web applications. Emphasis is on application design and development. Hands-on practice in using ColdFusion is provided.

Cooperative Education
Cooperative Education (Co-op) extends education beyond the traditional classroom by integrating career-related work opportunities with the student’s field of study.

Cooperative Education courses carry the designator of the appropriate academic discipline and the number 486A or 486B. Co-op courses may not be applied toward any general education requirements or some majors and minors. Students are responsible for consulting their advisor about applying Co-op credit to their degree program.

More details and contact information for Cooperative Education are available on p. 239. Details are also available on the Web at www.umuc.edu/coop.
Criminology/Criminal Justice

Courses in criminology/criminal justice (designated CCJS) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in the behavioral and social sciences (Note: Only CCJS 105, 330, 350, 360, 432, 451, 452, 453, 454, and 461 apply);
- a major in criminal justice, investigative forensics, legal studies, or social science;
- a minor in criminal justice, forensics, or sociology;
- a certificate in Correctional Administration, Security Management, or Security Operations; and
- electives.

Students who previously received credit for courses in the disciplines of criminology (courses designated CRIM) or criminal justice (courses designated CJUS) may not receive credit for comparable courses designated CCJS.

A description of the curriculum for the criminal justice major and minor begins on p. 36. Descriptions of related curricula may be found on the following pages: forensics (p. 47), investigative forensics (p. 63), legal studies (p. 67), and sociology (p. 81).

**CCJS 100 Introduction to Criminal Justice (3)**
(Fulfills the general education requirement in behavioral and social sciences.) An introduction to the administration of criminal justice in a democratic society, emphasizing the history and theories of law enforcement. Discussion covers the principles of organization and administration in law enforcement, including specific activities and functions (such as research and planning, public relations, personnel and training, inspection and control, and formulation and direction of policy). Students may receive credit for only one of the following courses: CCJS 100 or CJUS 100.

**CCJS 105 Introduction to Criminology (3)**
(Fulfills the general education requirement in behavioral and social sciences.) An overview of criminal behavior and the methods of studying it. Topics include causation; typologies of criminal acts and offenders; the practices and effects of punishments, correction, and incapacitation; and the prevention of crime. Students may receive credit for only one of the following courses: CCJS 105 or CRIM 220.

**CCJS 230 Criminal Law in Action (3)**
An exploration of law as a method of social control. The nature, sources, and types of criminal law are studied in relation to its history and theories. Topics include behavioral and legal aspects of criminal acts and the classification and analysis of selected criminal offenses. Students may receive credit for only one of the following courses: CCJS 230 or CJUS 230.

**CCJS 234 Criminal Procedure and Evidence (3)**
A study of the general principles and theories of criminal procedure. Topics include due process, arrest, search and seizure, and the evaluation of evidence and proof. Recent developments in the field are discussed. Students may receive credit for only one of the following courses: CCJS 234, CJUS 234, LGST 320, or PLGL 320.

**CCJS 320 Introduction to Criminalistics (3)**
Prerequisite: CCJS 100 or CCJS 105. An introduction to modern methods used in detecting, investigating, and solving crimes. The practical analysis of evidence in a criminal investigation laboratory is covered. Topics include photography, fingerprints, and other impressions; ballistics, documents and handwriting, glass, and hair; drug analysis; and lie detection. Students may receive credit for only one of the following courses: CCJS 320 or CJUS 320.

**CCJS 331 Contemporary Legal Policy Issues (3)**
Prerequisite: CCJS 105. Thorough examination of selected topics: criminal responsibility, alternative sociolegal policies on deviance, law-enforcement procedures for civil law and similar legal problems, admissibility of evidence, and the indigent’s right to counsel. Students may receive credit for only one of the following courses: CCJS 331 or CJUS 330.

**CCJS 340 Law-Enforcement Administration (3)**
An introduction to concepts of organization and management as they relate to law enforcement. Topics include principles of structure, process, policy and procedure, communication and authority, division of work and organizational controls, the human element in the organization, and informal interaction in the context of bureaucracy. Students may receive credit for only one of the following courses: CCJS 340 or CJUS 340.

**CCJS 350 Juvenile Delinquency (3)**
(Fulfills the general education requirement in behavioral and social sciences.) Prerequisite: CCJS 100 or CCJS 105. An examination of juvenile delinquency in relation to the general problem of crime. Topics include factors underlying juvenile delinquency, prevention of criminal acts by youths, and the treatment of delinquents. Students may receive credit for only one of the following courses: CCJS 350 or CRIM 450.
CCJS 351 Issues in Criminal Justice (6)
An interdisciplinary exploration of criminal justice. Topics include theories of the causes of crime; requisites of criminal liability; defenses; the rights guaranteed by the Fourth, Fifth, and Sixth Amendments to the U.S. Constitution; undercover investigation; special issues in juvenile justice; and the highly controversial issues of capital punishment and victimization. Students may receive credit for only one of the following courses: BEHS 351 or CCJS 351.

CCJS 352 Drugs and Crime (3)
Prerequisite: CCJS 100 or CCJS 105. An analysis of the role of criminal justice in controlling the use and abuse of drugs. Students may receive credit for only one of the following courses: CCJS 352 or CJUS 352.

CCJS 357 Industrial and Retail Security Administration (3)
An exploration of the origins of contemporary private security systems. The organization and management of protective units (industrial and retail) are examined. Students may receive credit for only one of the following courses: CCJS 357 or CJUS 360.

CCJS 360 Victimology (3)
(Fulfills the general education requirement in behavioral and social sciences.) Prerequisite: CCJS 100 or CCJS 105. An overview of the history and theory of victimology in which patterns of victimization are analyzed, with emphasis on types of victims and of crimes. The interaction between victims of crime and the system of criminal justice is considered in terms of the role of the victim and the services that the victim is offered. Students may receive credit for only one of the following courses: CCJS 360 or CRIM 360.

CCJS 370 Race, Crime, and Criminal Justice (3)
A historical and theoretical study of the role and treatment of racial/ethnic minorities in the criminal justice system.

CCJS 398P Crisis Management and Decision Making (1)
A study of the activities involved in planning, organizing, and directing immediate aid to the public and victims during emergencies. Focus is on gaining problem-solving skills using real-life situations. Topics include immediate challenges, such as controlling access, establishing and maintaining communications, evacuating residents, providing medical care, protecting crime scenes, and restoring vital community services. Theories from several disciplines are examined.

CCJS 398Q Interagency Communication (1)
An examination of the need for up-to-the-minute, accurate, specific, and reliable information and communication between governmental and private organizations. Focus is on effective organization, dissemination, and management of information and intelligence.

CCJS 398R Strategic Planning and Risk Reduction (1)
A study of threat and risk reduction and management. Topics include planning, budgeting, staffing, and directing first responders and emergency personnel. Focus is on how to create plans that strengthen security, reduce risks, and prevent attacks or minimize loss in daily operations, disasters, and emergencies. Discussion covers theories of crime, human behavior, and business management.

CCJS 400 Criminal Courts (3)
An examination of criminal courts in the United States at all levels. Topics include the roles of judges, prosecutors, defenders, clerks, and court administrators, and the nature of their jobs; problems of administration, as well as those facing courts and prosecutors; and reform. Students may receive credit for only one of the following courses: CCJS 400 or CJUS 400.

CCJS 420 Medical and Legal Investigations of Death (3)
An intensive look at medical and legal investigations into causes of death. Topics include the difference between the medical (or pathological) and legal (or criminal) components of investigations into causes of death, medical and investigative terminology, and the impact of ethics on prosecutions and convictions. Case studies illustrate practical applications of various forms of forensic styles and parameters.

CCJS 430 Legal and Ethical Issues in Security Management (3)
An examination of current problems facing the security professional. Topics include legal liabilities, compliance issues, and ethical standards of organizations. Students may receive credit for only one of the following courses: CCJS 430 or CCJS 498E.

CCJS 431 Legal and Ethical Issues in Corrections (3)
An examination of problems associated with managing staff and inmates in correctional communities. Topics include constitutional rights of inmates, inmate litigation and case law, workplace ethics and principles, and employee rights and protections.
CCJS 432 Law of Corrections (3)
(Fulfills the general education requirement in behavioral and social sciences.) Prerequisite: CCJS 105. A review of the law of criminal corrections, from sentencing to final release or release on parole. Topics include probation, punishments, special treatments for special offenders, parole and pardon, and the prisoner's civil rights. Students may receive credit for only one of the following courses: CCJS 432 or CRIM 432.

CCJS 433 Communicating in the Correctional Culture (3)
A study of effective management and communicating models applicable to correctional communities. Correctional climate and culture, information flow, inter- and intrapersonal relationships are major themes. Topics include formal and informal communication; verbal and nonverbal cues; and dissemination of rules, policies, and procedures.

CCJS 445 Introduction to Security Management (3)
A study of the concepts, principles, and methods of organizing and administering security management and loss-prevention activities in industry, business, and government. Emphasis is on both private and governmental protection of assets, personnel, and facilities. Students may receive credit for only one of the following courses: CCJS 445 or CCJS 498G.

CCJS 453 White-Collar and Organized Crime (3)
(Fulfills the general education requirement in behavioral and social sciences.) Prerequisite: CCJS 100 or CCJS 105. An overview of the definition, detection, prosecution, sentencing, and impact of white-collar and organized crime. Special consideration is given to the role of federal law and enforcement practices.

CCJS 454 Contemporary Criminological Theory (3)
(Fulfills the general education requirement in behavioral and social sciences.) Prerequisite: CCJS 100 or CCJS 105. A brief historical overview of criminological theory. Topics include deviance, labeling, and typologies, as well as the most recent research on criminalistic subcultures and on middle-class delinquency. Various recent proposals for decriminalization are discussed. Students may receive credit for only one of the following courses: CCJS 454 or CRIM 454.

CCJS 455 Theory and Principles of Executive Protection (3)
Prerequisite: CCJS 100 or CCJS 105. A study of concepts, principles, and methods of organizing and administering a successful protective security program for corporate executives, professional athletes, entertainment celebrities, and political personalities and families who are vulnerable and at risk for harassment, stalking, assault, kidnapping, or assassination at home, in the work environment, or while traveling. The philosophy and principles of protection and the use of both physical security techniques and electronic countermeasures are examined.

CCJS 461 Psychology of Criminal Behavior (3)
(Fulfills the general education requirement in behavioral and social sciences.) Prerequisite: CCJS 100 or CCJS 105. An overview of the biological, environmental, and psychological factors that underlie criminal behavior. Characteristics of criminal behavior are reviewed. The influence of biophysiology and stress on the commission of various crimes is examined. Topics include patterns of maladjustment, disorders of the personality, psychoses, the connection between aggression and violent crime, sexual deviations and crimes that are sexually motivated, and the abuse of alcohol and drugs. Students may receive credit for only one of the following courses: CCJS 461 or CRIM 455.

CCJS 462 Protection of Business Assets (3)
An examination of the application of security knowledge and techniques for the protection of business assets. Topics include security planning methods, risk analysis, security surveys, and decision making for the development of security programs and countermeasures. Students may receive credit for only one of the following courses: CCJS 462 or CCJS 498H.

CCJS 463 Security: A Management Perspective (3)
An examination of concepts, strategies, and skills needed to manage security-related operations and activities. Focus is on employee/employer security. Students may receive credit for only one of the following courses: CCJS 463 or CCJS 498K.
CCJS 486A Internship in Criminal Justice Through Co-op (3)
Prerequisites: CCJS 100 or CCJS 105; 9 credits in criminal justice; and formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in criminal justice. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to criminal justice and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

CCJS 486B Internship in Criminal Justice Through Co-op (6)
Prerequisites: CCJS 100 or CCJS 105; 9 credits in criminal justice; and formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in criminal justice. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to criminal justice and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

CCJS 495 Criminal Trial Issues (3)
Prerequisite: CCJS 100 or CCJS 105. An intensive study of the latest constitutional developments in the ever-changing areas of search and seizure, confessions, trial procedure, punishment, and appeals. Focus is on past and current trends of the U.S. Supreme Court in applying the Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments to federal as well as state law-enforcement practices. Supreme Court case decisions and cases pending review and decision provide an opportunity to understand the doctrinal development of controlling principles and to predict future developments. Students may receive credit for only one of the following courses: CCJS 495 or CCJS 498A.

CCJS 496 Computer Crime and Security (3)
An examination of crimes involving the use of computers. Topics include federal and state laws and investigative and preventive methods used to secure computers. Case studies emphasize security. Students may receive credit for only one of the following courses: CCJS 496 or CCJS 498C.

CCJS 497 Correctional Administration (3)
Prerequisite: CCJS 100 or CCJS 105. An introduction to concepts of organization and management as they relate to the field of corrections. Topics include the history of corrections, institutional structure and classification, policy and procedures, communication and authority, division of work, inmate discipline and due process, organizational culture, security, technology changes, and relationships with other components of the criminal justice system. Students may receive credit for only one of the following courses: CCJS 497 or CCJS 498D.

CCJS 498B Forensics and Psychology (1)
A survey of psychological research and theory dealing with behavior in the criminal trial process. Topics include jury selection, criminal profiling, eyewitness testimony, prediction of violent behavior, and mental competency of the accused. Students may receive credit for only one of the following courses: CCJS 498B or PSYC 309E.

CCJS 498J Criminal Justice and the Media (1)
An in-depth analysis of the effect of the news media on crime levels and public fear of crime. The relationship between media coverage and public perception is explored as well as the media’s role in crime prevention.
Economics

Courses in economics (designated ECON) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in the behavioral and social sciences;
- a major in finance, global business and public policy, or social science;
- a minor in economics;
- related requirements for most business-related majors and minors; and
- electives.

A description of the curriculum for the economics minor begins on p. 38. Descriptions of related majors may be found on the following pages: finance (p. 43), global business and public policy (p. 52), and social science (p. 80).

ECON 201 Principles of Macroeconomics (3)
An introduction to the problems of unemployment, inflation, and economic growth. Emphasis is on the roles of monetary policy and fiscal policy in determining macroeconomic policy. The efficacy of controlling wages and prices is analyzed. Students may receive credit for only one of the following courses: ECON 201 or ECON 205.

ECON 203 Principles of Microeconomics (3)
Analysis of the principles underlying the behavior of individual consumers and business firms. Topics include problems of international trade and finance, distribution of income, policies for eliminating poverty and discrimination, problems of environmental pollution, and effects of various market structures on economic activity.

ECON 205 Fundamentals of Economics (3)
A one-semester introduction to the principles of economics and their applications to the major economic problems of society. Topics include problems of population, poverty, inflation, unemployment, inequality, monopoly, urban renewal, environmental protection, economic planning, imperialism, international trade, and comparative economic systems. Students may receive credit for only one of the following courses: ECON 201 or ECON 205.

ECON 301 Current Issues in American Economic Policy (3)
Prerequisite(s): Either ECON 201 and 203 or ECON 205. Analysis of current economic problems and public policies. Topics include market power, federal budget and tax policy, governmental regulation, inflation, unemployment, poverty and distribution of income, and environmental issues.

ECON 305 Intermediate Macroeconomic Theory and Policy (3)
Prerequisite: ECON 201. Analysis of forces that determine a nation's income, employment, and price levels. Topics include consumption, investment, inflation, and governmental fiscal and monetary policy. Students may receive credit for only one of the following courses: ECON 305, ECON 403, or ECON 405.

ECON 306 Intermediate Microeconomic Theory (3)
Prerequisite: ECON 203. Analysis of the principles underlying the behavior of individual consumers and business firms. Theories of marketing systems, distribution, and the roles of externalities are covered. Students may receive credit for only one of the following courses: ECON 306 or ECON 403.

ECON 315 Economic Development of Underdeveloped Areas (3)
Prerequisite(s): Either ECON 201 and 203 or ECON 205. Analysis of the economic and social characteristics of underdeveloped areas. Recent theories about economic development, obstacles to development, and policies and planning for development are discussed. Students may receive credit for only one of the following courses: ECON 315 or ECON 416.

ECON 380 Comparative Economic Systems (3)
Prerequisite(s): Either ECON 201 and 203 or ECON 205. A comparative analysis of the theory and practice of various types of economic systems, especially the economic systems of the United States, the former Soviet Union, the People's Republic of China, Western and Eastern Europe, and less-developed countries.

ECON 381 Environmental Economics (3)
Prerequisite: ECON 201 or ECON 205. Application of economic theory to problems of environmental quality and management. The theory behind common-property resources, economic externalities, alternative pollution-control measures, and limits to economic growth is discussed.
ECON 422 Quantitative Methods in Economics I (3)
Prerequisites: ECON 201 and 203 and STAT 230. A study of the interaction between problems of economics and the assumptions of statistical theory. Formulation, estimation, and testing of economic models (including theory of identification, techniques of single-variable and multiple-variable regression, and issues of inference) are explained. Assignments include independent work relating the material in the course to an economic problem chosen by the student.

ECON 425 Mathematical Economics (3)
Prerequisites: ECON 201 and 203 and MATH 220. An explanation of the simpler aspects of mathematical economics. The types of calculus and algebra that are required for economic analysis are presented.

ECON 430 Money and Banking (3)
Prerequisites: ECON 201 and 203. An examination of the structure of financial institutions and their role in providing money and near-money. Institutions, processes, and correlations analyzed include the functions of the Federal Reserve System, the techniques of central banks, the control of the supply of financial assets as a mechanism of stabilization policy, and the relationship of money and credit to economic activity and prices. Students may receive credit for only one of the following courses: ECON 430 or ECON 431.

ECON 440 International Economics (3)
Prerequisites: ECON 201 and 203. A description of international trade and an analysis of international transactions, exchange rates, and balance of payments. Policies of protection, devaluation, and exchange-rate stabilization and their consequences are also analyzed. Students may receive credit for only one of the following courses: BEHS 440, ECON 440, or ECON 441.

ECON 450 Introduction to Public-Sector Economics (3)
Prerequisite(s): Either ECON 201 and 203 or ECON 205. A study of public finance, examining the roles of federal, state, and local governments in meeting the demands of the public. Analysis covers theories of taxation, public expenditures, governmental budgeting, benefit/cost analysis, and redistribution of income, as well as their applications in public policy. Students may receive credit for only one of the following courses: ECON 450 or ECON 454.

ECON 490 Survey of Urban Economic Problems and Policies (3)
Prerequisite(s): Either ECON 201 and 203 or ECON 205. An introduction to the study of urban economics by means of examining issues in current policy. Topics may include urban renewal, economic development in ghettos, problems concerning transportation, the development of new towns, and problems concerning provision of services (such as education and police protection).

Education: Counseling and Personnel Services

Courses in this discipline—education: counseling and personnel services (designated EDCP)—do not apply toward teacher-certification requirements.

Lower-level courses are intended to help students learn how to make the most of their college careers. They are recommended for students who have been away from school or who need to improve their academic skills.

EDCP 101, 101X, 103, and 103X do not fulfill the general education requirement in communications; they may be used as elective credit only.

Other courses designed to help students succeed in school or on the job are also included under career planning (courses designated CAPL) and library skills (courses designated LIBS).

EDCP 100 Principles and Strategies of Successful Learning (3)
An introduction to knowledge and strategies designed to promote success in the university environment. Focus is on developing the study, interpersonal, and self-management skills and attitudes needed to achieve academic objectives. Topics include the university’s mission, resources, and requirements. A series of self-assessments serve as tools to identify values and goals for individual life planning and educational success.

EDCP 101 Effective Writing Skills (3)
(Does not fulfill the general education requirement in communications. Recommended as preparation for ENGL 101.) A study of writing designed to improve basic skills at the level of sentence and paragraph. Topics include word choice, grammar, punctuation, and mechanics. Frequent opportunities to practice and refine skills are provided. Students may receive credit for only one of the following courses: EDCP 101, EDCP 101X, or ENGL 100.)
EDCP 103 Elements of Composition and Style (3)
(Does not fulfill the general education requirement in communications. Recommended as preparation for ENGL 101 or upper-level writing courses.) Prerequisite: Satisfactory performance on a placement test or recommendation of an advisor. A review of basic writing skills. Topics include increasing language awareness, developing sophisticated diction, and improving grammar. Practice is provided in writing complex sentences, giving examples, and developing extended paragraphs. Focus is on discerning, gathering, organizing, and presenting evidence and on developing a narrative voice. Students may receive credit for only one of the following courses: EDCP 103, EDCP 103X, or ENGL 100.

English
Courses in English (designated ENGL) may be applied as appropriate (according to individual program requirements) toward
- the general education requirement in communications (writing courses) or in the arts and humanities (literature courses);
- a major or minor in English or humanities; and
- electives.
ENGL 101, 101X, 102, 278F, 291, 294, 480, 481, 482, 483, 485, 487, 488, and 493 may be applied toward the general education requirement in communications for another writing course, but not toward the general education requirement in upper-level intensive writing.
ENGL 101, 101X, 102, 278F, 281, 281X, 291, 294, 384, 480, 481, 482, 483, 485, 487, 488, and 493 may be applied toward the general education requirement in communications for a third writing course or a speech communication course.
Only ENGL 391 and 391X (as well as COMM 393, 393X, 394, and 394X) are designated as writing intensive and may be applied toward the general education requirement in upper-level intensive writing.
Courses in literature may be applied toward the general education requirement in the arts and humanities.
ENGL 106 and EDCP 101, 101X, 103, and 103X may be used as electives but do not fulfill requirements.

Degree-seeking students must complete ENGL 101 (or present its equivalent in transfer) during their first 18 credits of enrollment at UMUC. ENGL 101 is prerequisite to all English writing courses with higher numbers and most courses in communication studies. Placement tests are required for enrollment in ENGL 101 and 101X. Students may either consult the undergraduate Schedule of Classes for times and locations of tests or contact Exams and Testing Services by phone at 800-888-UMUC, ext. 5249, or by e-mail at exams@umuc.edu.
Students for whom English is a second language should consider taking writing courses designated with X, such as ENGL 101X, 391X, etc. Other writing courses are available under the discipline of communication studies.
Other communications courses are also available under communication studies (courses designated COMM) and journalism (courses designated JOUR).
A description of the curriculum for the English major and minor begins on p. 39. A description of the curriculum for the humanities major and minor begins on p. 56.

ENGL 101 Introduction to Writing (3)
(Students for whom English is a second language should consider taking ENGL 101X instead.) Prerequisite: Satisfactory performance on a placement test. Practice in effective writing and clear thinking at all levels, including the sentence and paragraph, with emphasis on the essay and research report. Specific steps reviewed within the writing process include formulating purpose, identifying an audience, and selecting and using research resources and methods of development. Assignments include composing a total of at least 4,500 words (approximately 20 pages). Students may receive credit for only one of the following courses: ENGL 101 or ENGL 101X.

ENGL 101X Introduction to Writing (3)
(Enrollment restricted to students for whom English is a second language.) Prerequisite: Satisfactory performance on a placement test. Practice in effective writing and clear thinking at all levels, including the sentence and paragraph, with emphasis on the essay and research report. Specific steps reviewed within the writing process include formulating purpose, identifying an audience, and selecting and using research resources and methods of development. Assignments include composing a total of at least 4,500 words (approximately 20 pages). Students may receive credit for only one of the following courses: ENGL 101 or ENGL 101X.
ENGL 201 Western World Literature: Homer to the Renaissance (3)
Prerequisite: ENGL 101 or ENGL 101X. A survey of classic writings from Greek, biblical, Roman, and medieval civilizations. Literary forms and the ways the works reflect the values of their cultures are discussed. Readings may include selections from the Bible and the writings of Homer, Sophocles, Virgil, Dante, and Chaucer. Selections may vary each term.

ENGL 205 Introduction to Shakespeare (3)
Prerequisite: ENGL 101 or ENGL 101X. An examination of representative Shakespearean plays from each genre (comedy, history, tragedy, and romance).

ENGL 221 American Literature: Beginning to 1865 (3)
Prerequisite: ENGL 101 or ENGL 101X. A close study of some masterpieces of American literature, covering the period from the beginning of American literature to 1865.

ENGL 222 American Literature: 1865 to the Present (3)
Prerequisite: ENGL 101 or ENGL 101X. A study of the development of American literature since the Civil War, emphasizing representative authors and works. Genres investigated include stories and poems as well as novels and plays. Significant films may be viewed.

ENGL 240 Introduction to Fiction, Poetry, and Drama (3)
Prerequisite: ENGL 101 or ENGL 101X. An introduction to fiction, poetry, drama, film, and the literary essay, with an emphasis on developing critical reading and writing skills. Study may be organized either by genre or by theme. Writers covered vary from term to term. Films may be included. Students may receive credit for only one of the following courses: ENGL 240 or ENGL 340.

ENGL 246 The Short Story (3)
Prerequisite: ENGL 101 or ENGL 101X. An analysis of the attributes of the well-written short story. Emphasis is on aspects such as theme, plot, characterization, point of view, tone, imagery, irony, and symbolism, as exemplified in representative works of the 19th and 20th centuries. Only minimal biographical and historical background is provided; focus is on the selected writings.

ENGL 278F Introduction to Principles of Text Editing (3)
(Fulfills the general education requirement in communications.)
Prerequisite: ENGL 101 or ENGL 101X. An introduction to the practice of editing. Focus is on striving for correctness, consistency, and clarity of style, while writing, evaluating, and rewriting various documents.

ENGL 281 Standard English Grammar, Usage, and Diction (3)
(Students for whom English is a second language should consider taking ENGL 281X instead. Fulfills the general education requirement in communications, but is not a writing course.)
Prerequisite: ENGL 101 or ENGL 101X. An overview of grammatical structures of standard formal and written English. Topics may include parts of speech, punctuation, choice and usage of words, sentence patterns, and advanced grammatical issues. Students may receive credit for only one of the following courses: ENGL 281 or ENGL 281X.

ENGL 291 Expository and Research Writing (3)
(Fulfills the general education requirement in communications.)
Prerequisites: ENGL 101 (or ENGL 101X) and LIBS 150. Continued practice in critical reading, thinking, and writing skills. Focus is on analyzing, evaluating, and synthesizing diverse sources and viewpoints to develop persuasive and argumentative writing projects. Assignments include written exercises, two short research essays, and a research paper, resulting in a total of at least 4,500 words (approximately 20 pages). Students may receive credit for only one of the following courses: ENGL 291 or ENGL 291H.

ENGL 294 Introduction to Creative Writing (3)
(Fulfills the general education requirements in communications.)
Prerequisite: ENGL 101 or ENGL 101X. An introductory survey and practical study of key areas of creative writing: formal poetry, free verse, creative nonfiction, short story, and drama or screenplay. Emphasis is on reading and thinking analytically and critically from a writer’s perspective to better understand the craft. Discussion may cover publishing. Peer review of manuscripts may be included.
ENGL 303 Critical Approaches to Literature (3)
(Fulfills the general education requirement in communications. Designed as a foundation for other upper-level literature courses.) Prerequisite: ENGL 101 or ENGL 101X. A study of the techniques of literary analysis, emphasizing close reading of texts. The goal is to better understand and appreciate literature and to be able to formulate concepts and express them in well-written, coherent prose. Assignments include composing a total of 6,000 words (approximately 25 pages).

ENGL 304 The Major Works of Shakespeare (3)
Prerequisite: ENGL 101 or ENGL 101X. An overview of the variety of Shakespeare's works, including a representative sample of comedies, histories, tragedies, and romances. The goal is to gain a better understanding of and appreciation for the plays, both in reading the texts and viewing performances of them.

ENGL 310 Medieval and Renaissance British Literature (3)
Prerequisite: ENGL 101 or ENGL 101X. An exploration of the cultural attitudes and values that separate the Middle Ages from the Renaissance, highlighting the changing role and purpose of the writer. Major works and authors may include Beowulf, Sir Gawain and the Green Knight, Chaucer, Spenser, Marlowe, and Shakespeare.

ENGL 311 17th and 18th Century British Literature (3)
Prerequisite: ENGL 101 or ENGL 101X. A study of the culture of 17th- and 18th-century Britain seen through detailed study of selected major texts. Readings cover drama, poetry, political writings, and early novels by men and women. Authors may include Donne, Milton, Jonson, Swift, Pope, Montagu, and Wollstonecraft.

ENGL 312 Romantic to Modern British Literature (3)
Prerequisite: ENGL 101 or ENGL 101X. A study of representative authors and works in British literature from the early 19th century to the present, with emphasis on the novel. Some poetry and drama are also covered. The works of representative writers (such as Jane Austen, Charles Dickens, Thomas Hardy, P. D. James, and others) are explored.

ENGL 345 Modern Poetry (3)
(Not open to students who have already completed ENGL 446.) Prerequisite: ENGL 101 or ENGL 101X. A survey of British and American poetry from Yeats and Robinson to the present. Special emphasis is on Yeats, Pound, Eliot, Williams, Roethke, and Lowell.

ENGL 354 American Women Writers Since 1900 (3)
Prerequisite: ENGL 101 or ENGL 101X. An examination of the contributions of major American women writers since 1900 in the novel, short story, drama, and poetry.

ENGL 358 British Women Writers Since 1900 (3)
Prerequisite: ENGL 101 or ENGL 101X. An examination of the contributions of major British women writers since 1900 in the novel, short story, drama, and poetry.

ENGL 363 African American Authors to 1900 (3)
Prerequisite: ENGL 101 or ENGL 101X. An examination of the development, diversity, and quantity of African American literature, focusing on works composed before 1900. A broad range of African American writers is studied through some of their important but lesser-known works. Readings may include the writings of Phillis Wheatley, Frances Harper, Maria W. Stewart, David Walker, Frederick Douglass, William Wells Brown, Charles Chesnutt, and Paul Laurence Dunbar.

ENGL 364 African American Authors Since 1900 (3)
Prerequisite: ENGL 101 or ENGL 101X. An examination of the development and diversity of African American literature since 1900. Readings may include works by James Weldon Johnson, Zora Neale Hurston, Richard Wright, James Baldwin, Ann Petry, Paule Marshall, Toni Morrison, Alice Walker and other African American authors. Students may receive credit for only one of the following courses: ENGL 364 or HUMN 364.

ENGL 377 Medieval Myth and Modern Narrative (3)
(Not open to students who have completed ENGL 361.) Prerequisite: ENGL 101 or ENGL 101X. A study of literary patterns characteristic of medieval myth, epic, and romance; their continuing vitality in modern works; and links between medieval works (such as The Prose Edda, Beowulf, Le Morte D’Arthur, The Volsunga Saga, and Grettis Saga) and modern narratives (such as Tolkien’s The Lord of the Rings).
ENGL 391 Advanced Expository and Research Writing (3)
(Fulfills the general education requirement in intensive upper-level writing.) Prerequisite: ENGL 101 or ENGL 101X.
Instruction and practice in methods of presenting ideas and factual information clearly and effectively. Emphasis is on developing skills fundamental to both workplace and academic writing. Published writings are discussed and evaluated. Assignments include composing a total of 6,000 words (approximately 25 pages). Students may receive credit for only one of the following courses: ENGL 391 or ENGL 391X.

ENGL 391X Advanced Expository and Research Writing (3)
(Enrollment restricted to students for whom English is a second language. Fulfills the general education requirement in intensive upper-level writing.) Prerequisite: ENGL 101 or ENGL 101X. Instruction and practice in methods of presenting ideas and factual information clearly and effectively. Emphasis is on developing skills fundamental to both workplace and academic writing. Published writings are discussed and evaluated. Assignments include composing a total of 6,000 words (approximately 25 pages). Students may receive credit for only one of the following courses: ENGL 391 or ENGL 391X.

ENGL 402 Chaucer (3)
Prerequisite: ENGL 101 or ENGL 101X. An examination of selections from middle and modern English versions of Chaucer's Canterbury Tales. The cultural, literary, and linguistic foundations of Chaucer's tales are covered. Theme, structure, genre, and imagery are examined in each tale.

ENGL 406 Shakespeare: Power and Justice (3)
(Fulfills the civic responsibility perspective requirement.) Prerequisite: ENGL 101 or ENGL 101X. An intensive study of Shakespeare's dramatic masterpieces as illustrations of the concepts of power and justice both in a historically specific social and cultural context and as timeless concerns reflecting the human condition. Students may receive credit for only one of the following courses: ENGL 406 or HUMN 440.

ENGL 425 Modern British Literature (3)
Prerequisite: ENGL 101 or ENGL 101X. An examination of representative authors and works in the development of British literature from the late 19th century to post–World War II, with special emphasis on writers from the 1920s through the 1940s.

ENGL 433 American Literature: 1914 to the Present (3)
Prerequisite: ENGL 101 or ENGL 101X. A study of representative works—selected from drama, fiction, and poetry—that reflect significant trends in literary techniques and themes as well as shifts in cultural values.

ENGL 434 American Drama (3)
Prerequisite: ENGL 101 or ENGL 101X. An examination of representative authors in the development of American drama, with emphasis on post–World War II writers. Playwrights studied may include Glaspell, O'Neill, Hellman, Miller, Williams, Hansberry, Inge, Albee, Shepard, Wilson, Howe, Henley, and Hwang. Film and television adaptations may be included.

ENGL 437 Contemporary American Literature (3)
Prerequisite: ENGL 101 or ENGL 101X. A survey of representative authors and works in the development of American literature from 1945 to the present, with emphasis on fiction and drama. Works studied may include fiction by Truman Capote, John Cheever, Flannery O'Connor, Anne Tyler, Kurt Vonnegut, and Alice Walker and dramas by Tennessee Williams, Arthur Miller, Lorraine Hansberry, William Inge, August Wilson, Lanford Wilson, Tina Howe, Sam Shepard, and Tony Kushner. Some films may also be included.

ENGL 439 Major American Writers (3)
Prerequisite: ENGL 101 or ENGL 101X. A literary analysis of the works of significant American writers, emphasizing subject matter, themes, and techniques. Representative writers usually include Twain, Wharton, Dreiser, Lewis, Fitzgerald, Hemingway, Faulkner, and Frost; other authors may be included. May be repeated to a maximum of 6 credits when topics differ.

ENGL 441 The Novel in America Since 1914 (3)
Prerequisite: ENGL 101 or ENGL 101X. A survey of the American novel since World War I. Cultural and philosophical contexts and technical developments in the genre are discussed. Authors studied may include Ernest Hemingway, Willa Cather, William Faulkner, Anne Tyler, and Toni Morrison.
ENGL 486A Internship in English Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in English. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to English and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

ENGL 486B Internship in English Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in English. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to English and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

ENGL 499 Independent Study in English (3)
Prerequisite: 6 credits in upper-level ENGL. Directed independent study of topics of special interest not covered by regularly scheduled courses in English. May be repeated to a maximum of 6 credits when topics differ.
Environmental Management

Courses in environmental management (designated ENMT) may be applied as appropriate (according to individual program requirements) toward

- a major in environmental management, laboratory management, or management studies;
- a minor in environmental management or management studies;
- a certificate in Bio-Security or Environmental and Occupational Health and Safety Management; and
- electives.

Courses in environmental management require a basic scientific foundation. Before enrolling, students are recommended to complete the related requirements in math and science and should consult an advisor.

A description of the curriculum for the environmental management major and minor begins on p. 41. Descriptions of related curricula may be found on the following pages: laboratory management (p. 65) and management studies (p. 68).

ENMT 301 Environment and Ecosystems Management (3)
Prerequisite: NSCI 100. An overview of the scientific principles governing ecosystems, particularly as they relate to the environmental consequences of resource development and industrial processes. Earth's ecosphere, atmosphere, hydrosphere, and lithosphere are examined with special reference to environmental impacts and issues. Discussion covers the current state of the environment and the history of the environmental movement. The historical development of environmental management issues and approaches is introduced. Principles of environmental management at local, regional, and global levels are also covered.

ENMT 303 Environmental Regulations and Policy (3)
(Formerly ENMT 493.) Prerequisite: ENMT 301. An analytical survey of principles of constitutional and administrative law that are fundamental to environmental and health and safety management. Focus is on acquiring basic knowledge of federal legislation (including CWA, CAA, SDWA, RCRA/HSCA, CERCLA/SARA, FIFRA, TSCA, FDA, DOT, and OSHA), and becoming familiar with the use of the Federal Register and the Code of Federal Regulations. The relationship between regulations and public policy at local, state, and federal levels is discussed. Review also covers the social contract and its sanctions, as expressed in law and litigation at local, state, national, and international levels. Students may receive credit for only one of the following courses: ENMT 303 or ENMT 493.

ENMT 305 Hazardous Materials Toxicology (3)
Prerequisite: ENMT 301. An introduction to the human body, how it functions, and how normal body functions are altered by exposure or contact with hazardous materials. Basic principles of toxicology are used to examine human health effects associated with exposure to hazardous chemicals in the community and in work environments. Topics include the kinetics and dynamics of toxins; dermal, ocular, and systematic toxicology; practical aspects of occupational toxicology; the regulatory agencies (FDA and EPA); the data required to make regulatory decisions; and the process of risk assessment.

ENMT 310 Emergency Planning and Operations Management (3)
Prerequisite: ENMT 301. A review of human-made and natural hazards and emergency-preparedness laws. The relationships between industrial processes and hazardous materials are covered. Focus is on developing the skills needed to work safely in a hazardous environment and prepare hazardous materials for transportation, processing, and disposal. Topics include elements of hazardous materials emergency planning, such as direction and control of emergency response and remediation. Review also covers preparation of emergency plans, methodology of disaster response, and performance of emergency operations. Practical exercises demonstrate how to prepare for and respond to emergencies.
ENMT 315 Environmental Audits and Permits (3)
Prerequisite: ENMT 301. A study of the principles of environmental impact assessment and an in-depth look at various laws, regulations, and methods of performing due diligence audits. Topics include the regulatory requirements of NEPA, EIS reports, types of audits, ISO 14000 environmental systems standards, ASTM audit procedures, Department of Health and Safety audits, common law privileges, and self-regulation and business transfer statutes. Strategies and methodology for obtaining environmental permits and compliance are also reviewed.

ENMT 321 Environmental Health (3)
Prerequisite: ENMT 301. A study of the effects of environmental hazards on human health, particularly those hazards created or influenced by human activities. Topics include chemical pollution of the air, soil, and water; and the effects of physical environmental hazards such as radiation and noise pollution on the well being of humans. Discussion covers the control of environmental health hazards through hazard management.

ENMT 322 Occupational Health and Safety (3)
Prerequisite: ENMT 301. A study of the principles of health and safety management in the workplace. Topics include recognition, evaluation, and control of occupational hazards and the methods used to evaluate and control these hazards. The strategies used by industrial hygienists and safety professionals to prevent or minimize exposure to occupational hazards are explored. Discussion also covers the role of regulatory processes in occupational health and safety management.

ENMT 340 Environmental Technology (3)
Prerequisite: ENMT 301. An introduction to technology for multimedia (i.e., air, water, land) environmental management, control, and remediation. Survey covers existing, modified, new, and emerging technologies. Case studies of real-world environmental challenges demonstrate the evaluation and selection of the appropriate technology for specific uses. Factors in making technology application decisions, such as technical integrity, cost effectiveness, and environmental soundness, are explained.

ENMT 380 Air Quality Management (3)
Prerequisite: ENMT 301. An overview of air quality management principles and strategy. Focus is on the atmosphere, pollutants and sources, dispersion, effects, regulations, air pollution control technology and management, indoor air quality pollution, and noise control. Indoor air pollution topics include the study of sick buildings, causes and risk factors, diagnostic protocols, contamination measurement, and problem mitigation.

ENMT 390 Environmental Risk Assessment (3)
An overview of principles and guidelines for performing and using risk assessments. Topics include relevant regulations, the requirements of different government agencies (e.g., EPA, OSHA, FDA, etc.), the pros and cons of different risk assessment methods, and how to plan, perform, report, and communicate environmental risk assessments. Emphasis is on environmental, health and safety, and ecological risk assessments. The use and economic effectiveness of risk assessments are also explored.

ENMT 405 Pollution Prevention Strategies (3)
Prerequisite: ENMT 301. An overview of alternative environmental strategies to minimize, reduce, and prevent pollution. Topics include source reduction, recovery, reuse, recycling, and conservation; material substitution; process modifications; quality assurance, quality control, and good housekeeping; waste minimization; zero discharge; and pollution prevention, processing, treatment, and disposal. Emphasis is on pollution prevention techniques, practices, and case studies. Review also covers economic analysis and regulatory compliance related to these strategies.

ENMT 486A Internship in Environmental Management Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in environmental management. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to environmental management and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
Experiential Learning

The EXCEL Through Experiential Learning program yields UMUC credit for learning acquired outside the classroom. The course in experiential learning (designated EXCL), as well as credit earned through the program, may be applied toward
• appropriate majors and minors;
• general education requirements (according to content) as appropriate; and
• electives.

Information about this program is given on p. 238. Details, an application form, and an online orientation are also available on the Web at www.umuc.edu/priorlearning.

EXCL 301 Learning Analysis and Planning (3)

Prerequisite: Formal admission to the program. (For more information, students should visit www.umuc.edu/priorlearning or contact priorlearning@umuc.edu.) Instruction in the preparation of a portfolio documenting college-level learning gained through life experiences. Focus is on defining goals, documenting learning gained through experience and providing an analysis of applied and theoretical understanding of college-level content. Faculty evaluators assess completed portfolios for a possible award of credit.

ENMT 486B Internship in Environmental Management Through Co-op (6)

Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in environmental management. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to environmental management and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

ENMT 495 Global Environmental Management Issues (3)

(Intended as a final, capstone course to be taken in a student’s last 15 credits.) Prerequisite: ENMT 301. A study of global environmental management that integrates knowledge gained through previous coursework and experience and builds on that conceptual foundation through integrative analysis, practical application, and critical thinking. Emerging issues in global environmental management are considered. An overview of the fundamental elements of an integrated environmental management program is provided. Topics include economic development; environmental pollution; remediation; and conservation within a multifaceted scientific, legal, political, and global context. Discussion covers ongoing national and international events concerning environmental issues. Case studies and an advanced management project apply principles and concepts to environmental perspectives, experiences, research issues, and new paradigms of design.
Fire Science

Courses in fire science (designated FSCN) may be applied as appropriate (according to individual program requirements) toward

- a major in fire science, investigative forensics, or management studies;
- a minor in fire science or management studies;
- a certificate in Public Fire-Protection Management and Administration or Systems Approach to Fire Safety; and
- electives.

The fire science curriculum is unique and is designed primarily for firefighters. Students should consult an advisor before enrolling in any of the courses.

Most courses require extensive writing. Students should complete a writing course (such as ENGL 101, 101X, 391, and 391X) or have equivalent writing experience before enrolling.

A description of the curriculum for the fire science major and minor begins on p. 45. A description of the curriculum for the management studies major and minor begins on p. 68.

FSCN 302 Advanced Fire Administration (3)
A presentation of modern management and planning techniques that apply to organizing a fire department. Procedures explored include those for evaluation and control of budgeting, personnel, communications, and planning. The traditional and evolving roles of the fire department in protection, prevention, and community service are discussed.

FSCN 303 Analytic Approaches to Public Fire Protection (3)
A presentation of techniques of operations research and systems analysis as they apply to problems in fire protection. Discussion covers techniques such as cost/benefit analysis, methods for locating fire stations, and the use of statistical analysis. Techniques for collecting data on fires and for managing information are explained.

FSCN 304 Fire-Personnel Management (3)
An examination of personnel practices, management procedures, collective bargaining, binding arbitration, and applicable legislative and administrative procedures. Topics include promotion, personnel development, career and incentive systems, validation of physical requirements, and managerial and supervisory procedures.

FSCN 305 Fire-Prevention Organization and Management (3)
An examination of prevention as the primary community-based strategy for fire protection. Topics include community risk reduction, codes and standards, inspections and plans review, incident investigation, fire-prevention research, and the relationship of master planning to fire prevention. The cultural, economic, governmental, nongovernmental, and departmental influences on fire prevention are also explored. Emphasis is on applying the principles studied to anticipate problems and develop strategies for fire prevention.

FSCN 306 Incendiary-Fire Analysis and Investigation (3)
A presentation of procedures and techniques for determining, collecting, comparing, and analyzing data on incendiary fires. Topics include principles of ignition phenomena and propagation variables, the role of insurance and governmental programs in combating arson, and techniques of analyzing and predicting data, such as pattern analysis. Discussion deals with the legislative, economic, psychological, sociological, and legal aspects of incendiarism.

FSCN 401 Disaster and Fire Defense Planning (3)
A study of the concept and principles of assessing community risk and then developing regional and cooperative procedures and plans of response. The relationship of structural, climatic, and topological variables to group fires, conflagrations, and natural disasters is analyzed. Other aspects introduced include pre- and postoccurrence factors, such as organization, communications, planning, coordination, and command and logistics.

FSCN 402 Fire-Related Human Behavior (3)
Explanation of the dynamics of human behavior in fire incidents. Emphasis is on the functions and implementation of prevention practices, programs, codes, and ordinances. The concepts of risk, personal invulnerability, role, and group dynamics are examined in relation to design aspects of buildings and mitigation of the effects of fire on modern society. Discussion deals with proper ways of conducting postfire interviews, and emphasizes the psychological effects of communications during emergencies.
FSCN 403 Managerial Issues in Hazardous Materials (3)
The development of the knowledge and skills necessary to safely and effectively manage a hazardous materials emergency. Topics include health and safety concerns, political issues, regulations, site management and control, hazard and risk evaluation, information management, response objectives, special tactical problems, decontamination, and termination activities. Federal regulations such as OSHA 1910.120 and NFPA 472 (Standard on Professional Competency of Responders to Hazardous Materials Incidents) are addressed.

FSCN 411 Fire-Protection Structure and Systems Design (3)
Presentation of design principles involved in protecting buildings and other structures from fire. Empirical tests and prediction procedures are explained. Practices in designing systems for detecting, controlling, and suppressing fires, as well as the basic hydraulic design of sprinkler and water-spray systems are presented. Recent innovations in the field are reviewed.

FSCN 412 Political and Legal Foundations of Fire Protection (3)
A consideration of the legal basis for the police powers of the government in connection with public safety. The responsibility, legal limitations, and liability of fire-prevention organizations and personnel are examined. Judicial decisions are reviewed, with a focus on the implications of product-liability cases in the field of fire prevention.

FSCN 413 The Community and Fire Threat (3)
An analysis of the sociological, economic, and political characteristics of communities and their influence on the fire problem. Discussion covers methods of studying community profiles and structures, and the economic, geographic, and sociological variables of fire threat. The functional basis of the community is examined, with attention to the diverse social roles of community agencies and the roles of fire service as a complex organization within the community.

FSCN 414 Fire Dynamics (3)
An investigation into the phenomena of fire propagation in the air-regulated phase and the fuel-regulated phase. Variables in the development of pre- and postflashover fire are analyzed. Topics include geometric material; gaseous, fluid-flow, and thermodynamic parameters; and fire models of compartments and buildings.

FSCN 415 Application of Fire Research (3)
A practical, up-to-date review of fire research and its application. The transfer of research and its implications for fire prevention and protection programs are addressed. The focus is on both national and international studies, and on maintaining awareness of ongoing research developments.

FSCN 486A Internship in Fire Science Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in fire science. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to fire science and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

FSCN 486B Internship in Fire Science Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in fire science. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to fire science and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
Geography

Courses in geography (designated GEOG) may be applied as appropriate (according to individual program requirements) toward

• the general education requirement in the behavioral and social sciences; and

• electives.

UMUC offers only a limited number of courses each term in this discipline.

GEOG 100 Introduction to Geography (3)

An introduction to the broad field of geography. Emphasis is on concepts relevant to understanding global, regional, and local issues.

Geology

Courses in geology (designated GEOL) may be applied as appropriate (according to individual program requirements) toward

• the general education requirement in the biological and physical sciences; and

• electives.

UMUC offers only a limited number of courses each term in this discipline.

GEOL 100 Physical Geology (3)

A study of the principles of dynamic and structural geology. The rocks and minerals composing Earth, the movement within it, and its surface features and the agents that form them are surveyed. Students may receive credit for only one of the following courses: GEOL 100 or GEOL 101.

German

Courses in German (designated GERM) may be applied as appropriate (according to individual program requirements) toward

• the general education requirements in the arts and humanities and for international perspective coursework;

• a major or minor in humanities; and

• electives.

UMUC offers a limited number of foreign language courses each term.

A description of the curriculum for the humanities major and minor begins on p. 56.

GERM 111 Elementary German I (3)

(Fulfills the international perspective requirement.) A basic foundation in listening, speaking, reading, and writing in German. German culture, history, current events, and geography provide the context for instruction in grammatical structures, vocabulary, pronunciation, and writing. Focus is on acquiring the skills necessary to communicate with native German speakers orally and in writing at an elementary level. Students may receive credit for only one of the following courses: GERM 101 or GERM 111.

GERM 112 Elementary German II (3)

(Fulfills the international perspective requirement.) Prerequisite: GERM 111. A continuation of the development of basic skills in listening, speaking, reading, and writing in German. German culture, history, current events, and geography provide the context for instruction in grammatical structures, vocabulary, pronunciation, and writing. Focus is on acquiring the skills necessary to communicate with native German speakers orally and in writing at an advanced elementary level. Much of the class is conducted in German. Students may receive credit for only one of the following courses: GERM 102 or GERM 112.
Gerontology

Courses in gerontology (designated GERO) may be applied as appropriate (according to individual program requirements) toward

- the general education requirements for behavioral and social sciences (except GERO 341, 342, 351, and 353 and 1-credit GERO courses);
- a major in gerontology, psychology, or social science;
- a minor in gerontology or women’s studies;
- a certificate in gerontology; and
- electives.

A description of the curriculum for the gerontology major and minor begins on p. 50.

GERO 100 Introduction to Gerontology (3)
(Fulfills the general education requirement in behavioral and social sciences.) An overview of the processes of aging and the way aging is defined chronologically, functionally, biologically, sociologically, and psychologically. The physical, psychological, cultural, and social aspects of aging are examined. Topics include the demography of aging and its implications for society, social structure and processes (such as patterns of family and social roles), work and retirement, health care and housing, and the implications of an aging society for policy. Students may receive credit for only one of the following courses: GERO 100 or GERO 210.

GERO 220 Psychological Aspects of Aging (3)
(Fulfills the general education requirement in behavioral and social sciences.) Prerequisite: GERO 100. A review of normal and pathological changes associated with the process of aging. Topics include sensory, perceptual, and psychomotor processes; mental ability, drives, motives, and emotions; intelligence, memory, and cognitive functions; depression; neurological changes; Alzheimer’s disease and related dementias; stress; life review processes; personality and adjustment; suicide; bereavement; and treatment modes. Emphasis is on the normal aging process, pathological changes in the elderly (according to current research), and understanding the difference between the two.

GERO 301 Service/Program Management (3)
An exploration of the managerial aspects of providing health and human services in the field of gerontology through an integrated delivery system. Focus is on the concepts, strategies, and best practices for the management of health and human services. Topics include planning, strategic management, marketing, financing, legal issues and capacity building.

GERO 302 Health and Aging (3)
Prerequisite: GERO 100. An exploration of the physiological processes of aging that covers normal aging and chronic illness. Topics include biological processes and theories of aging, bodily changes normally associated with aging, long-term and health care systems, and related medical terminology. Review also covers substance abuse, environmental factors affecting aging, and ways of promoting health, preventing disease, and assessing health risks.

GERO 306 Programs, Services, and Policies (3)
Prerequisite: GERO 100. An overview of programs and policies designed to enable older adults to obtain necessary services, enhance their health, improve or maintain their economic well-being, and provide support to families of the aging. Trends in aging programs, services, and policies are discussed. Topics include work, retirement, and income maintenance (employment concerns, pensions, Social Security, and Supplementary Security Income); delivery and regulation of health care (long-term care, home care, Medicare, and Medicaid); and social or community services (adult day care, in-home services, senior centers, nutrition and food programs, information and referrals, advocacy, elder abuse protection, and transportation) that promote well-being in older adults. Students may receive credit for only one of the following courses: GERO 304 or GERO 306.

GERO 307 Aging, Religion, and Spirituality (3)
Prerequisite: GERO 100. An examination of aging, religion, and spirituality from the perspectives of the humanities and social science. Focus is on concepts of spiritual or religious development and aging within the major religious traditions (Buddhism, Islam, Judaism, Christianity, and Hinduism). A critical analysis of theoretical and empirical research and clinical perspectives of the role of religion and spirituality in the lives of older adults from different religious traditions are presented. Discussion covers definitions and concepts of religiosity and spirituality in the social science literature. The current and future impact of older adults on religious institutions, the responsibilities of religious institutions to their aging members, and the role of religion and spirituality in the lives of the aging are examined.
GERO 311 Women and Aging (3)
Recommended: GERO 100. An exploration of issues important to women in midlife and later adulthood. Topics include changes in identity, marriage and family, work, health, social relationships, and economic well-being. The impact of social class and ethnicity or culture on women’s well-being in midlife and later adulthood is examined. The impact of policy and services on women’s development and quality of life and life planning for midlife and aging women are also discussed. Students may receive credit for only one of the following courses: GERO 311 or GERO 497E.

GERO 327 Ethnicity and Aging (3)
Prerequisite: GERO 100. An examination of the increasing heterogeneity of the aging population in the United States. Topics include theory and research related to ethnicity and aging, the resources and needs of older adults in different ethnic groups (Hispanic, African American, Asian, and Native American), the impact of ethnicity and culture on the aging family, social support and caregiving, health, and social relationships. Discussion also covers how social, health care, and government agencies can effectively meet the needs of older adults in ethnic communities.

GERO 331 Sociology of Aging (3)
Prerequisite: GERO 100. An examination of the social forces that impinge on the aging process from a number of theoretical perspectives found in sociology and social gerontology. Topics include the social ramifications of an aging population, sociological and social gerontological explanations of the aging process, interactions between the aging process and the larger social structure, cross-cultural similarities and differences in the aging experience, and current social policies toward aging and their implications for the future.

GERO 336 The Aging Family (3)
Prerequisite: GERO 100. An examination of issues faced by aging families. Topics include the structure of family networks; solidarity and conflict between generations; types and quality of support given to and by the older person; and social roles (including role strain, conflict, and reward). Emphasis is on understanding family caregiving—the experience of caregiving; the caregiver-recipient relationship; and the social, psychological, and economic costs of caregiving. The phenomena of grandparents parenting grandchildren is covered. The changing nature of family relationships is analyzed from the perspective of gender, race or ethnicity, social class, age, and historical context. Discussion also covers implications for social programs and policies to support aging families. Students may receive credit for only one of the following courses: GERO 336 or GERO 496L.

GERO 338 Health Promotion in Older Adults (3)
Prerequisite: GERO 100. An exploration of health promotion issues in an older adult population. The literature on health promotion and health risk behaviors in older adults is analyzed critically. Focus is on the modification of risk behaviors related to the development of cardiovascular disease, cancer, and other illnesses common to older adults through ecological and educational models of health promotion. The impact of social, cultural, political, and economic factors on health behavior and health promotion is also examined.

GERO 341 The Long-Term Care Continuum (3)
Prerequisite: GERO 100. A survey of gerontological intervention programs and the care needs of the elderly and their families. The changing needs of aging individuals who have chronic physical and/or mental health impairments are examined. A framework for understanding the continuum of care from community- to institution-based is provided. Focus is on understanding a multi-disciplinary approach to community-, home-, and institution-based care. Students may receive credit for only one of the following courses: FMCD 499E, GERO 341, or GERO 496K.

GERO 342 Long-Term Care Administration (3)
(Continuation of GERO 341.) Prerequisite: GERO 100. An overview of the administrative and operational issues of long-term care facilities. The responsibilities of a long-term care administrator and relationships with personnel and administrative structure are examined. Topics include policy, procedures, and insurance or financing. Discussion also covers the ethical and legal concerns of long-term care.

GERO 350 The Older Learner (3)
Prerequisite: GERO 100. A critical examination of theory and research on education and learning in later life. Philosophical perspectives on education in later life are explored. Topics include educational opportunities and needs in later life; psychological, educational, and social aspects that influence learning in older adults; the impact of ethnicity, gender, age, and socioeconomic status on education and the teaching/learning process; and the development of educational programs, curricula, and teaching/learning strategies used with older adults. The evaluation of educational programs designed for older learners is also covered.
GERO 351 Management of Senior Housing Environment (3)
Prerequisite: GERO 100. A framework for training retirement-housing professionals. Topics include regulatory standards and processes for Housing and Urban Development senior housing structures, environmental design, behavioral and environmental interaction, dietary services, continuity of care, differentiation of management needs in various formats of senior housing, personnel, programming, and medical and personal care services.

GERO 353 Financial Management of Retirement Housing (3)
Prerequisite: GERO 100. An examination of the operational side of senior housing management. Topics include the housing administrator’s role as financial manager; application of accounting principles to senior housing needs; working capital, ratio analysis, and vertical analysis; budgeting in senior housing; purchasing; financing new facilities; payroll; and maintenance issues in senior housing.

GERO 355 Nutritional Concerns of Aging (3)
Prerequisite: GERO 100. A survey of the nutritional concerns of the elderly, including causes, pathophysiology, prevention, and control. Topics include the role of nutrients in the etiology of various illnesses associated with aging (such as anemia, osteoporosis, gastrointestinal tract disorders, cancer, cardiovascular diseases, maturity-onset diabetes, crippling arthritis, stroke, Alzheimer’s disease, cataracts, tooth loss, and vision loss). Other topics include the effects of aging on appetite, nutrition and exercise, vegetarianism, and food choices. Nutritional assessment, the influence of different cultures on nutrition, and community resources are discussed. Students may receive credit for only one of the following courses: GERO 355 or GERO 495K.

GERO 380 End of Life: Issues and Perspectives (3)
Prerequisite: GERO 100. An exploration of death, dying, and bereavement from social, cultural, psychological, biomedical, economic, and historical perspectives. Topics include definitions of death, the meaning of death, psychological needs of the dying person and significant others, care of the dying, suicide, euthanasia, end-of-life decision making, the economics of life-sustaining care, and bereavement and grieving.

GERO 390 Economics of Aging (3)
Prerequisites: GERO 100 and ECON 201, ECON 203, or ECON 205. A study of the fundamental sources of economic security that older adults receive, the many problems they face in retirement, and the impact of an aging population on the nation’s economy. Sources of economic security received by older adults are analyzed according to race or ethnicity, gender, and social class background. Topics include the history, development, and fundamental structure of the Social Security and pension systems; Medicare, Medicaid, private health coverage, and the myriad public assistance programs for which elderly persons are eligible; and the nation’s evolving private and public policies on retirement. The relative amounts of income the elderly receive and patterns of spending in older adult households are examined. The major income support programs available to older adults are profiled. Other topics include baby boomer retirement, international economics of aging, the financial situation of older women and their poverty, reverse annuity mortgages, “productive aging” (work and volunteering after retirement), and implications of demographics for our society and its economic structure.

GERO 391 Legal Issues in Aging (3)
Prerequisite: GERO 100. An overview of critical legal issues affecting the elderly. Focus is on potential problems that may require the assistance of attorneys and health care professionals. Topics include the responsibilities of legal representatives, personal autonomy, and voluntary and involuntary limitations on autonomy, guardianship and other alternatives, and end-of-life decision making. Regulations and laws designed to protect the elderly against abuse and fraud are also covered.

GERO 410 Cross-Cultural Perspectives of Aging (3)
Prerequisite: GERO 100. An examination of how different cultures interpret aging and the life cycle. Topics include cross-cultural theory and research on aging; research methods; global demographics of aging; cross-cultural perspectives of norms and values regarding work, family, and community roles for older adults; the social and economic status of older adults; intergenerational relationships; caregiving; end-of-life issues; social services; and social policy. Health care for older adults is also covered from a cross-cultural perspective.
GERO 443 Making Gerontology Relevant to Other Disciplines (3)
(Designed to help students in other disciplines integrate gerontology with their major area of academic study.) Prerequisites: GERO 100, 220 (or PSYC 357), 302 (or BIOL 307), and 331. An exploration of fundamental gerontological concepts (adaptation, health, functional ability, family/intergenerational relations, interdependency, activity, and economic security) from a multidisciplinary perspective. Implications for practice are examined from the perspective of the student’s academic major. Avenues for fostering interaction among different disciplines, as they pertain to gerontology, are explored. Discussion also covers how new linkages can be forged between scientists and practitioners in gerontology and professionals within individual major areas of study.

GERO 460 Neurocognitive Functioning in the Aging (3)
Prerequisite: GERO 100. An exploration of the relationship between the functioning of the brain and cognitive and functional abilities. Normative age-related and pathological changes in the brain and central nervous system are examined along with the impact of these changes on cognitive and functional abilities in older adults. Discussion covers Alzheimer’s and other dementias and their assessment and treatment.

GERO 486A Internship in Gerontology Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in gerontology. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to gerontology and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

GERO 486B Internship in Gerontology Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in gerontology. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to gerontology and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

GERO 495 Special Topics in Development and Health (1–3)
Specialized study in gerontology and related topics, focusing on issues in development and health. May be repeated to a maximum of 6 credits when topics differ.

GERO 495C Alzheimer’s Disease: Current Issues, Perspectives, and Research (1)
A theoretical and practical approach to the study of Alzheimer’s disease, covering its etiology and establishing its place among the chronic dementias. Topics include medical ethics, legal issues, caregiving, anticipatory grieving, support groups for both patients and caregivers, and community networks. Students may receive credit for only one of the following courses: GERO 495C or HLTH 498U.

GERO 495I More Than Movement (1)
Presentation of and practice in activities designed to motivate and increase joint articulation, range of motion, and enjoyment of body movement, as well as to stimulate deeper breathing and physical awareness. Focus is on promoting healthier bodies, minds, and spirits through interrelated arts, fun, and social interaction regardless of the level of physical functioning.

GERO 4956 Special Topics in Social and Family Relations (1–3)
Specialized study in gerontology and related topics focusing on social and family relations. May be repeated to a maximum of 6 credits when topics differ.
GERO 496B Issues Affecting Older Workers and Their Employers (1)
An overview of issues affecting older workers and their employers. Topics include descriptive information about older workers and the types of work they perform, policy issues governing older workers and their employers, attitudes about older workers among employers and workers, methods to combat age discrimination, and future issues for older workers in the United States and Europe.

GERO 496C Managing Loss and Grief: Approaches for the Human Services Provider (1)
A discussion of new understanding of grief and loss that has emerged from health care and counseling practices. Therapeutic interventions, responding to varied loss-inducing situations, that help clients satisfactorily work through accompanying grief while promoting personal growth are explained.

GERO 496G Elder Abuse and Criminal Victimization (1)
A survey of abusive treatment of older people in the context of violence in families. The typical characteristics of the abusers and the abused, as well as the causes and types of crimes of abuse, are examined. Topics include methodological shortcomings in the conduct of research on cases of abuse, alternative strategies of intervention, and the types of stress that caregivers experience. Students may receive credit for only one of the following courses: GERO 496G or HLTH 498L.

GERO 496I Understanding and Coping with Life Transitions (1)
A study of the transitions of adulthood and aging, such as divorce, career changes, retirement, grandparenthood, illness, and the death of a spouse or loved one. The Transition Coping Model is used to look at factors that make a difference in dealing with change.

GERO 496K Long-Term Care: Options and Alternatives (1)
An overview of resources available for people no longer able to live independently. The continuum from home care to independent living is examined to determine which type of living situation best suits the individual’s medical, personal care, and financial needs. A field trip to a nearby long-term care facility is included. Students may receive credit for only one of the following courses: FMCD 499E, GERO 341, or GERO 496K.

GERO 496P Elder Rights: Social Security and Medicare (1)
An overview of the history and evolution of Social Security and Medicare, including an exploration of basic benefits, current conflicts, and implications for the future.

GERO 496R Geriatric Case Management (1)
A review of the concept of geriatric case management, including the needs of older adults and appropriate interventions.

GERO 497 Special Topics in Administration and Planning (1–3)
Specialized study in gerontology and related topics focusing on administration and planning. May be repeated to a maximum of 6 credits when topics differ.

GERO 497D Retirement Planning: Managing Your Estate (1)
(For nonlawyers.) An examination of the principles and strategies used to settle an estate. Topics include administration of wills and estates, ownership and transfer of property, will substitutes, trusts and powers of appointment, strategies for giving charitable gifts, and gift and estate taxes. Students may receive credit for only one of the following courses: FMCD 499D or GERO 497D.

GERO 497K Strategic Planning for Retirement (1)
A discussion of the techniques for achieving financial independence at retirement and the economic, governmental, and business factors that work against reaching this goal. Topics covered include Social Security and Medicare; pensions and tax-deferred savings plans, including 401(k)s and IRAs; and how much to save for retirement throughout the life span.

GERO 497M Managed Health Care Services in Gerontology (1)
A comparative analysis of the delivery of managed health services to retirees and the elderly in the United States. Focus is on the financing of comprehensive benefits and services while considering demographics, employer-sponsored approaches, government-sponsored approaches, indemnity approaches, and self-sponsored approaches. Key concepts examined include employer/retiree cost-sharing coverage, tax-deferred funding options, purchasing cooperatives, health alliances, fiscal management, and capitation.
GERO 497N Vocational Planning in Gerontology (1)
A review of the various vocational pathways in gerontology. Topics include suggested plans of study, professional affiliations, and market demands.

Government and Politics

Courses in government and politics (designated GVPT) may be applied as appropriate (according to individual program requirements) toward
- the general education requirement in the behavioral and social sciences;
- a major in political science or social science;
- a minor in African American studies, political science, or social science;
- a certificate in various policy-related areas; and
- electives.

A description of the curriculum for the political science major and minor begins on p. 75. Descriptions of related curricula may be found on the following pages: African American studies (p. 17), criminal justice (p. 36), and social science (p. 80).

GVPT 100 Introduction to Political Science (3)
(Fulfills the civic responsibility perspective requirement.) A survey of the basic principles of political science. Topics include the relationship of political science to the other social sciences; the concepts of modern democracy, political ideology, and political socialization; the function of public opinion, mass media, interest groups, and political parties; the basic institutions of government and the separation of powers; and the role of international relations and globalization.

GVPT 101 Introduction to Political Theory (3)
An introduction to political philosophy. Discussion covers the classic contrast between the philosophies of Plato and Machiavelli concerning the problem of justice and power and the philosophical foundations of liberalism, socialism, and conservatism. Other topics include the political ideas of John Locke, Thomas Hobbes, Jean-Jacques Rousseau, John Stuart Mills, Karl Marx, and Edmund Burke.

GVPT 170 American Government (3)
A comprehensive study of government in the United States, including the basic principles of American government and political culture and a cross-cultural examination of institutions, processes, and public policies.

GVPT 199 Introductory Topics in Government and Politics (1–3)
Introduction to topics of specialized interest.

GVPT 200 International Political Relations (3)
(Fulfills the international perspective requirement.) A study of the major factors underlying international relations, the methods of conducting foreign relations, the foreign policies of the major powers, and the means of avoiding or alleviating international conflicts. Students may receive credit for only one of the following courses: GVPT 200 or GVPT 300.

GVPT 209 Research Methods of Political Science (3)
An introductory study of the research designs, methods, and techniques used in contemporary political science. Discussion covers basic concepts and methods of observation, hypothesis formulation, experimental design, data collection, measurement, data analysis and generalization, and basic inferential statistics.

GVPT 210 Introduction to Public Administration and Policy (3)
An introduction to the study of the administrative process in the executive branch. The concepts and principles of administration are examined, then placed in the context of their relationship to public policy. Analysis covers organizational structure and theory and the behavior of participants in the administration of policy.

GVPT 240 Political Ideologies (3)
A survey and an analysis of the leading ideologies of the modern world. Topics include anarchism, communism, socialism, fascism, nationalism, and democracy.

GVPT 280 Comparative Politics and Government (3)
An introduction to some of the major theories and issues in the study of comparative politics. Focus is on examining how different political systems (e.g., democratic or authoritarian) operate. The major forms of government in the world are compared.
GVPT 282 The Government and Politics of the Third World (3)
A study of how the internal politics of Third World nations develop. The governmental institutions, processes, and problems of the Third World are evaluated in light of the socioeconomic environments that are common to most of the states of Africa, the Middle East, Asia, and Latin America.

GVPT 306 Global Ecopolitics (3)
An assessment of controversial worldwide problems. Topics may include growth and its limitations, agricultural productivity, the depletion of resources, the energy crisis, pollution, and the general effects of science and technology on the ecological, socioeconomic, and political systems of the world. These problems are considered as objects of public policy.

GVPT 308 Human Rights in the World (3)
A study of the principles and practices governing human rights from the beginning of mankind to the modern international conventions and U.N. Declarations. The present international and national push for human rights and emancipation is analyzed and discussed. Students may receive credit for only one of the following courses: GVPT 308 and GVPT 399Y.

GVPT 400 Business and Politics (3)
A study of the inner workings of key political, social, and economic institutions in American society and their effect on individuals, business, and government. Topics include central issues facing contemporary society; the powers of government and business; government regulations affecting business, the consumer, the workplace, and the environment; and business and government in the world economy.

GVPT 401 Problems of World Politics (3)
A study of governmental problems of international scope. Topics include causes of war, problems of neutrality, and propaganda. Assignments include reports on readings from current literature.

GVPT 401A International Political Terrorism (3)
An examination of the development of international political terrorism. Topics may include the definition of terrorism; the historical antecedents of modern terrorism; the motivations, organizations, and support networks of terrorists; the nature of crisis management; the responses of the world community; the effects of terrorism on free societies; and the linkages of terrorist states to international terrorism. The ability of civilization to withstand this type of attack upon its fabric is discussed.

GVPT 401B State Terrorism (3)
An exploration of the use of terror and political violence by governments, against their own citizenry or against other nations, in the furtherance of national goals. Review begins with the Reign of Terror in revolutionary France and culminates with a recent 20th-century example, the invasion of Kuwait by Iraq.

GVPT 401C Urban Terrorism (3)
An examination of terrorism in the urban environment. Topics include the definition of terrorism; the historical antecedents of urban terrorism, from the Paris Commune to the Minimanual of the Urban Guerrilla; the motivation, organization, tactics, and support networks of urban terrorists; and the nature of crisis management in the face of urban terrorist activity. The role of advanced technology in rendering society more vulnerable to urban terrorism is evaluated, with industrial and postindustrial society considered as catalysts for terrorist attacks in urban settings. Urban terrorism is viewed in the contexts of transnational and international terrorism. The effects of terrorism on a free society are assessed.

GVPT 401D International Terrorism (1)
An examination of the origins, theories, methods, dangers, and possible future of international terrorism. The serious nature of terrorism today and how prepared government should be to control it are addressed. Topics include the definition of terrorism; reasons for growth; terrorist groups and their grievances; supporters of terrorism; questions of moral or philosophical justification; and protection against kidnappings, skyjackings, and bombings. Assignments include advanced reading and research. Students may receive credit for only one of the following courses: GVPT 199C or GVPT 401D.

GVPT 402 International Law (3)
A study of the basic character, general principles, and specific rules of international law. Emphasis is on recent and contemporary trends in the field. The relationship of law to other aspects of international affairs is analyzed as well.

GVPT 403 Law, Morality, and War (3)
(Fulfills the civic responsibility perspective requirement.) An exploration of fundamental moral and legal issues concerning war.
GVPT 405 Defense Policy and Arms Control (3)
A survey of contemporary issues of military strategy and international security. The processes of formulating defense-related political and economic policy are examined. Topics include nuclear war and conventional (limited) warfare, insurgency by guerrillas, arms control and disarmament, and the possibilities for moderation of war.

GVPT 411 Public Personnel Administration (3)
A survey of components of public personnel administration. Topics include the development of the merit civil service, the personnel agency, classification, recruitment, examinations and techniques of administering them, promotion, service ratings, training, discipline, employee relations, and retirement.

GVPT 413 Governmental Organization and Management (3)
A study of the theories of organization and management in U.S. government. New trends, experiments, and reorganization are major topics.

GVPT 414 Administrative Law (3)
A study of the discretion exercised by administrative agencies. Their functions, their powers over persons and property, their procedures, and judicial sanctions and controls are analyzed.

GVPT 431 Introduction to Constitutional Law (3)
A systematic inquiry into the general principles of the U.S. constitutional system. Special reference is made to the role of the judiciary in interpreting and enforcing the federal Constitution.

GVPT 433 The Judicial Process (3)
An examination of judicial organization in the United States at all levels of government. Emphasis is on legal reasoning, legal research, and court procedures.

GVPT 434 Race Relations and Public Law (3)
A political and legal examination of rights protected by the Constitution as they affect racial minorities. The constitutional powers of the federal courts, the executive branch, and Congress to define, protect, and extend those rights are probed.

GVPT 436 The Legal Status of Women (3)
An examination of judicial interpretation and applications of common, statutory, and constitutional laws as they affect the status of women in American society.

GVPT 443 Contemporary Political Theory (3)
Prerequisite: GVPT 100. A survey of the principal political theories and ideologies from Karl Marx to the present.

GVPT 444 American Political Theory (3)
A study of the development and growth of American political concepts from the colonial period to the present.

GVPT 457 American Foreign Relations (3)
A study of the principles and machinery of American foreign relations. Emphasis is on the conduct of the U.S. Department of State and the Foreign Service. Analysis of the major foreign policies of the United States is provided.

GVPT 460 State and Local Administration (3)
A study of the administrative structure, procedures, and policies of state and local governments. The focus is on the state level and on intergovernmental relationships. Illustrations are drawn from Maryland governmental arrangements.

GVPT 473 Legislature and Legislation (3)
A comprehensive study of the organization, procedures, and problems involved in legislation. Opportunities for contact with Congress and with the legislature of Maryland are provided.

GVPT 475 The Presidency and the Executive Branch (3)
An examination of the various roles of the president in the political process of the United States. The president’s involvement in legislative matters, the president’s function in the executive branch, and the president’s role in his or her political party are assessed.

GVPT 480 Comparative Political Systems (3)
A study, along functional lines, of major political institutions, such as legislatures, executives, courts, bureaucracies, public organizations, and political parties.
GVPT 498A Contemporary Issues in the Middle East (1)
An investigation of the modern Middle East. Topics include significant stages in modern Arab history, notions of honor and shame, religion, and other factors of cultural importance. Western stereotypes and misconceptions of the region and the people are examined. Analysis covers the problems of state development, the struggle over Palestine, and the causes and possible results of the Gulf War.

GVPT 498X Terrorism, Antiterrorism, and Prevention Laws (3)
A review and analysis of federal laws on terrorism. Emphasis is on the analysis and application of federal acts, laws against terrorism, and antiterrorism provisions. Topics include policy formulation and the implementation of current terrorism, antiterrorism, and prevention laws. Various components of the laws and their impact are assessed.

History
Courses in history (designated HIST) may be applied as appropriate (according to individual program requirements) toward
• the general education requirements in the arts and humanities and for historical perspective coursework;
• a major or minor in history;
• a minor in African American studies, Asian studies, or women’s studies;
• a certificate in various areas; and
• electives.
A description of the curriculum for the history major and minor begins on p. 53. Descriptions of related curricula may be found on the following pages: African American studies (p. 17), Asian studies (p. 19), humanities (p. 56), and women’s studies (p. 84).

HIST 115 World History I (3)
A survey of Western and non-Western civilizations and cultures from earliest times to 1500. Emphasis is on the political, social, and cultural developments of the major civilizations and on the interactions between those civilizations.
HIST 116 World History II (3)
A survey of Western and non-Western civilizations and cultures from 1500 to the present. Emphasis is on the political, social, and cultural developments of the major civilizations; the interactions between those civilizations; and the development of a global community since 1500.

HIST 141 Western Civilization I (3)
A survey of the history of Western civilization from antiquity through the Reformation. The political, social, and intellectual developments that formed the values and institutions of the Western world are examined.

HIST 142 Western Civilization II (3)
A survey of the history of Western civilization from the Reformation to modern times.

HIST 156 History of the United States to 1865 (3)
A survey of the United States from colonial times to the end of the Civil War. The establishment and development of national institutions are traced. Students may receive credit for only one of the following courses: HIST 156 or HUMN 119.

HIST 157 History of the United States Since 1865 (3)
A survey of economic, intellectual, political, and social developments since the Civil War. The rise of industry and the emergence of the United States as a world power are emphasized. Students may receive credit for only one of the following courses: HIST 157 or HUMN 120.

HIST 309 Introduction to Historical Writing (3)
Recommended: 12 credits in history. A study of the methods and problems of historical research and presentation. Assignments include a major research paper.

HIST 319 Special Topics in History (3)
An in-depth study of specific topics, themes, events, or problems in history. Assignments include advanced reading and research. Students may receive credit for a given topic in either HIST 219 or HIST 319 only once.

HIST 319A History of Terrorism (3)
A survey of terrorism in the modern world, investigating the ideology of political violence since 1789. Topics include the organization, aims, arms, financing, and composition of terrorist groups, from the 1880s in Russia to the present day worldwide. Various interpretations of the terrorist phenomenon are discussed. Assignments include advanced reading and research.

HIST 319B History of Violence in America (3)
A survey of violence in the United States, with an emphasis on the late 19th century and the 20th century. Theories of conflict and its causes provide a framework for discussing political violence, both past and present. Racial violence in the 20th century is examined. Other topics include violence and organized crime, domestic terrorism, violent crimes, student protest, and labor violence. Assignments include advanced reading and research.

HIST 319D A History of Sex in America (3)
A survey of the changing and conflicting ideas, debates, and practices surrounding sex in North America from the beginnings of European colonization until the present. Assignments include advanced reading and research.

HIST 336 Europe in the 19th Century: 1815 to 1919 (3)
A study of the political, economic, social, and cultural development of Europe from the Congress of Vienna to World War I.

HIST 337 Europe in the World Setting Since 1914 (3)
An investigation of the political, economic, and cultural development of Europe since 1914, with special emphasis on the factors involved in the two world wars and their worldwide effects and significance.

HIST 362 Ante-Bellum America: 1815 to 1861 (3)
An examination of the strong sense of nationalism in the United States after the War of 1812 and its transformation into the sectionalism that led to the Civil War. Issues contributing to North/South antagonism, particularly slavery, are discussed. Topics include Jacksonian democracy; capitalism; racism; immigration; Manifest Destiny; and religious, social, and intellectual movements.
HIST 363 The Civil War and New Industrial Society in the United States: 1860 to 1900 (3)
A survey of sectional and class conflicts and their effects on American life and institutions from the Civil War through the Gilded Age. The social, economic, and political reconstruction of the Union is analyzed as it affected and was affected by industrialization, urbanization, and technological changes.

HIST 364 Emergence of Modern America: 1900 to 1945 (3)
A study of the emergence of modern American institutions and identities in the years 1900–45. Topics include the presidencies of McKinley, Roosevelt, Taft, and Wilson; the world wars; the Great Depression; and the period of the New Deal. Special consideration is also given to emerging issues such as the role of women and African Americans, corporate enterprises, and the welfare state.

HIST 365 Recent America: 1945 to the Present (3)
A survey of U.S. history from the presidencies of Truman and Eisenhower to the present. Topics include 1960s’ radicalism, the Cold War, Vietnam, Watergate, and changes in American society.

HIST 366 Women and the Family in America to 1870 (3)
An examination of the diverse experiences of different groups of women from the colonial era through 1870. Three main themes are developed: the impact of race and class on women’s lives, changes and continuity in the division of labor on the basis of gender, and the shifting definition of the family. Emphasis is on the relationship between ideals and realities in women’s lives and alterations in their status within the family and society at large. Students may receive credit for only one of the following courses: HIST 366 or HUMN 366.

HIST 367 Women in America Since 1870 (3)
An examination of the changing role of women in working-class and middle-class families. Topics include the effects of industrialization on women’s economic activities and status and women’s involvement in political and social struggles, including those for women’s rights, birth control, and civil rights. Students may receive credit for only one of the following courses: HIST 211, HIST 367, or HIST 377.

HIST 372 Legacy of the Civil Rights Movement (3)
An examination of the civil rights movement in the United States from World War II to the present. Focus is on the era of protest and reform through the 1980s, with analysis of its influence into the present decade. Students may receive credit for only one of the following courses: BEHS 372 or HIST 372.

HIST 376 Women and the Family in America to 1870 (3)
An examination of the diverse experiences of different groups of women from the colonial era through 1870. Three main themes are developed: the impact of race and class on women’s lives, changes and continuity in the division of labor on the basis of gender, and the shifting definition of the family. Emphasis is on the relationship between ideals and realities in women’s lives and alterations in their status within the family and society at large. Students may receive credit for only one of the following courses: HIST 376 or HUMN 366.

HIST 377 Women in America Since 1870 (3)
An examination of the changing role of women in working-class and middle-class families. Topics include the effects of industrialization on women’s economic activities and status and women’s involvement in political and social struggles, including those for women’s rights, birth control, and civil rights. Students may receive credit for only one of the following courses: HIST 211, HIST 367, or HIST 377.

HIST 381 America in Vietnam (3)
A multidisciplinary interpretation of the complex involvement of the United States in Vietnam. Key themes include foreign policies after World War II that led to the Vietnam War, the political and military objectives of the United States, domestic responses in the United States to military involvement, and the lessons and legacies of the war. Students may receive credit for only one of the following courses: BEHS 337 or HIST 381.

HIST 382 The Korean War (3)
An exploration of the Korean War, including the origins of the conflict on the peninsula and the reasons for Soviet, American, and Chinese involvement. Military strategy and campaigns are discussed, as are U.S. domestic politics and the consequences of the war for the nations and peoples involved. Students may receive credit for only one of the following courses: HIST 382 or HIST 318O.

HIST 383 Korean History (3)
A study of the history of Korea from prehistory to the present. Focus is on Korea’s political, social, and economic history. Korea’s relations with China and Japan are explored. Students may receive credit only once under this course title.

HIST 460 African American Life: 1500 to 1865 (3)
An examination of African American communities in the Western Hemisphere from 1500 to 1865. Topics include the origins of African American communities in the Western Hemisphere and the resulting diversity of experiences and cultures. Emphasis is on African American communities in North America, especially the evolution of those communities and their cultures.

HIST 461 African American Life Since 1865 (3)
An examination of African Americans in the United States since the abolition of slavery. Emphasis is on 20th-century developments, including the migration from farm to city, the growth of the civil rights movement, and the race question as a national problem.
HIST 462 The U.S. Civil War (3)
A study of the U.S. Civil War. Topics include causes of the war; sectional politics and secession; resources and strategies of the Confederacy and the Union; the changing character of the war; emancipation and its consequences; the economic, social, and political conditions of the home front; and the wartime origins of Reconstruction.

HIST 463 U.S. Military History Since 1865 (3)
An examination of the evolution of the U.S. armed forces since the Civil War. Topics include the role of the armed forces in U.S. diplomatic relations, the social and economic impact of war and peace, and the changing image of the military in American culture. Students may receive credit for only one of the following courses: HIST 419N or HIST 463.

HIST 464 World War I (3)
An intensive study of the First World War. Topics include the development of nationalism and socialism in late 19th-century Europe, the causes of the First World War, trench warfare on the western front, war in the Balkans, total war on the home fronts, the Russian Revolution of 1917, the collapse of the Central Powers, the 1918 settlements, the postwar conflicts that continued to haunt Europe until 1923, and the concept of the Lost Generation.

HIST 465 World War II (3)
An examination of the Second World War. Topics include the origins and causes of the war; the political, military, economic, and social circumstances and events; and its catastrophic impact and legacy.

HIST 466 The Cold War (3)
An introduction to the history of the Cold War, which divided the world along ideological, economic, political, and military lines for more than 40 years. Focus is on the chronology of the struggle between the United States and the Soviet Union, with the former leading the NATO nations and the latter leading the Warsaw Pact nations. Students may receive credit for only one of the following courses: HIST 320, HIST 419I, or HIST 466.

HIST 467 History of Maryland (3)
An examination of the political, social, and economic history of Maryland from the 17th century to the present.

HIST 468 History of Traditional China (3)
A study of the history of China from earliest times to 1644. Emphasis is on the development of Chinese institutions that have molded the life of the nation and its people.

HIST 481 History of Modern China (3)
A study of the history of modern China from 1644 to the present. Focus is on the process of change, as China moved from its perceived position of the center of the civilized world to that of a nation-state in a complex international environment.

HIST 483 History of Japan Since 1800 (3)
A survey of Japan's renewed contact with the Western world and its emergence between 1800 and 1931 as a modern state, an industrial society, and world power. Japan's road to war, the period of occupation, and the era of recovery are covered, from 1931 to the present.

HIST 486A Internship in History Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in history. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to history and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

HIST 486B Internship in History Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in history. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to history and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
Humanities

Courses in humanities (designated HUMN) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in the arts and humanities;
- a major or minor in humanities; and
- electives.

Most courses require extensive writing. Students should complete a writing course (such as COMM 390, 393, 393X, 394, and 394X and ENGL 101, 101X, 391, and 391X) or have equivalent writing experience before enrolling.

A description of the curriculum for the humanities major and minor begins on p. 56.

HUMN 102 Classical Foundations (3)
A study of aspects of the ancient Greco-Roman world (such as myth and religion, war and conquest, government and politics, social organization, and leisure activities) through examination of the words and actions of the protagonists. Original sources of history, philosophy, poetry, and drama are considered. Focus is on individuals who contributed to the shaping of classical civilization. Students may receive credit for only one of the following courses: CLAS 100 or HUMN 102.

HUMN 120 America in Perspective (3)
A survey of the second hundred years of the history of the United States, beginning in 1877 with the closing of the American frontier and the move into industrialization. Review covers crucial events and issues in recent history, including the Great Depression, the rise of big business, Roosevelt’s New Deal, World Wars I and II, the Cold War, the Vietnam War, the civil rights movement, and the end of the Cold War. The complex forces and events that have determined the course of modern American history and shaped America as it is today are traced and interpreted. Students may receive credit only once under this course number and for only one of the following courses: HIST 157 or HUMN 120.

HUMN 204 Film and American Culture Studies (3)
Exploration of the American film from a historical perspective, illustrating the motion picture’s role as an institutional phenomenon, as a form of communication, and as a source of cross-cultural study. Students may receive credit for only one of the following courses: AMST 204 or HUMN 204.

HUMN 301 Crossing Cultures: World Views in the Humanities (6)
An examination of Western and non-Western roots of human identity viewed from philosophical, cultural, and intellectual perspectives. The ways in which different peoples express their essential intellectual heritage through philosophy, religion, and the arts are studied. Ideas and cultural expression from specific areas of the world, from antiquity through 1750, are explored. Areas covered are Africa, the Middle East, South Asia, the Far East, the Americas, and Europe. Outcomes of cross-cultural interaction are considered.

HUMN 311 Workplace Ethics (3)
(Fulfills the civic responsibility perspective requirement.) Examination and discussion of normative ethical theory; moral reasoning; and the larger economic, social, political, and legal framework of the workplace within which ethical issues arise. Discussion covers workplace issues such as discrimination, harassment, the quality of work life, professional rights and responsibilities, and specific cases exemplifying these issues. Possible examples include cases in the areas of hiring, privacy, intellectual property, whistle-blowing versus loyalty, health care, ethics in advertising, consumerism in relation to product liability, economic globalization, and the common environment. Students may receive credit for only one of the following courses: HUMN 310 or HUMN 311.

HUMN 312 Ethics and Religion (3)
An exploration of the roles religions around the world play in the establishment of the moral codes in the societies where they are practiced and the results when different religions promote different moral responses in the same society. Discussion covers the relationships, if any, of ethics—the search for general principles that underlie specific moral rules or claims—to the different religions that express these moral codes.

HUMN 334 Understanding Movies (3)
An analysis of one of the most important means of artistic expression of the 20th century. The goal is to acquire a deeper understanding of the aesthetic qualities of film by considering the stylistic elements of film as it has evolved throughout the century and weighing the special relationship between cinema and literature. Students may receive credit for only one of the following courses: HUMN 334 or HUMN 498D.
HUMN 336 Ideas Shaping the 21st Century (6)
An overview of predominating ideas and philosophies that may govern and alter humanity and this planet in the early 21st century. Ideas and ways of living are evaluated insofar as they reveal the nature of intelligence and at the same time determine the uses of this planet. Topics include the rise of science, religions, and technocentrism; the development of systems of communication; prevailing perceptions of justice and human relationships; and “quality of life” as expressed in architecture and the arts.

HUMN 339 Aging in Literature, Film, and the Arts (3)
A critical examination of the experience of aging as portrayed in literature, film, and the arts in different countries. The experiences of older adults are explored as they relate to identity, intimacy, friendships, prejudice or discrimination, family, intergenerational relationships, health, independence, social roles, grieving, and end-of-life issues.

HUMN 350 The Religious Quest (6)
A comparative exploration of aspects of several religions, emphasizing specific forms of expression and practice. Focus is on the major faiths of the world in terms of numbers of adherents: Hinduism, Buddhism, Judaism, Christianity, Islam, and religions of China and Japan. An interdisciplinary approach is used to examine the religions in their historical, social, literary, artistic, philosophical, and theological aspects.

HUMN 351 Myth and Culture (3)
(Fulfills the international perspective requirement.) A presentation of reflections on the interrelations of myth, religion, and culture in which myths are evaluated as embodiments of ethnic and universal ideas. Religion is analyzed within American and non-American cultures. Ideas and symbols from mythology that provide background for literature, music, and art are introduced.

HUMN 375 Social History of Washington, D.C. (3)
A study of the uniqueness of Washington, D.C., through its artistic, architectural, cultural, social, political, and economic history. Washington is examined as a center of power and decision making, as well as the domicile of some of the nation’s least empowered citizens; as a home to monuments, museums, and statuary commemorating visionary leaders, as well as a seedbed of avant-garde artistic movements; and as an urban center built upon limited industrial growth. Students may receive credit for only one of the following courses: HIST 351, HUMN 375, or HUMN 498C.

HUMN 376 Social History of a Region (3)
An integrated study of the artistic, architectural, cultural, social, political, economic, and military history of a city or region. The place and its unique history determine the focus or foci. The different aspects of the place are studied through reading, lecture, and site tours.

HUMN 376A Social History of Annapolis (3)
A study of the artistic, architectural, cultural, social, political, economic, and military history of Annapolis, one of the oldest cities in the United States. Annapolis is examined in relation to the Chesapeake Bay, as a naval center, as a center of government with the oldest state capitol building, and as a center of the slave trade that became home to early “free men of color” before the Civil War. Archaeological and preservation sites are toured.

HUMN 376B Social History of Baltimore (3)
A study of the artistic, architectural, cultural, social, political, and economic history of Baltimore. The fifth largest U.S. port, Baltimore is examined as an urban center historically connected by its harbor to Europe and the world and by canal and railroad to the interior. Topics include the creation of culturally distinct neighborhoods of rural and immigrant groups, early industrial operations in milling and canning, and the effects of fire and the Depression. The complex forces of urban revitalization are studied. Archaeological and preservation sites are toured.

HUMN 376 Social History of a Region (3)
An integrated study of the artistic, architectural, cultural, social, political, economic, and military history of a city or region. The place and its unique history determine the focus or foci. The different aspects of the place are studied through reading, lecture, and site tours.

HUMN 376A Social History of Annapolis (3)
A study of the artistic, architectural, cultural, social, political, economic, and military history of Annapolis, one of the oldest cities in the United States. Annapolis is examined in relation to the Chesapeake Bay, as a naval center, as a center of government with the oldest state capitol building, and as a center of the slave trade that became home to early “free men of color” before the Civil War. Archaeological and preservation sites are toured.

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HUMN 398B Popular Culture in Contemporary America (3)
A study of American popular culture. Topics include the popularity and influence of icons like Elvis Presley, Frank Sinatra, John Wayne, Marilyn Monroe, Babe Ruth, Michael Jordan, and the Simpsons; the role of race, gender, economic class, and age; and popular culture as an expression of freedom, unity, and individualism or one of crass materialism, corporate domination, and declining moral values. Assignments include advanced reading and research. Students may receive credit for only one of the following courses: HUMN 198B or HUMN 398B.

HUMN 399 Independent Study in Humanities (1–6)
(For advanced students.) Directed independent study of topics of special interest not covered by regularly scheduled courses. May be repeated to a maximum of 6 credits when topics differ.
HUMN 442 Contemporary Sexual Ethics (3)
An inquiry into ethical considerations of contemporary sexual behavior. Topics include the changing dynamics between male and female (modes, expectations, and codes); the increase of sexual activity and freedom (premarital, postmarital, and extra-marital); laws, such as those concerning abortion, homosexuality, and rape (whether outside or within marriage); the sexual rights of women; and speculations about ethical dimensions of human sexual activity in the future.

HUMN 486A Internship in Humanities Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in the humanities. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to the humanities and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

HUMN 486B Internship in Humanities Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in the humanities. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to the humanities and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

Human Resource Management
Courses in human resource management (designated HRMN) may be applied as appropriate (according to individual program requirements) toward
- a major or minor in human resource management, business administration, global business and public policy, or management studies;
- a certificate in Human Resources Management; and
- electives.
A description of the curriculum for the human resource management major and minor begins on p. 58. Descriptions of other management-related curricula may be found on the following pages: accounting (p. 15), business administration (p. 23), environmental management (p. 41), fire science (p. 45), global business and public policy (p. 52), management studies (p. 68), and marketing (p. 71).

HRMN 300 Human Resource Management (3)
A basic study of human resource management. Topics include human resource planning and the recruitment, selection, development, compensation, and appraisal of employees. Scientific management and unionism are explored insofar as these historical developments affect the various personnel functions. Students may receive credit for only one of the following courses: BMGT 360, HRMN 300, or TMGT 360.

HRMN 302 Organizational Communication (3)
Prerequisite: BMGT 364. A study of the structure of communication in organizations. Problems, issues, and techniques of organizational communication are analyzed through case histories, exercises, and projects. The examination of theory and examples is intended to improve managerial effectiveness in communication and negotiation. Students may receive credit for only one of the following courses: BMGT 398N, HRMN 302, MGMT 320, MGST 315, or TEMN 315.

HRMN 362 Labor Relations (3)
A study of the development and methods of organized groups in industry, with reference to the settlement of labor disputes. Labor unions and employer associations involved in arbitration, mediation, and conciliation are analyzed from an economic as well as a legal standpoint. Topics include collective bargaining, trade agreements, strikes, boycotts, lockouts, company unions, employee representation, and injunctions. Students may receive credit for only one of the following courses: BMGT 362 or HRMN 362.
HRMN 363 Negotiation Strategies (3)
Recommended: HRMN 362. An introduction to methods and processes of negotiation and collective bargaining. Negotiating strategies related to selected products, services, and management issues are explored. Students may receive credit for only one of the following courses: BMGT 398W, HRMN 363, or MGMT 398W.

HRMN 365 Conflict Management in Organizations (3)
An introduction to processes observed in and management of conflict within organizations. Topics include general models of conflict, methods of managing conflict, and issues related to disagreements in organizational contexts. Students may receive credit for only one of the following courses: BMGT 398X, HRMN 365, or MGMT 398X.

HRMN 367 Organizational Culture (3)
Prerequisite: BMGT 364. An examination of the nature, definitions, theories, and aspects of organizational culture. Analysis covers patterns of behavior and their relationship to organizational culture, especially the impact of the organization’s business on employee behavior and culture. Topics include the role of nationality, gender, and race within organizational culture; implications of addressing organizational challenges; theory versus practice; and the relative roles of the individual, groups, and the organization in a cultural context. Students may receive credit for only one of the following courses: BMGT 398T or HRMN 367.

HRMN 390 Contemporary Compensation Management (3)
Prerequisites: BMGT 230 and HRMN 300. An exploration of alternative compensation philosophies. Topics include strategies of employee compensation, incentives to productivity, employee motivation, and performance appraisal. Strategies such as incentive cash and/or stock compensation programs, employee ownership, and nonmonetary rewards are discussed and evaluated in varying situations. Discussion also covers techniques for identifying and classifying critical job components and observable standards and measures, setting compensation for job performance, and developing an executive compensation program. The interrelationship between compensation, motivation, performance appraisal, and performance within the organization is examined. Students may receive credit for only one of the following courses: BMGT 388L or HRMN 390.

HRMN 392 Stress Management in Organizations (1)
An exploration of the changing nature of work and stress in organizations, due to a business emphasis on productivity and personal and family demands. Focus is on the causes of stress and methods of managing stress in organizational settings. Topics include interactions, performance objectives, social structure, job characteristics, and other factors causing stress in organizations. Consideration is given to political climate, pressure to achieve, interpersonal conflict, and time pressures. Discussion covers practical approaches to reduce stress at work. Students may receive credit for only one of the following courses: BMGT 398Y, HRMN 392, MGMT 398Y, or MGST 398H.

HRMN 400 Human Resource Management: Analysis and Problems (3)
Prerequisite: HRMN 300. A study of the role of human resource management in the strategic planning and operation of organizations, performance appraisal systems, and compensation and labor management issues. The influence of federal regulations (including equal opportunity, sexual harassment, discrimination, and other employee-related regulations) is analyzed. The critical evaluation of human resource problems is supported with a review of research findings, readings, discussions, case studies, and applicable federal regulations. Students may receive credit for only one of the following courses: BMGT 460, HRMN 400, or TMGT 360.

HRMN 406 Employee Training and Development (3)
Prerequisites: BMGT 364 and HRMN 300. An examination of employee training and human resource development in various organizations. Topics include the development, administration, and evaluation of training programs; employee development; career development; and organizational change. Issues in employee development (including assessment of employee competencies, opportunities for learning and growth, and the roles of managers in employee development) are explored. Students may receive credit for only one of the following courses: BMGT 498I, HRMN 406, or MGMT 498I.
HRMN 408 Employment Law for Business (3)
A conceptual and functional analysis of the legal framework and principles of industrial and employment relations, with special emphasis on discrimination in the workplace in the domestic and global environment. Topics include discrimination based on race, sex, age, and disability; testing and performance appraisal; wrongful discharge; labor/management issues; and employee benefits. Salient transnational employment issues are also explored. Students may receive credit for only one of the following courses: BMGT 468, BMGT 498G, HRMN 408, or MGMT 498G.

HRMN 462 Labor Relations Law (3)
A conceptual and functional analysis and application of legal principles relevant to labor/management relations and the collective bargaining process in the domestic and global industrial and public sectors. Topics include the historical and statutory development of unionization; union organization and unfair labor practices; negotiation and administration of the collective bargaining agreement; economic pressures, including strikes, pickets, boycotts, and lockouts; arbitration and conflict resolution; public-sector regulation; and transnational labor/management issues. Students may receive credit for only one of the following courses: BMGT 462 or HRMN 462.

HRMN 486A Internship in Human Resource Management Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in human resource management. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to human resource management and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

HRMN 486B Internship in Human Resource Management Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in human resource management. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to human resource management and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

HRMN 495 Contemporary Issues in Human Resource Management Practice (3)
(Intended as a final, capstone course to be taken in a student’s last 15 credits.) Prerequisites: HRMN 300 and 400. A study of human resource management that integrates knowledge gained through previous coursework and experience and builds on that conceptual foundation through integrative analysis, practical application, and critical thinking. Emerging issues in human resource management are considered. Students may receive credit for only one of the following courses: BMGT 388K, HRMN 494, or HRMN 495.
Information Systems Management

Courses in information systems management (designated IFSM) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in computing;
- a major in information systems management, computer information technology, computer studies, laboratory management, or management studies;
- a minor in computer studies;
- a certificate in Database Management, Information Assurance, Information Management, or Project Management for IT Professionals; and
- electives.

A description of the curriculum for the information systems management major begins on p. 60. Descriptions of other computer-related curricula may be found on the following pages: computer and information science (p. 29), computer information technology (p. 31), computer science (p. 32), and computer studies (p. 34).

IFSM 201 Introduction to Computer-Based Systems (3)

(Course activities require access to a standard office productivity package, i.e., word processing, spreadsheet, database, and presentation software.) An overview of computer information systems in which hardware, software, procedures, systems, and human resources are explored in relation to their integration and application in business and other segments of society. Students may receive credit for only one of the following courses: BMGT 301, CAPP 101, CAPP 300, CMST 300, IFSM 201, or TMGT 201.

IFSM 204 History and Future Trends of Computing (3)

A historical account of the pioneers of computing and the rise of the computer industry (as well as related industries). Although technical and institutional developments are the focus, developments are explained in a broader historical context. Factors such as the state of scientific knowledge, economic conditions, defense requirements, the nature of business and financial systems, and governmental policy are taken into consideration.

IFSM 300 Information Systems in Organizations (3)

Prerequisite: IFSM 201. An overview of information systems, their role in organizations, and the relationship between information systems and the objectives and structure of an organization. Discussion covers human aspects of computing, types of computer systems, and general theory of systems.

IFSM 302 Workplace Productivity (3)

Prerequisite: IFSM 201. A survey of techniques for improving the productivity of practices and procedures in the workplace. Teaming (e.g., encouraging employees’ participation in group activities, brainstorming, and making meetings more effective) and problem solving (e.g., simplifying work; charting work-flow processes; diagramming causes and effects; and using Pareto analysis, histograms, and total quality management) are the two major approaches emphasized.

IFSM 303 Human Factors in Information Systems (3)

Prerequisite: IFSM 201. A general survey of the application of human factors to the design and use of information systems. Topics include the history, evolution, and current state of the human/computer interface. The contributions of psychology, engineering, and physiology to the development of ergonomics are described.

IFSM 304 Ethics in the Information Age (3)

(Fulfills the civic responsibility perspective requirement.) Prerequisite: CMIS 102, CMIS 102A, CMSC 101, or IFSM 201. An introduction to information systems as used to provide information for decision making in a democratic society. Discussion covers the philosophy, techniques, and ethical considerations involved in evaluating information systems.

IFSM 310 Software and Hardware Concepts (3)

Prerequisites: IFSM 201 and MATH 012. A survey of computer systems. Emphasis is on the interrelationships of hardware architecture, system software, and application software. Topics include the architectures of processors and storage systems and implications for system software design. Discussion also covers the effects of the design of hardware and system software on the development of application programs in a business environment. Students may receive credit for only one of the following courses: CMIS 270, CMIS 310, CMSC 311, or IFSM 310.
INFORMATION ON COURSES

IFSM 320 Office Automation (3)
Prerequisite: IFSM 201. An examination of office information systems and decision-support systems as emerging critical elements of data and information systems for business uses. Emphasis is on information-processing considerations at the systems level, including analysis and management of support activities. Discussion covers interfaces between machines and their users, current and future technological trends, and their effects on data processing and the office environment.

IFSM 350 Wireless Telecommunications (3)
Prerequisite: IFSM 201. An analysis of technical and managerial perspectives on basic concepts and applications in wireless telecommunications systems. The implications of the regulatory environment and communications standards on transmission of voice and data are examined. Other topics include an overview of second generation (2G), third generation (3G), and global systems of mobile (GSM) wireless communications; code-division multiple access (CDMA); and trends in wireless communication. Students may receive credit for only one of the following courses: IFSM 350 or IFSM 398W.

IFSM 390 Multimedia Design and Evaluation for Information Systems Managers (3)
Prerequisite: IFSM 201. An investigation of microcomputer-based multimedia systems and their application. Emphasis is on concepts and techniques for creating professional presentations using sound, clip art, video, and text. Discussion covers hardware selection and the use of the Internet as a resource for multimedia projects. The effects of multimedia presentations and the social issues involved in their use are examined.

IFSM 410 Database Concepts (3)
Prerequisites: CMIS 102 (or CMIS 102A) and IFSM 300. An introduction to the design and management of database systems in a business environment. Topics include the role of databases in organizations, the management of information as a critical business resource, types and functions of database management systems, conceptual data modeling and entity/relationship and semantic data models, and the fundamental principles of relational and object-oriented database design. The implementation and maintenance of database management systems and the role of the database administrator are discussed. Students may receive credit for only one of the following courses: CMIS 320 or IFSM 410.

IFSM 411 SQL (3)
Prerequisite: IFSM 410 or CMIS 320. In-depth practice using Structured Query Language (SQL), the most common database manipulation language. Business-related case studies illustrate the various uses of SQL. Discussion covers the underlying theory of relations (including relational operators, keys, and entity and referential integrity). Students may receive credit for only one of the following courses: CMIS 420, IFSM 411, or IFSM 498I.

IFSM 420 Advanced Database Concepts (3)
Prerequisite: IFSM 411 or CMIS 320. Investigation and application of advanced database concepts, including database administration, database technology, and the selection and acquisition of database management systems. An intensive practicum in data modeling and system development in a database environment is provided. An overview of future trends in data management is also included.

IFSM 425 Decision Support and Expert Systems (3)
Prerequisite: IFSM 300. An analysis of information support systems that serve the management user at all levels of the decision-making process. The information provided by such systems is derived from multiple models and databases within and/or external to an organization. Theoretical concepts are related to examples from specific organizations. Research on the development of expert systems and commercially available applications is included.

IFSM 430 Information Systems and Security (3)
Prerequisite: IFSM 300. A survey covering aspects of establishing and maintaining a practical information security program. The security aspects and implications of databases, telecommunication systems, and software are examined, along with techniques used to assess risks and discover abuses of systems.

IFSM 431 Policy Planning for Security Architects (3)
Prerequisites: IFSM 300 and an upper-level writing course (such as COMM 393). A study of various aspects of information assurance (IA) policy planning in an organizational context. Topics include the impact of current legislation and government regulations directing the focus of policy formulation. Key analysis procedures, such as security requirements analysis and risk assessments, are examined to determine their role in policy formulation. Projects include generating an information security program for an organization.
IFSM 432 Disaster Recovery Planning (3)
Prerequisite: IFSM 300. Recommended: IFSM 430. A study of disaster recovery and emergency planning as applied to the information-systems function in corporations. Topics include security risk evaluation and management, creation of threat profiles, continuity of operations planning, contingency planning, and incident reporting. A self-directed approach/tool for the conduct of information security risk evaluation is introduced. Projects include developing a security protection strategy and plan. Students may receive credit for only one of the following courses: IFSM 432 or IFSM 498N.

IFSM 433 Information Security Needs Assessment and Planning (3)
Prerequisite: IFSM 300. Recommended: IFSM 430. In-depth practice in gathering security requirements to generate a security plan. Topics include the collection and analysis of functional security requirements, risk analysis, requirements traceability matrices and the collection of metrics, the investigation of physical security, operational procedures and legal issues related to information security, and the identification of education and training requirements. Projects include generating a site security plan based on site-specific or case-study requirements.

IFSM 435 Information Security and E-Commerce (3)
Prerequisite: IFSM 300. An introduction to the four essential elements of safe electronic commerce: the data transaction, the server, the client, and the host network. Topics include encryption, firewalls, transaction security, securing Web commerce, and Web security risk management. Students may receive credit for only one of the following courses: IFSM 435 or IFSM 498H.

IFSM 438 Project Management (3)
Prerequisite: IFSM 300. An exposition of planning, scheduling, and controlling a system project during its life cycle. Topics include the use of project-management techniques such as PERT (Project Evaluation and Review Technique) and Gantt charts and other techniques of planning, scheduling, and controlling projects. Demonstrations and exercises in using project-management software are provided. Students may receive credit for only one of the following courses: IFSM 438 or TMGT 430.

IFSM 450 Telecommunication Systems in Management (3)
Prerequisites: IFSM 300 and 310. An analysis of technical and managerial perspectives on basic concepts and applications in telecommunication systems. An overview of data communication protocols and standards; local area networks, wide area networks, and internetworks; and trends in telecommunications is provided. The implications of the regulatory environment and communications standards on transmission of voice, data, and image are examined. Students may receive credit for only one of the following courses: CMIS 370, CMSC 370, or IFSM 450.

IFSM 454 Information System Security Mechanisms (3)
Prerequisite: IFSM 450. Recommended: IFSM 430. A hands-on technical examination of six areas of security vital to any organization: authentication, authorization and access control, confidentiality, availability, data integrity (encryption), and non-repudiation. Topics include firewalls, intrusion detection systems (IDSs), vulnerability software, Public-Key Infrastructure (PKI), IP security (IPSec), virtual private networks (VPNs), and Web server lockdown procedures. Review also covers the types of attacks often launched on the Internet and how they are performed. Projects include demonstrations of network software used to gain information about a network, perform attacks, and/or prevent attacks.

IFSM 455 IT Infrastructure of E-Commerce (3)
(Formerly IFSM 498E) Prerequisites: IFSM 300 and 310. An introduction to both the theory and practice of doing business over the Internet and World Wide Web. Topics include the general structure, protocols, utility programs, popular Internet applications, and Web client/server architecture that support the Internet and electronic commerce. The technologies of electronic commerce (including software, security issues, and payment systems) are addressed. Project planning and management and customer relationship management issues are also explored. Students may receive credit for only one of the following courses: IFSM 455 or IFSM 498E.
IFSM 457 Cyberterrorism (3)
(Formerly IFSM 497C.) Prerequisite: IFSM 300. An overview of the issues surrounding cyberterrorism, including low-level threats (attacks that vandalize Web pages or launch denial of service), middle-tier threats (online fraud and industrial espionage by companies, organized crime, and nation states), and high-end threats from nation states and terrorist groups. Socioeconomic motivations and the “hacker mentality” are explored. Review also covers common network and security loopholes, the concept of social engineering and its impact on IT security, existing government regulations, and the National IT Security Plan. Students may receive credit for only one of the following courses: IFSM 457 or IFSM 497C.

IFSM 459 Security Issues and Emerging Technologies (3)
Prerequisite: IFSM 450. Recommended: IFSM 430. A detailed overview of various emerging network technologies such as wireless networks based on IEEE 802.11 standards, Mobile Ad Hoc Networks (MANET), and wireless packet data networks like GPRS and CDMA 2000. Discussion covers the various applications based on these technologies (such as wireless and mobile Internet access, voice over IP, location-based services, etc.) and the security issues involved in supporting these applications. Existing solutions and mechanisms for addressing the security requirements for these applications are examined, and the impact of the solutions on the quality of service is analyzed. The emerging security standards and best practices for these new technologies are also described, along with their salient strengths and weaknesses.

IFSM 461 Systems Analysis and Design (3)
Prerequisite: IFSM 300. A study of the methods used in analyzing needs for information and in specifying requirements for an application system. Implementation of the operational system, integration of computer technology, and aspects of organizational behavior in the design support system are examined. Topics include the concept of the system life cycle, the iterative nature of the processes of analysis and design, and the methodology for developing a logical specification and physical design for an operational system. Students may receive credit for only one of the following courses: IFSM 436, IFSM 460, or IFSM 461.

IFSM 486A Internship in Information Systems Management Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in information systems management. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to information systems management and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

IFSM 486B Internship in Information Systems Management Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in information systems management. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to information systems management and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

IFSM 498 Special Topics in Information Systems (1–3)
A seminar on topics in the design and implementation of information-processing systems.
Japanese
Courses in Japanese (designated JAPN) may be applied as appropriate (according to individual program requirements) toward
- the general education requirements in the arts and humanities and for international perspective coursework;
- a major or minor in humanities; and
- electives.
UMUC offers a limited number of foreign language courses each term.
A description of the curriculum for the humanities major and minor begins on p. 56.

JAPN 111 Elementary Japanese I (3)
( Assumes no prior knowledge of Japanese. Fulfills the international perspective requirement.) An elementary study of Japanese. Emphasis begins with oral communication skills and leads to balanced proficiency in the four communication skills of listening, speaking, reading, and writing. Topics include basic structures, vocabulary, pronunciation, and writing, as well as elements of culture, history, and geography. Authentic text from native speakers is used as much as possible.

JAPN 112 Elementary Japanese II (3)
(Fulfills the international perspective requirement.) Prerequisite: Completion of JAPN 111 with a grade of C or better. Continued basic study of Japanese, emphasizing oral communication and leading to a balanced development of proficiency in the four communication skills of listening, speaking, reading, and writing. Basic structures, vocabulary, pronunciation, and writing are practiced along with continued familiarity with culture, history, and geography. Oral and written authentic text from native speakers is used as much as possible.

Journalism
Courses in journalism (designated JOUR) may be applied as appropriate (according to individual program requirements) toward
- a major or minor in communication studies;
- a minor in journalism; and
- electives.
JOUR 201 fulfills the general education requirement in communications.
A description of the curriculum for the journalism minor begins on p. 64. Descriptions of related curricula may be found on the following pages: communication studies (p. 27) and speech communication (p. 82).

JOUR 201 Writing for the Mass Media (3)
(Fulfills the general education requirement in communications.) Prerequisite: ENGL 101 or ENGL 101X. An introduction to writing news and feature articles for print, broadcast, and online media. Emphasis is on writing—from mechanics (grammar, spelling, punctuation, and journalism style) to content (accuracy, completeness, audience, and readability)—and reporting.

JOUR 202 Editing for the Mass Media (3)
Prerequisite: JOUR 201. Presentation of the basic editing skills that apply to all mass media. Hands-on practice in copyediting, fact checking, headline writing, photo selection, and page layout is provided. Students may receive credit for only one of the following courses: JOUR 202 or JOUR 310.

JOUR 319A Analyzing and Understanding the News (1)
An analysis of radio, television, and newspaper reporting designed to improve critical understanding of the news. Topics include the benefits of channel surfing and turning to more than one news provider, whether print or broadcast, for information. Reasons for loyalty to favorite sources of news information are examined.

JOUR 319B Issues in Online Journalism (1)
A review of the recent history of online journalism that stresses the issues and challenges that writers face in this medium. Online newspapers and journals are reviewed for content and design. The basics of setting up an online newspaper—from getting source material to designing the look of the publication—are examined.
JOUR 330 Public Relations Theory (3)
Prerequisite: JOUR 201. A study of the historical development and contemporary status of public relations in business, government, associations, and other organizations. Communication theory and social science methodology are studied as they apply to the research, planning, communication, and evaluation aspects of the public relations process.

JOUR 331 Public Relations Techniques (3)
Prerequisite: JOUR 330. A review of the techniques of public relations. Emphasis is on news releases, publications and printed materials, speeches, special events, and audiovisual media. Techniques are applied in laboratory and field projects. Students may receive credit for only one of the following courses: BMGT 398U or JOUR 331.

JOUR 350 Photojournalism in the Digital Age (3)
(Students are required to use their own digital camera.) Prerequisite: A course in journalism. An exploration of techniques and trends in photojournalism. Practice in the fundamentals of photography (exposure, basic lighting techniques, portraiture and composition, and scanning and digitally toning photos using Photoshop) is provided. Assignments include developing a mini portfolio of short photo essays and a final story project to be published on the course Web site. The history of photojournalism is surveyed, focusing on the recent development of webzines and online newspapers.

JOUR 371 Magazine Article and Feature Writing (3)
Prerequisite: JOUR 201. A study of various types of feature articles, particularly in the magazine market. Analysis covers the medium and its specialized audiences. Practice in researching and writing the feature article and in evaluating freelance markets is provided.

JOUR 410 History of Mass Communication (3)
Prerequisite: ENGL 101 or ENGL 101X. A discussion of the development of newspapers, magazines, radio, television, and motion pictures as media of mass communication. The influence of the media on the historical development of the nation is considered.

JOUR 459 Special Topics in Mass Communication (3)
An in-depth study of a specific area in journalism or public relations. Topics may focus on areas such as international public relations, crisis communication, newsroom management, environmental journalism, or political campaigns. Assignments include advanced reading and research. May be repeated to a maximum of 6 credits when topics differ.

JOUR 486A Internship in Journalism Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in journalism. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to journalism and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

JOUR 486B Internship in Journalism Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in journalism. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to journalism and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
Legal Studies

Courses in legal studies (designated LGST) may be applied as appropriate (according to individual program requirements) toward

• a major in legal studies;
• a certificate in Paralegal Studies; and
• electives.

LGST 360 and 363A may be applied toward the general education requirement in computing.

A description of the legal studies major begins on p. 67.

LGST 101 Introduction to Law (3)
A survey of the U.S. legal system and the role of the paralegal in the legal environment. Topics include the organization and powers of federal and state lawmaking institutions, court procedures, and the analysis of statutory provisions and judicial opinions. Students may receive credit for only one of the following courses: LGST 101 or PLGL 101.

LGST 200 Techniques of Legal Research (3)
Prerequisite or corequisite: LGST 101. An introduction to the book-based methods used to locate relevant, mandatory, and current rules and interpretations. Topics include the analysis, publication, and citation of judicial opinions, statutory provisions, and administrative law and the features and use of secondary sources, digests, and citators. Computer-assisted research systems are introduced, but assignments require legal research in a physical library with a hard-copy law collection. Students may receive credit for only one of the following courses: LGST 200 or PLGL 200.

LGST 201 Legal Writing (3)
Prerequisite: LGST 200. An introduction to the principles of writing clearly and effectively in the legal environment. Emphasis is on types of documents that paralegals may be called upon to draft, including intake memos, legal synthesis and office memos, and client letters. Students may receive credit for only one of the following courses: LGST 201 or PLGL 201.

LGST 204 Legal Ethics (3)
A survey of basic principles relating to the ethical practice of law. Rules and guidelines governing the ethical conduct of lawyers and nonlawyers are covered, as are law office management principles relevant to ethical requirements. Students may receive credit for only one of the following courses: LGST 204 or PLGL 204.

LGST 312 Torts (3)
Prerequisite: LGST 201. A study of the causes of action, defenses, and remedies in the major categories of tort law, as well as tort-litigation procedures and writings for which a paralegal may be responsible. Topics include intentional torts, negligence, strict liability, damages, and civil procedures. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 312 or PLGL 312.

LGST 314 Workers’ Compensation Law (1)
A thorough study of the Maryland Workers’ Compensation Act and the practice of workers’ compensation law in Maryland. Practical aspects of the workers’ compensation system (including jurisdiction, employer/employee relationships, injuries covered by the Act, defenses, compensation benefits, vocational rehabilitation, and appeals) are covered. Students may receive credit for only one of the following courses: LGST 314 or PLGL 398H.

LGST 315 Domestic Relations (3)
Prerequisite: LGST 201. A study of the various legal aspects of family law. Emphasis is on the processes, procedures, and writings a paralegal may handle. Topics include divorce, separation, and annulment; child custody and visitation; and alimony, child support, disposition of property, and legal rights of children. Relevant aspects of civil procedures, enforcement, and the modification of orders and agreements are covered. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: FMCD 487, LGST 315, or PLGL 315.

LGST 316 Estates and Probate (3)
Prerequisite: LGST 201. A study of the legal concepts entailed in drafting and preparing simple wills and administering estates in Maryland, as well as the processes, procedures, and writings for which a paralegal may be responsible. Topics include preliminary and practical considerations of administering an estate; the appraisal of estate assets and probate inventory; inheritance taxes; claims against the estate; management of debts, accounting, and distribution considerations; the drafting and execution of wills; and guardianships. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 316, PLGL 216, or PLGL 316.

LGST 320 Criminal Law and Procedures (3)
Prerequisite: LGST 201. A study of the substantive and procedural aspects of the criminal justice system, particularly those aspects related to the work of a paralegal. Topics include crimes and defenses, penalties, and court procedures. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: CJUS 234, LGST 320, or PLGL 320.

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LGST 322 Evidence (3)  
Prerequisite: LGST 201. A study of laws that govern the admissibility of evidence for establishing or controverting facts in trials and administrative proceedings, and the role of the paralegal in gathering evidence and helping attorneys prepare for trial. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 322, PLGL 222, or PLGL 322.

LGST 325 Litigation (3)  
Prerequisite: LGST 201. An examination of the process of civil litigation and the responsibilities commonly assigned to paralegals. Topics include investigation and interviewing, preparation of pleadings and motions, discovery, the conduct of the trial, and post-trial activity. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 325 or PLGL 325.

LGST 327 Alternative Dispute Resolution (3)  
An overview of the various processes and techniques to settle disputes without court adjudication. Topics include negotiation, mediation, and arbitration. Students may receive credit for only one of the following courses: LGST 327, PLGL 327, or PLGL 398G.

LGST 330 Administrative Law (3)  
Prerequisite: LGST 201. An overview of the functions and procedures of federal and state administrative agencies, as well as preparation of writings pertinent to administrative law practice. Topics include rulemaking, adjudication, the use and control of agency discretion, and disclosure of information. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 330 or PLGL 330.

LGST 335 Elder Law (3)  
Prerequisite: LGST 201. An overview of legal issues that are increasingly relevant as the older population increases. Topics include health care, public entitlements, and legal and financial decision making. Emphasis is on the role of the paralegal in those areas. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 335, PLGL 335, or PLGL 398E.

LGST 340 Contract Law (3)  
Prerequisite: LGST 201. A comprehensive study of the major areas of contract law that paralegals are most likely to encounter. Topics include formation, interpretation and enforcement, discharge, and breach and remedies for breach. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 340 or PLGL 340.

LGST 343 Real Estate Transactions (3)  
Prerequisite: LGST 201. A study of the essentials of real estate law. Emphasis is on settlement procedures in Maryland, especially the processes, procedures, and writings for which a paralegal may be responsible. Topics include real estate contracts, types and sources of mortgage financing, title work, and closing and settlement. Other topics include easements and covenants, and condos, PUDs, and co-ops. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 343 or PLGL 343.

LGST 345 Landlord Tenant Law (1)  
A nuts-and-bolts study of landlord/tenant issues. Focus is on the rights and obligations of landlords in rental properties and the rights of tenants and how to assert those rights. Topics include lease provisions and eviction processes and how to defend against eviction. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 345 or PLGL 398K.

LGST 360 Computer Application in the Legal Environment (3)  
(Course activities require access to a standard office productivity package, i.e., word processing, spreadsheet, database, and presentation software.) Prerequisite: IFSM 201. An overview of uses of computer software in the legal environment. The concepts and theory of computer operations are explained in the context of needs analysis for law firms. Emphasis is on applications such as text processing, database management, electronic spreadsheets, timekeeping, docket control, and litigation support. Students may receive credit for only one of the following courses: CAPP 343, LGST 360, or PLGL 360.

LGST 363A Computer-Assisted Litigation Support (3)  
(Course activities require access to a standard office productivity package, i.e., word processing, spreadsheet, database, and presentation software.) Prerequisites: IFSM 201 and LGST 325. A focused study of the use of text processing, database management, and electronic spreadsheets to support litigation. Topics include document discovery; document coding and abstracting; search and retrieval methods; project management; and preparing trial exhibits, presentations, and other visual aids. Students may receive credit for only one of the following courses: LGST 363A or PLGL 363A.
LGST 370 Advanced Legal Analysis (3)
Prerequisite: LGST 201. An advanced study of the legal analysis skills needed by the paralegal to successfully complete a variety of tasks in the legal environment. Skills covered include spotting and framing legal issues, analyzing and applying relevant law to predict and advocate the outcome of legal issues, and using legal rules and interpretations to develop informal and formal discovery plans. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 370 or PLGL 370.

LGST 398A Sports Law (3)
Prerequisite: LGST 201. A study of the laws that apply to sports and the role paralegals may play. Topics include the laws that apply to the business of sports and issues such as ethics, contracts, Title IX, representation of athletes, and drug testing.

LGST 398B Public Housing (1)
A thorough review of federal and state law pertaining to public housing to prepare the paralegal to represent individuals in public housing cases, including admission and eligibility requirements, preferences and admissions, rent computation procedures, lease requirements, repair requirements, security deposits, rent increases, recertification of income, and termination proceedings. Practical aspects are covered including procedures in formal and informal hearings.

LGST 398C Social Security Cases (1)
A thorough review of the pertinent Social Security regulations, case law, and procedure for Social Security Disability (SSD) and Supplemental Security Income (SSI) cases to prepare the paralegal to represent individuals at Social Security Administration hearings. Practical aspects, including cross-examining vocational experts, analyzing medical records, preparing witness and client direct examination and opening statements and closing arguments, and evaluating hypothetical client cases, are covered.

LGST 398D Drug and Alcohol Cases in Maryland (1)
A hands-on survey of the statutes, regulations, and case law governing the sentencing, commitment, and treatment of drug and alcohol offenders in Maryland, including those with dual diagnoses. Procedures and forms are discussed and illustrated.

LGST 398G Civil Litigation Filings in Maryland State Courts (1)
A study of the rules and practical aspects of civil trial filings in Maryland district and circuit courts. Topics include the applicable Maryland rules of civil procedure, including those pertaining to jurisdiction of district and circuit courts; the filing of complaints, motions, and other pleadings; and service of process. Focus is on learning how to assist attorneys with preparing and filing pleadings, including complaints, discovery, answers, and motions (such as those for postponement of trial). Discussion covers practical considerations, including location of courts, courthouse etiquette, copy requirements, obtaining copies of documents from court, and organization of trial folders.

LGST 398J Elder Guardianships in Maryland (1)
A thorough review of the statutes and regulations pertaining to elder guardianships in Maryland and the student’s role in assisting attorneys in representing elderly clients and/or their families. Topics include the guardianship process, qualifications of the petitioner for guardianship, postpetition procedures, obtaining emergency guardianships, obtaining medical records of those alleged to be disabled, and avoiding guardianships with advance directives. Discussion also covers guardianship of person and property, eligibility for guardianship, appointment of counsel for those alleged to be disabled, and guardian reporting and oversight. Procedure and forms, including petitions and show cause orders, are illustrated.

LGST 398P Administrative Advocacy (3)
Prerequisite: LGST 201. The fundamentals of preparing and presenting a case at an administrative agency hearing that allows representation by nonattorneys. Topics include gathering, reviewing, and organizing information; reviewing agency files; interviewing, preparing, and examining claimants and witnesses; drafting memoranda of law and opening and closing statements; organizing a hearing notebook; negotiating with the agency; and interpreting and applying agency regulations. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 398P or PLGL 398P.

LGST 398S Insurance Law (1)
An overview of the major concepts of the field of insurance law. Topics include basic principles of insurance (risk, underwriting, and claims); the nature and extent of state regulation under the McCarran-Ferguson Act; the different legal liabilities associated with property, life, and health insurance, as well as reinsurance; theories of insurance litigation; and the problems associated with the claims process.
LGST 398U Diversity Issues in Dispute Resolution (1)
A study of the influence of race, ethnicity, gender, nationality, religiosity, and other social group designations on approaches to and course of conflict, with focus on legal disputing. Topics include issues of stereotyping, cultural differences in approaches to conflict, and the impact of bigotry and discrimination on the course of conflict. Strategies for effectively dealing with these issues in legal, dispute-resolution, and personal settings are considered.

LGST 398W Domestic Violence Cases in Maryland (1)
A thorough review of statutes and court rules pertaining to domestic violence cases in Maryland. Focus is on acquiring the knowledge to assist attorneys in representing victims in criminal and civil court proceedings. Procedures and forms, including protective order/peace order petitions and motions, are illustrated. Topics include the victim's socioeconomic status, race/ethnicity, gender, and culture and resources outside the court system.

LGST 400 Advanced Legal Research (3)
Prerequisite: LGST 200. An exhaustive study of methods and techniques for planning and completing a complex legal research project. Features and uses of Lexis, Westlaw, and other online sources for both primary and secondary legal authority are presented. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 400 or PLGL 400.

LGST 401 Advanced Legal Writing (3)
Prerequisite: LGST 201. A thorough grounding in the principles and techniques of drafting sophisticated legal memoranda that paralegals may be called upon to prepare. Kinds of writings that are covered include complex office and advocacy memoranda, as well as selected parts of appellate briefs. Assignments include legal research. Students may receive credit for only one of the following courses: LGST 401 or PLGL 401.

LGST 411 Consumer Protection Law (3)
Prerequisite: LGST 201. A general overview of consumer protection law and the roles of federal, state, and local agencies. Topics include warranties, the regulation of consumer credit, restrictions on advertising, and credit reporting. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 411 or PLGL 411.

LGST 415 Intellectual Property (3)
Prerequisite: LGST 201. An overview of patents, trademarks, and copyright law. Emphasis is on the role of the paralegal in application, maintenance, research, and litigation processes. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 415, PLGL 398D, or PLGL 415.

LGST 420 Immigration Law (3)
Prerequisite: LGST 201. An overview of the laws, agencies, and procedures involved in U.S. immigration law and the role of paralegals in immigration practice. Topics include sources and administration of immigration law and research and preparation of various immigration documents. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 420, PLGL 398F, or PLGL 420.

LGST 425 Advanced Civil Litigation (3)
Prerequisites: LGST 201 and 325. Recommended: LGST 322. A study of the nuts and bolts of paralegal practice in large-case civil litigation. Topics include discovery and motion practice; pretrial preparation, including the pretrial memorandum; and preparation of the excerpt of record for the appellate court. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 425 or PLGL 398N.

LGST 431 Government Information Practices (3)
Prerequisite: LGST 201. An introduction to federal statutes and interpretive case law governing requirements, exemptions, and procedures related to the disclosure of information by the federal government. Focus is on the processes, procedures, and writings for which a paralegal may be responsible. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 431, PLGL 331, or PLGL 431.

LGST 432 Environmental Law (3)
Prerequisite: LGST 201. An exploration of the statutory and regulatory bases of environmental law, for the prospective paralegal. Topics include the role of federal agencies in such undertakings as controlling various types of pollution, assessing and managing risk, and regulating toxic substances. Assignments include legal research and written and oral analysis. Students may receive credit for only one of the following courses: LGST 432, PLGL 332, or PLGL 432.
LGST 434 Government Contracts (3)
Prerequisites: LGST 201 and 340. An overview of the rules and regulations that must be followed in preparing and executing government contracts for the prospective paralegal. Methods of acquisition, types of contracts and settlements, modifications, socioeconomic provisions, and disputes and remedies are covered. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 434 or PLGL 434.

LGST 442 Business Organizations (3)
Prerequisite: LGST 201. Recommended: LGST 340. An overview of the legal aspects of establishing, organizing, developing, and operating a business enterprise and the processes, procedures, and writings for which a paralegal may be responsible. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 442, PLGL 342, or PLGL 442.

LGST 445 Employment Law (3)
Prerequisite: LGST 201. An overview of federal and state laws governing the employment relationship in the public and private sectors. Topics include employee protection from discrimination and harassment, employer obligations toward disabled workers, privacy issues, and employment contract matters. Focus is on the knowledge and practical skills required for a paralegal working in this area. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 445 or PLGL 398O.

LGST 450 Bankruptcy Law (3)
Prerequisite: LGST 201. A study of the bankruptcy code, the related rules of procedure, and the role of the paralegal in assisting attorneys in bankruptcy practice. Techniques detailed include how to identify and gather relevant data and how to draft and file appropriate documents. Assignments include legal research and written analysis. Students may receive credit for only one of the following courses: LGST 450 or PLGL 450.

LGST 486A Legal Studies Internship Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in legal studies. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to legal studies and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

LGST 486B Legal Studies Internship Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in legal studies. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to legal studies and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
Library Skills and Information Literacy

Courses in library skills (designated LIBS) may be applied toward
- the general education requirement in information literacy; and
- electives.

Degree-seeking students must complete LIBS 150 (or present its equivalent in transfer) during the first 18 credits of enrollment at UMUC.

LIBS 150 Information Literacy and Research Methods (1)

An introduction to the research process and methods for retrieving information in a library or through online sources. Development of a research topic and the creation of effective strategies for finding relevant information are discussed and practiced. The following information literacy skills are emphasized: understanding the research process; selecting appropriate print and electronic sources to answer research questions; effectively using Web search engines and UMUC Information and Library Services’ electronic resources to find information; and evaluating, organizing, and correctly citing the information found. Credit for LIBS 150 may not be earned through challenge exam or portfolio credit. Students may receive credit for only one of the following courses: COMP 111, LIBS 100, or LIBS 150.

Marketing

Courses in marketing (designated MRKT) may be applied as appropriate (according to individual program requirements) toward
- a major in marketing, business administration, global business and public policy, or management studies;
- a minor in marketing, business administration, or management studies;
- a certificate in Customer Service Communications, Customer Service Management, or E-Commerce in Small Business; and
- electives.

A description of the curriculum for the marketing major and minor begins on p. 71. Descriptions of other management-related curricula may be found on the following pages: accounting (p. 15), business administration (p. 23), environmental management (p. 41), fire science (p. 45), global business and public policy (p. 52), human resource management (p. 58), and management studies (p. 68).

MRKT 310 Marketing Principles and Organization (3)

An introduction to the field of marketing, intended to develop a general understanding and appreciation of the forces, institutions, and methods involved in marketing a variety of goods and services. Topics include segmentation, target marketing, positioning, developing new products, pricing, distributing and promoting goods and services, and sales and marketing management. Students may receive credit for only one of the following courses: BMGT 350, MGMT 322, MRKT 310, or TMGT 322.

MRKT 314 Nonprofit Marketing (3)

Prerequisite: MRKT 310. An introduction to key issues in nonprofit marketing. Topics include nonprofit marketing issues related to constituencies, planning, products and services, membership, and promotion, as well as association and social marketing. Students may receive credit for only one of the following courses: BMGT 398B or MRKT 314.
MRKT 318 Exploring Internet Marketing (1)
Recommended: MRKT 310. An exploration of various potential uses and goals of Internet marketing in addition to its obvious role of inducing sales or generating sales leads. Topics include the role of electronic commerce in the marketing mix, advantages of using the Internet as a marketing tool, the ethical and legal constraints of Internet marketing, and creative strategies for implementing Internet marketing campaigns. Current publications, online computer exercises, and class discussions are used to examine marketing via the Internet. Students may receive credit for only one of the following courses: BMGT 398O, BMGT 398R, MGMT 398O, MGMT 398R, or MRKT 318.

MRKT 353 Retail Management (3)
Prerequisite: MRKT 310. A review of the organization, location, design, layout, management, and policies of retail stores. Topics include retail planning, administration, operational control, customer behavior, competition, marketing channels, the legal environment, financial planning, merchandise planning and buying, credit policies, pricing, brands, and advertising and promotion. Personal selling, customer service, sales management, strategic planning, human resource management, training, and information technologies commonly applied in retailing are also examined. Students may receive credit for only one of the following courses: BMGT 353 or MRKT 353.

MRKT 354 Integrated Marketing Communications (3)
Prerequisite: MRKT 310. An in-depth study of promotional activities such as advertising, personal selling, sales promotions, and direct marketing (including use of the Internet). Emphasis is on strategic planning of promotional activities to communicate with customers to achieve marketing objectives. The relationship of integrated marketing communications to other elements of promotional activities is also explored. Students may receive credit for only one of the following courses: BMGT 354 or MRKT 354.

MRKT 374 Small Business Marketing (3)
Prerequisite: MRKT 310. An overview of how marketing principles and theories apply to small businesses and entrepreneurial efforts. Topics include marketing tools and techniques required for start-up businesses, such as new business development, core competencies and technologies, marketing research, marketing planning, relationship marketing, and partnerships with customers and suppliers. Marketing-mix issues specific to small business (such as developing new products and services, selecting sites, choosing distribution channels, establishing pricing policies, and developing and evaluating promotional campaigns) are also explored. Types and sources of marketing information available to the small-business person are identified. Students may receive credit for only one of the following courses: MGMT 332 or MRKT 374.

MRKT 395 Customer Service Management (3)
Prerequisite: BMGT 364. A study of customer services accompanying a core product and service products themselves. Problems and issues related to the service mix, service-level decisions, the formulation of service policies, customer service management, the development of customer service staff, training, and evaluation are analyzed. Discussion covers customer information, customer surveys and suggestions, the handling of complaints and adjustments, techniques for dealing with difficult and angry customers, dissemination of information, credit services, maintenance, technical service, and the development of new programs. Students may receive credit for only one of the following courses: BMGT 395, BMGT 398A, MGMT 395, MGMT 398A, or MRKT 395.

MRKT 396 Customer Consultation and Needs Analysis (3)
Prerequisite: MRKT 395. A study of customer consultation and needs analysis for the front-line supervisor of customer service personnel. Issues such as working with internal staff and external customers to develop effective processes, procedures, and ongoing communication are explored. Focus is on establishing and maintaining a high level of customer satisfaction and loyalty. Skills covered include conducting formal and informal needs analysis and recommending improvements such as training, documentation, job aids, and electronic performance support systems; documenting and securing agreement on requirements and commitments; developing communication and work process flows to ensure quality of service; designing and delivering presentations; and creating customer satisfaction surveys and suggesting service improvements. Students may receive credit for only one of the following courses: BMGT 388I, BMGT 396, or MRKT 396.
MRKT 397 Customer Satisfaction and Loyalty (3)
A study of various approaches used for determining the level of customer satisfaction with the products and services of a small business. Techniques for setting customer-satisfaction goals and putting systems in place to achieve those goals are examined. Students may receive credit for only one of the following courses: BMGT 397, MGMT 398E, or MRKT 397.

MRKT 410 Consumer Behavior (3)
Prerequisite: MRKT 310. Recommended: PSYC 100 or PSYC 221. An overview of the increasing importance of American consumers in the marketing system and the importance of understanding them. Discussion covers the foundations of consumer behavior (such as economic, social, psychological, and cultural factors). Consumers are analyzed in marketing situations as buyers and users of products and services and in relation to the various social and marketing factors that affect their behavior. The influence of well-directed communications is also considered. Students may receive credit for only one of the following courses: BMGT 451, CNEC 437, or MRKT 410.

MRKT 412 Marketing Research Applications (3)
Prerequisites: STAT 230 (or BMGT 230) and MRKT 310. A study of the specialized field of marketing research as it is used to identify market needs, profile target markets, test promotional efforts, and measure the effectiveness of marketing plans. Procedures for planning survey projects, designing statistical samples, tabulating data, and preparing reports are covered. Emphasis is on managing the marketing research function. Students may receive credit for only one of the following courses: BMGT 452 or MRKT 412.

MRKT 454 Global Marketing (3)
(Fulfills the international perspective requirement.) Prerequisite: MRKT 310. An in-depth study of marketing principles as they relate to the global marketplace. Emphasis is on understanding the influence of internationalization on the U.S. economy, the competitive pressures on the intensifying global markets, and the development of marketing plans tailored to reach international and global markets. Topics include the political, economic, legal, regulatory, and sociocultural trends affecting international marketing; the dynamic environments in which global marketing strategies are formulated; and the challenge of implementing marketing programs leading to competitive advantage. Students may receive credit for only one of the following courses: BMGT 454 or MRKT 454.

MRKT 456 Advertising (3)
Prerequisite: MRKT 310. An exploration of the role of advertising in the American economy. Analysis covers the effects of advertising on economic and social life; the methods and techniques that advertising practitioners use; the role of newspapers, magazines, and other media in developing an advertising campaign; modern methods of research to improve the effectiveness of advertising; and the organization of the advertising business. Students may receive credit for only one of the following courses: BMGT 456 or MRKT 456.

MRKT 457 Using Web-Enhanced Marketing Techniques (3)
Prerequisite: MRKT 310. An exploration of how the use of Web-based computer applications and databases can enhance the marketing process and create relationships with customers. Topics include the use of the Internet in developing marketing strategy, conducting market research, and making marketing-mix decisions. Emphasis is on the Internet as a national and global marketing communications tool. Discussion also covers creative Web site design techniques to measure advertising effectiveness. Students may receive credit for only one of the following courses: BMGT 398O, BMGT 398R, MGMT 398O, MGMT 398R, or MRKT 457.

MRKT 471 Business Marketing (3)
Prerequisite: MRKT 310. An examination of the basic marketing functions applied to business and government sectors rather than individual consumers. Topics include planning and introducing products, analyzing and forecasting markets, developing and using channels, pricing and planning promotional strategies, and managing a sales force and business marketing. Students may receive credit for only one of the following courses: BMGT 453 or MRKT 471.

MRKT 475 Sales Management (3)
Prerequisite: MRKT 310. An overview of the role of the sales manager, both at headquarters and in the field, in managing people, resources, and functions of marketing. The problems of organizing, forecasting, planning, communicating, evaluating, and controlling sales are analyzed. Quantitative techniques and pertinent concepts of behavioral science are applied to the management of the sales effort and sales force. Students may receive credit for only one of the following courses: BMGT 455 or MRKT 475.
INFORMATION ON COURSES

Mathematics

Courses in mathematics (designated MATH) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in mathematics (with the exception of MATH 009 and 012);
- a minor in mathematical sciences;
- a major in computer science; and
- electives.

Students who are planning to major or minor in management, computing, or science-related fields of business administration, computer and information science, or the biological or social sciences should consider courses from sequence I. Students who are planning a major or minor in computer science, mathematical sciences, or the physical and engineering sciences should consider courses from sequence II. Students in other majors or minors should refer to their chosen curriculum for mathematics requirements.

**Sequence I**
- MATH 009 Introductory Algebra
- MATH 012 Intermediate Algebra
- MATH 107 College Algebra
- MATH 220 Elementary Calculus I
- MATH 221 Elementary Calculus II
- Approved course in statistics

**Sequence II**
- MATH 009 Introductory Algebra
- MATH 012 Intermediate Algebra
- MATH 115* Pre-Calculus
- MATH 140 Calculus I
- MATH 141 Calculus II
- MATH 240 Introduction to Linear Algebra
- MATH 241 Calculus III

* or MATH 107–108

Degree-seeking students must complete general education requirements in mathematics (or present the equivalent in transfer) during their first 18 credits of enrollment at UMUC.

Placement tests are required for enrollment in MATH 012, 105, 106, 107, 108, 115, 140, and 220. Students may either consult the undergraduate Schedule of Classes for times and locations of tests or contact Exams and Testing Services by phone at 800-888-UMUC, ext. 5249, or by e-mail at exams@umuc.edu.

Students are expected to own and use scientific calculators in all mathematics and statistics courses.

A description of the curriculum for the mathematical sciences minor begins on p. 73. A description of the computer science major begins on p. 32.

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**MRKT 486A Internship in Marketing Through Co-op (3)**

Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in marketing. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to marketing and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

**MRKT 486B Internship in Marketing Through Co-op (6)**

Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in marketing. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to marketing and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

**MRKT 495 Marketing Policies and Strategies (3)**

(Intended as a final, capstone course to be taken in a student's last 15 credits.) Prerequisites: MRKT 310 and one other marketing course. A study of marketing that integrates knowledge gained through previous coursework and experience and builds on that conceptual foundation through integrative analysis, practical application, and critical thinking. Emerging issues in marketing are considered. Focus is on the use of appropriate decision models and the analysis of consumers and markets. Students may receive credit for only one of the following courses: BMGT 457 or MRKT 495.
**MATH 009 Introductory Algebra (3)**
(Not open to students who have already successfully completed a higher-level mathematics course. Does not apply toward degree requirements. Yields institutional credit only.) Prerequisite: MATH 001 or an appropriate result on the placement test. A study of number systems, algebraic properties, equations, and applications. Topics include exponents, polynomials, and linear equations. Students may receive credit for only one of the following courses: MATH 009, MATH 009M, or MATH 100.

**MATH 012 Intermediate Algebra (3)**
(Not open to students who have already successfully completed a higher-level mathematics course. Does not apply toward degree requirements. Yields institutional credit only.) Prerequisite: MATH 009 or an appropriate result on the placement test. A study of problem-solving techniques in intermediate-level algebra. Emphasis is on numbers and algebraic properties, graphing skills, and applications drawn from a variety of areas (such as statistics, computing, and discrete mathematics). Topics include polynomials; factoring; exponents and their notation; linear, quadratic, and other equations; and inequalities. Students may receive credit for only one of the following courses: MATH 012, MATH 101, MATH 101M, MATH 102, MATH 102M, MATH 199A, or MATH 199M.

**MATH 105 Mathematics: Contemporary Topics and Applications (3)**
(Not intended for students planning to take MATH 107 or higher-numbered courses; does not serve as a prerequisite for these courses.) Prerequisite: MATH 012 or an appropriate result on the placement test. A survey of contemporary topics in mathematics, covering applications and projects. Topics include problem solving, sequences and series, financial management, geometry, probability, and statistics. Students may receive credit for only one of the following courses: MATH 105 or MATH 106.

**MATH 106 Finite Mathematics (3)**
(Not intended for students planning to take MATH 107, higher-numbered mathematics courses, or STAT 200.) Prerequisite: MATH 012 or an appropriate result on the placement test. A survey of selected topics from contemporary mathematics to introduce mathematical thinking. Applications and projects of other disciplines are covered. Topics include problem solving, finance, probability and statistics, linear models, set theory, and logic. Other topics may include sequences and series, geometry, and game theory. Students may receive credit for only one of the following courses: MATH 105 or MATH 106.

**MATH 107 College Algebra (3)**
(The first course in the two-course series MATH 107–108. An alternative to MATH 115 Pre-Calculus.) Prerequisite: MATH 012 or an appropriate result on the placement test. An introduction to equations, inequalities, and absolute values and a study of functions and their properties, including the development of graphing skills with polynomial, rational, exponential, and logarithmic functions. Applications are also covered. Students may receive credit for only one of the following courses: MATH 107 or MATH 115.

**MATH 108 Trigonometry and Analytical Geometry (3)**
(The second course in the two-course series MATH 107–108. An alternative to MATH 115 Pre-Calculus.) Prerequisite: MATH 107 or an appropriate result on the placement test. An introduction to trigonometric functions, identities, and equations and their applications. Analytical geometry and conic sections are covered. Additional topics may include matrices, determinants, sequences, and series. Students may receive credit for only one of the following courses: MATH 108 or MATH 115.

**MATH 115 Pre-Calculus (3)**
(Not open to students who have completed MATH 140 or any course for which MATH 140 is a prerequisite.) Prerequisite: MATH 012 or an appropriate result on the placement test. Explication of elementary functions and graphs. Topics include polynomials, rational functions, and exponential and logarithmic functions. Algebraic techniques preparatory for calculus are presented. Students may receive credit for only one of the following: MATH 107–108 or MATH 115.

**MATH 140 Calculus I (4)**
Prerequisite: MATH 108, MATH 115, or an appropriate result on the placement test. An introduction to calculus. Topics include functions, the sketching of graphs of functions, limits, continuity, derivatives and applications of the derivative, definite and indefinite integrals, and calculation of area. Students may receive credit for only one of the following courses: MATH 130, MATH 131, MATH 140, or MATH 220.

**MATH 141 Calculus II (4)**
(A continuation of MATH 140.) Prerequisite: MATH 140. A study of integration and functions, with application, and coverage of other topics. Focus is on techniques of integration, improper integrals, and applications of integration (such as volumes, work, arc length, and moments); inverse, exponential, and logarithmic functions; and sequences and series. Students may receive credit for only one of the following courses: MATH 131, MATH 132, MATH 141, or MATH 221.
INFORMATION ON COURSES

MATH 220 Elementary Calculus I (3)
Prerequisite: MATH 107, MATH 115, or an appropriate result on the placement test. A presentation of the basic ideas of differential and integral calculus. Emphasis is on elementary techniques of differentiation, as well as applications. Students may receive credit for only one of the following courses: MATH 130, MATH 131, MATH 140, or MATH 220.

MATH 240 Introduction to Linear Algebra (4)
Prerequisite: MATH 141. An explanation of the basic concepts of linear algebra. Topics include vector spaces, applications to line and plane geometry, linear equations, and matrices, as well as linear transformations, changes of basis, diagonalization, similar matrices, Jordan canonical forms, eigenvalues, determinants, and quadratic forms. Students may receive credit for only one of the following courses: MATH 240, MATH 400, or MATH 461.

MATH 241 Calculus III (4)
Prerequisite: MATH 141. An introduction to multivariable calculus. Exposition covers vectors and vector-valued functions; partial derivatives and applications of partial derivatives (such as tangent planes and Lagrangian multipliers); multiple integrals; volume; surface area; and the classical theorems of Green, Stokes, and Gauss.

MATH 246 Differential Equations (3)
Prerequisite: MATH 141. An introduction to the basic methods of solving differential equations. Separable, exact, and linear differential equations are addressed. The main techniques considered include undetermined coefficients, series solutions, Laplace transforms, and numerical methods. Students may receive credit only once under this course number.

MATH 301 Concepts of Real Analysis I (3)
Prerequisites: MATH 240 and MATH 241. An approach to real analysis. Topics include sequences and series of numbers, continuity and differentiability of real-valued functions of one variable, the Riemann integral, sequences of functions, and power series. Discussion also covers the functions of several variables, including partial derivatives, multiple integrals, line and surface integrals, and the implicit-function theorem. Students may receive credit for only one of the following courses: MATH 301 or MATH 410.

MATH 381 Operations Research (3)
Prerequisite: MATH 240. An exploration of linear programming models and applications, simplex algorithms, sensitivity analysis, integer programming, and network flow models.

MATH 402 Algebraic Structures (3)
Prerequisite: MATH 240. An overview of groups, rings, integral domains, and fields; detailed study of several groups; and exploration of properties of integers and polynomials. Topics may include an introduction to computer algebra and Boolean algebra.

MATH 450 Logic for Computer Science (3)
(Also listed as CMSC 450.) Prerequisites: CMSC 150 and MATH 241. Elementary development of propositional logic (including the resolution method) and first-order logic (including Hebrand’s unsatisfiability theorem). Discussion covers the concepts of truth and interpretation; validity, provability, and soundness; completeness and incompleteness; and decidability and semidecidability. Students may receive credit for only one of the following courses: CMSC 450, MATH 444, MATH 445, or MATH 450.

MATH 463 Complex Variables (3)
Prerequisite: MATH 241. A survey of analytic functions, mapping properties of the elementary functions, the algebra of complex numbers, and the Cauchy integral formula. Topics include conformal mapping as well as theory of residues and its application to evaluation of integrals.

MATH 466 Numerical Analysis (3)
Prerequisites: MATH 240 and 241. A study of various methods of numerical analysis. Topics include solutions of equations in one variable, interpolation and polynomial approximation, and numerical integration. Discussion also covers direct methods for solving linear systems and applications to finance and actuarial science.

MATH 486A Internship in Mathematics Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in mathematics. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to mathematics and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship course-work through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
MATH 486B Internship in Mathematics Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in mathematics. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to mathematics and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

MUSC 210 The Impact of Music on Life (3)
A study of music as a part of culture. Materials are drawn from traditions throughout the world to illustrate issues of historical and contemporary significance, including the impact of race, class, and gender on the study of music. Students may receive credit for only one of the following courses: HUMN 211 or MUSC 210.

MUSC 436 Jazz: Then and Now (3)
An examination of jazz in America during the past 75 years—its major styles and influential artists. Students may receive credit for only one of the following courses: HUMN 436 or MUSC 436.

Natural Science
Courses in natural science (designated NSCI) may be applied as appropriate (according to individual program requirements) toward
• the general education requirement in the biological and physical sciences;
• a major in laboratory management;
• a minor in natural science; and
• electives.
A description of the curriculum for the natural science minor begins on p. 74.

NSCI 100 Introduction to Physical Science (3)
(For students not majoring in a science.) Prerequisite: MATH 012 or higher. An introduction to the basic principles of physics, chemistry, astronomy, geology, oceanography, and meteorology. Discussion covers the development of scientific thinking, the scientific method, the relationships among the various physical sciences, and the role of the physical sciences in interpreting the natural world. Students may receive credit for only one of the following courses: GNSC 100 or NSCI 100.

NSCI 101 Physical Science Laboratory (1)
(For students not majoring or minoring in a science. Fulfills the laboratory science requirement only with previous or concurrent credit for NSCI 100.) Prerequisite: MATH 012 or higher. A laboratory study of the basic principles of physics and chemistry that illustrates how they apply to everyday life as well as to the fields of astronomy, geology, oceanography, and meteorology. Assignments include experiments, observations, and exercises.
INFORMATION ON COURSES

Philosophy

Courses in philosophy (designated PHIL) may be applied as appropriate (according to individual program requirements) toward

• the general education requirement in the arts and humanities;
• a major or minor in humanities; and
• electives.

UMUC offers only a limited number of courses each term in this discipline.

A description of the curriculum for the humanities major and minor begins on p. 56.

PHIL 100 Introduction to Philosophy (3)
An introduction to the literature, problems, and methods of philosophy. The subject is approached either by studying some of the main figures in philosophic thought or by considering some central, recurring problems of philosophy. Students may receive credit for only one of the following courses: HUMN 125 or PHIL 100.

PHIL 140 Contemporary Moral Issues (3)
(Fulfills the civic responsibility perspective requirement.) An exploration of how philosophical analysis can be a foundation for thinking clearly about moral issues. Problems analyzed include such widely debated issues as abortion, euthanasia, the death penalty, homosexuality, pornography, reverse discrimination, business ethics, sexual equality, and economic equity. Students may receive credit for only one of the following courses: HUMN 300 or PHIL 140.

PHIL 170 Introduction to Logic (3)
A general introduction to the discipline of logic. Traditional and modern deductive techniques are demonstrated and used; informal fallacies are clarified. Students may receive credit for only one of the following courses: HUMN 170 or PHIL 170.

PHIL 310 Ancient Philosophy (3)
A study of the origins and development of philosophy and science in ancient Greece, focusing on the pre-Socratic philosophers, Socrates, Plato, and Aristotle.
PHIL 320 Modern Philosophy (3)
A study of major philosophical issues of the 16th, 17th, and 18th centuries. Writings of such philosophers as Descartes, Newton, Hume, and Kant are explored.

PHIL 340 Making Decisions (3)
Analysis of various approaches to making decisions in personal, professional, and public life. The logic of decision making, risk and probability, moral aspects of making decisions, and the standard biases in judgment are considered. Students may receive credit for only one of the following courses: HUMN 345 or PHIL 340.

PHIL 342 Moral Problems in Medicine (3)
A critical exploration of the dimensions of decisions in health-related contexts. Readings are drawn from philosophical, medical, and other sources. Students may receive credit for only one of the following courses: HUMN 342 or PHIL 342.

PHIL 343 Sexual Morality (3)
A critical examination of practical moral issues related to sexual conduct. The resources of moral and social philosophy are used as texts. Students may receive credit for only one of the following courses: HUMN 343 or PHIL 343.

PHIL 385 Philosophy and Computers (3)
Prerequisite: 3 credits in logic or computer science. A presentation of philosophical issues concerning computers, focusing on nonquantitative treatment of major results in computation theory regarding absolute limits on computers. Fundamental problems concerning computers used as models of human intelligence are examined. Students may receive credit for only one of the following courses: HUMN 385, PHIL 308C, or PHIL 385.

Physics
Courses in physics (designated PHYS) may be applied as appropriate (according to individual program requirements) toward
• the general education requirement in the biological and physical sciences;
• a major in investigative forensics;
• a minor in natural science; and
• electives.
A description of the natural science minor begins on p. 74.

PHYS 121 Fundamentals of Physics I (4)
(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Fulfills the laboratory science requirement. Together with PHYS 122, generally satisfies the minimum requirement of medical and dental schools. The first course in a two-course sequence.) Prerequisite: MATH 108, MATH 115, or knowledge of college-level trigonometry. An exploration of mechanics. Topics include kinematics, force, dynamics, conservation laws, and rotational motion.

PHYS 122 Fundamentals of Physics II (4)
(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements. Fulfills the laboratory science requirement. Together with PHYS 121, generally satisfies the minimum requirement of medical and dental schools. A continuation of PHYS 121.) Prerequisite: PHYS 121. An exploration of the fields of heat, sound, electricity, magnetism, optics, and modern physics.

PHYS 161 General Physics: Mechanics and Particle Dynamics (3)
(For students majoring or minoring in a science; not appropriate for nonscience students fulfilling general education requirements.) Prerequisite or corequisite: MATH 131 or MATH 141. A study of the laws of motion, force, and energy. The principles of mechanics, collisions, linear momentum, rotation, and gravitation are investigated. Students may receive credit for only one of the following courses: PHYS 141, PHYS 161, PHYS 171, or PHYS 191.
Psychology

Courses in psychology (designated PSYC) may be applied as appropriate (according to individual program requirements) toward

- the general education requirement in the behavioral and social sciences;
- a major in psychology, investigative forensics, or social science;
- a minor in psychology or forensics;
- a certificate in various disciplines; and
- electives.

A description of the curriculum for the psychology major and minor begins on p. 78. Descriptions of related curricula may be found on the following pages: forensics (p. 47), investigative forensics (p. 63), and social science (p. 80).

PSYC 100 Introduction to Psychology (3)
A survey of the basic principles, research concepts, and problems in psychological science. The biological, cognitive, and social perspectives of human thought and behavior are addressed. Topics include neuroscience, sensation and perception, learning and conditioning, memory, motivation, language and intelligence, personality and social behavior, and psychopathology and therapy. Applications of psychology are also presented. Students may receive credit for only one of the following courses: BEHS 101 or PSYC 100.

PSYC 101 Psychology of Adjustment (3)
(Formerly PSYC 235.) A study of theory and research on the psychology of personal adjustment in everyday life. Emphasis is on self-concept, emotions, self-control, interpersonal relations, and stress. Students may receive credit for only one of the following courses: PSYC 101 or PSYC 235.

PSYC 301 Biological Basis of Behavior (3)
Prerequisite: PSYC 100. Recommended: STAT 225. An introduction to the anatomical structures and physiological processes that determine behavior. Topics include the acquisition and processing of sensory information, the neural control of movement, and the biological bases of complex behaviors (such as sleep, learning, memory, language, and addiction), as well as the basic functioning of the nervous system.

PSYC 305 Experimental Methods in Psychology (3)
Prerequisites: PSYC 100 and STAT 225 (or PSYC 200). A survey of research methods in sensory systems, memory and cognition, motivation, development, and personality and social behavior. Statistical and computer applications are introduced. Opportunities to enhance laboratory skills and gain experience in the psychological sciences are provided.

PSYC 306 Special Topics in Psychology (1–3)
Prerequisite: PSYC 100. Seminar discussion of topics of current interest. Areas explored may extend or augment those covered in more general topical courses. May be repeated to a maximum of 6 credits when topics differ.

PSYC 306A APA Writing Style for Psychology (1)
Prerequisite: PSYC 100. An introduction to the effective use and application of APA style for research projects, technical papers, and expository writing in the psychological and behavioral sciences.

PSYC 307 Special Topics in Psychology: Natural Science Theme (1–3)
Prerequisite: PSYC 100. Seminar discussion of topics of current interest. Areas explored may extend or augment those covered in more general topical courses. May be repeated to a maximum of 6 credits when topics differ.

PSYC 307D Improving Memory and Thinking (1)
(Formerly PSYC 309D.) Prerequisite: PSYC 100. A presentation of methods of improving memory and thinking as outcomes of basic theory and research. Assignments include workshop activities and critical review of relevant research.

PSYC 307G Parapsychology (1)
Prerequisite: PSYC 100. An introduction to parapsychology and experimental methods used in that field. Topics include the history of parapsychology, superstition and science, ESP in the laboratory, evidence for life after death, and reincarnation. Rival explanations for phenomena are considered critically.

PSYC 307H Sleep and Dreams (1)
Prerequisite: PSYC 100. An introduction to the clinical, cultural, and research aspects of sleep and dreams. Topics include historical and theoretical approaches to sleep and dreams, sleep deprivation and disorders, biological rhythms, typical dreams, and dream interpretation.
PSYC 307X Substance Abuse: An Introduction (1)
(Formerly PSYC 309X.) Prerequisite: PSYC 100. An introduction to the study of drug abuse. Topics include the causes, symptoms, and defenses for substance abuse, as well as prevention and treatment. Review covers biology, personality, lifestyle, and relationships with families, peers, and communities. Drug abuse is compared to other social problems, including self-destructive, high-risk, and sabotaging behavior. How different cultures respond to drug abuse is also addressed. Practice exercises, observations, interviews, and media summaries supplement class discussions.

PSYC 308 Special Topics in Psychology: Social Science Theme (1–3)
Prerequisite: PSYC 100. Seminar discussion of topics of current interest. Areas explored may extend or augment those covered in more general topical courses. May be repeated to a maximum of 6 credits when topics differ.

PSYC 308E Cultivating Executive Skills (1)
Prerequisite: PSYC 100. A presentation of relevant behavioral and managerial science theory, research, and real-world applications of leadership training. Focus is on applied executive skills. Issues of workplace diversity, technology, and effective use of human resources are also covered.

PSYC 308H Psychology of Motivating People at Work (1)
(Formerly PSYC 309H.) Prerequisite: PSYC 100. An examination of successful strategies for motivating people in work settings. Basic theories of work motivation are covered. Focus is on identifying managerial and personal motivational strategies in organizations through review of relevant research and case studies.

PSYC 308K Introduction to Black Psychology (1)
Prerequisite: PSYC 100. An introduction to issues and perspectives in the study of the psychological development of Black people, particularly in America, over the past 100 years. Topics include the Afrocentric and Eurocentric ethos; the nature of Black personality as affected by slavery and racism; psychological assessment, treatment, and counseling techniques; and the relationships between psychological research and social policy in American and Western research.

PSYC 308Q Psychology of Religion (1)
(Formerly PSYC 309Q.) Prerequisite: PSYC 100. An examination of the relationship of modern psychology and traditional religion in finding meaning in human reality and providing concepts and techniques for the ordering of the interior life. Topics include attitudes toward anxiety, issues of guilt, existential trust, the nature of suffering and evil, and the image of God and the function of belief.

PSYC 309 Special Topics in Psychology: Clinical Science Theme (1–3)
Prerequisite: PSYC 100. Seminar discussion of topics of current interest. Areas explored may extend or augment those covered in more general topical courses. May be repeated to a maximum of 6 credits when topics differ.

PSYC 309C Psychology of Eating Disorders (1)
Prerequisite: PSYC 100. An introduction to the current research on eating disorders—anorexia nervosa, bulimia nervosa, and obesity. Topics include adolescent eating behavior, theoretical explanations, factors associated with eating disorders, and the general management of disorders.

PSYC 309H Psychological Consequences of War and Violent Conflict (1)
Prerequisite: PSYC 100. A study of the effects of war on various groups of vulnerable people using a case example. Theoretical bases and issues are emphasized in order to better understand the development of disorders, the expression of these disorders, and treatment and rehabilitation.

PSYC 309K Managing Interpersonal Stress and Conflict (1)
Prerequisite: PSYC 100. An exploration of the nature and causes of stress and techniques for its management. Discussion covers psychological processes that cause interpersonal conflict and those that can bring about its reduction, as well as interpersonal and group factors, such as cooperation and negotiation.

PSYC 309S Introduction to the Psychology of Parenting (1)
Prerequisite: PSYC 100. An overview of psychological issues relevant to parenting. Key theories and relevant research findings that directly apply to effective and ineffective parenting are presented. Practical lessons in grand-, step-, and single-parenting; learning disabilities; the influence of media and technology; and cross-cultural aspects are considered.
PSYC 309W Professional Psychology (1)
Prerequisite: PSYC 100. An overview of the profession of psychology. A panel of psychologists present lessons learned in teaching, research, therapy, and organizational consulting. Career goals and aspirations are also addressed.

PSYC 309X Ethics in Mental Health and Psychological Treatment (1)
Prerequisite: PSYC 100. A general introduction to ethical considerations in the diagnosis and treatment of psychologically impaired persons. Topics include confidentiality, dual relationships, credentialing, recordkeeping, informed consent, and legal concerns.

PSYC 309Y Introduction to Hypnosis (1)
Prerequisite: PSYC 100. An introduction to some of the basic concepts and principles of hypnosis for psychological practice. The relationship between hypnosis and systematic desensitization and their respective roles in affecting human behavior are examined. Therapeutic uses of hypnosis and practical exercises in the use of self-hypnosis are also explored.

PSYC 310 Perception (3)
Prerequisite: PSYC 100. Recommended: PSYC 200 and 305. A survey of phenomena and theories of perception. Topics include the psychological, anatomical, physiological, and environmental factors important in determining how humans perceive the world. Historical background and contemporary research are examined.

PSYC 315 Motivation (3)
Prerequisites: PSYC 100 and 301. Recommended: STAT 225 (or PSYC 200) and PSYC 305. A study of the interaction of physiological, neurological, and pharmacological aspects of motivation with environmental influences such as culture, learning, and social dynamics. Relevant issues (such as aggression, sex, achievement, and cognition) are discussed.

PSYC 321 Social Psychology (3)
(Formerly PSYC 221.) Prerequisite: PSYC 100. An examination of the influence of social factors on individual and interpersonal behavior. Topics include conformity, attitudinal change, personal perception, interpersonal attraction, and group behavior. Students may receive credit for only one of the following courses: BEHS 221, BEHS 421, BEHS 450, PSYC 221, or PSYC 321.

PSYC 332 Psychology of Human Sexuality (3)
Prerequisite: PSYC 100. A survey of historical and contemporary psychological views on a wide variety of sexual behaviors. Topics include theory and research on the interrelationship of life-span psychological development, psychological functioning, interpersonal processes, and sexual behaviors. Political and social issues involved in current sexual norms and practices are also discussed. Students may receive credit for only one of the following courses: BEHS 363, HLTH 377, or PSYC 332.

PSYC 334 Psychology of Interpersonal Relationships (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. A study of research and theory on the development, maintenance, and dissolution of human relationships, followed by consideration of practical applications. Topics include processes critical to successful relating (such as communication, bargaining, and resolution of conflict). Focus is also on issues that are specific to troubled dyadic relations of equal partners (such as jealousy, spousal abuse, and divorce).

PSYC 335 Psychology of Men (3)
Prerequisite: PSYC 100. A survey of the biology, life-span development, socialization, personality attributes, mental health factors, and special problems of men.

PSYC 336 Psychology of Women (3)
Prerequisite: PSYC 100. A survey of the biology, life-span development, socialization, personality attributes, mental health factors, and special problems of women.

PSYC 337 Community Psychology (3)
Prerequisite: PSYC 100. A survey and critical examination of the interrelationship of environmental factors and variations in individual functioning. The effects of social process and social structure on the mental health of individuals in community life are evaluated. Discussion covers both theoretical models and other topics in community psychology.

PSYC 339 Educational Psychology (3)
Prerequisite: PSYC 100. An overview of educational psychology focusing on processes of learning. Discussion covers measurement of differences between individuals (in intelligence, styles of thinking, understanding, attitudes, ability to learn, motivation, emotions, problem solving, and communication of knowledge) and the significance of those differences. Problems in the field are introduced and outlined. Examination of research in educational psychology supplements study. Students may receive credit for only one of the following courses: EDHD 460, PSYC 309J, or PSYC 339.
PSYC 341 Introduction to Memory and Cognition (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. An introduction to basic models, methods of research, and findings in the fields of memory, problem solving, and language. Applications as well as theory are explored.

PSYC 345 Group Dynamics (3)
Prerequisites: PSYC 100 and 221. Recommended: STAT 225 (or PSYC 200) and PSYC 305. An analysis and exploration of psychological forces in small-group behavior. Issues of growth, conflict, and successful performance are considered. Emphasis is on the application of rigorous scientific theory and research to the impact group dynamics have on real organizational and community problems. Topics include group development, team building, sports psychology, multicultural influence, social advocacy, and leadership. Students may receive credit for only one of the following courses: PSYC 309A, PSYC 345, or SOCY 447.

PSYC 353 Adult Psychopathology (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. An examination of mental disorders among adults. Topics include the identification and diagnosis of specific disorders as well as their etiology and treatment. Students may receive credit for only one of the following courses: PSYC 331, PSYC 353, or PSYC 431.

PSYC 354 Cross-Cultural Psychology (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. An exploration of cultural components of theory and research in the fields of personality, social psychology, and community psychology. The interplay of individual, ethnic, and cultural factors in psychosocial growth and well-being, as well as in cross-cultural and cross-ethnic communication, is stressed. Counseling and psychotherapeutic interactions are discussed.

PSYC 355 Child Psychology (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. A survey of research and theory focusing on psychological development, from conception through childhood. Physiological, conceptual, and behavioral changes are addressed, with attention to the social and biological context in which individuals develop. Students may receive credit for only one of the following courses: PSYC 333, PSYC 355, or PSYC 433.

PSYC 356 Psychology of Adolescence (3)
Prerequisites: PSYC 100 and 355. Recommended: STAT 225 (or PSYC 200) and PSYC 305. A description of adolescent development according to research and theory. The physiological, intellectual, and social changes of the teen years are viewed as interrelated, and the systems dealing with those changes are examined.

PSYC 357 Psychology of Adulthood and Aging (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. An overview of the development of physiological, intellectual, and interpersonal social functioning from early adulthood through the aging years. The dual theme is that of stability and change. Discussion covers theory and research, and their implications.

PSYC 361 Survey of Industrial and Organizational Psychology (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. A general survey of the field of industrial/organizational psychology. Topics include entry into the organization (recruitment, selection, training, socialization); organizational psychology (motivation, attitudes, leadership); and productivity in the workplace (quality of work, performance appraisals, absenteeism, turnover). The role that the larger environment plays in influencing behavior and attitudes on the job is also considered.

PSYC 370 Foundations of Forensics Psychology (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. A survey of psychological research and theory related to behavior in the criminal trial process. Topics include jury selection, criminal profiling, eyewitness testimony, prediction of violent behavior, and mental competency of the accused.

PSYC 386 Psychology of Stress (3)
Prerequisite: PSYC 100. An examination of the forces that define and determine the stress response. Stress is studied as the product of the interactions of one’s social structure, occupational status, and psychological and physiological levels of well-being. The psychological perspective is brought to bear on the stresses produced by work organizations, political climate, definitions of achievement, socioeconomic pressures, and the conflicts of those circumstances with ethical and moral values. Practical applications discussed include the constructive use of stress management techniques and the relationship between stress and illness. Students may receive credit for only one of the following courses: BEHS 463, HLTH 285, or PSYC 386.
PSYC 391 Introduction to Neuropsychology (3)
Prerequisites: PSYC 100 and 301 and STAT 225 (or PSYC 200). Recommended: PSYC 305. An examination of how the human brain governs and influences cognition, language, memory, and emotion. Principles of the organization of the brain and the interaction of the brain and behavior are presented. Clinical, developmental, and experimental factors in psychological assessment of disorders are also considered. Students may receive credit for only one of the following courses: PSYC 307A or PSYC 391.

PSYC 405 Principles of Behavior Modification (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. A review of various features of human behavior. Literature on theory and research is evaluated in the application of operant and respondent conditioning principles. Analysis covers approaches to behavioral problems in school, home, and professional settings.

PSYC 415 History of Psychology (3)
Prerequisites: PSYC 100 and two upper-level psychology courses. A study of the origins of psychology in philosophy and biology and the development of psychology as a science in the 19th and 20th centuries. Current theoretical perspectives and experiments are considered in relation to the enduring problems of psychology, as well as the roles of culture, science, and technology in the development of psychological ideas.

PSYC 424 Psychology of Persuasion (3)
Prerequisites: PSYC 100 and 221. Recommended: STAT 225 (or PSYC 200) and PSYC 305. A study of the effect of social communication on behavior and attitudes. Theory and research concerning social influence and change of attitude are examined.

PSYC 432 Introduction to Counseling Psychology (3)
Prerequisite: PSYC 100. A survey and critical analysis of research and intervention strategies developed and used by counseling psychologists. Historical as well as current trends in content and methodology are examined.

PSYC 435 Personality Theories (3)
Prerequisite: PSYC 100. A study of major theories and perspectives on personality, including trait, psychodynamic, behavioristic, and humanistic theories. Methods of personality research and relevant findings are also introduced and applied to real-world settings.

PSYC 436 Introduction to Clinical Psychology (3)
Prerequisite: PSYC 100. A survey of diagnostic and therapeutic strategies employed by clinical psychologists. The scientist-practitioner model is emphasized through the critical analysis of theories and empirical research that provide the foundation for determining effective treatments of mental disorders.

PSYC 441 Psychology of Human Learning (3)
Prerequisites: PSYC 100 and STAT 225 (or PSYC 200) and PSYC 305. A review and analysis of the major phenomena and theories of human learning. Conditioning, the application of behavior analysis to real-world problems, and laboratory techniques in learning research are also presented.

PSYC 451 Principles of Psychological Assessment (3)
Prerequisites: PSYC 100 and STAT 225 (or PSYC 200). Recommended: PSYC 305. An examination of basic concepts and theories of psychological assessment, including test development. Social, legal, cultural, and ethical considerations in psychological testing are also discussed.

PSYC 466 Environmental and Ecological Psychology (3)
Prerequisite: PSYC 100. Recommended: STAT 225 (or PSYC 200) and PSYC 305. An examination of the measurement, description, and impact of the physical environments that affect various aspects of cognition and social behavior in school, at work, and at leisure. Topics include responses to environmental stress and catastrophes, personal and space territoriality, urban living, and psychological solutions to everyday environmental problems.
INFORMATION ON COURSES

Sociology

Courses in sociology (designated SOCY) may be applied as appropriate (according to individual program requirements) toward
- the general education requirement in the behavioral and social sciences;
- a minor in sociology or forensics;
- a major in social science; and
- electives.

A description of the curriculum for the sociology minor begins on p. 81. Descriptions of related curricula may be found on the following pages: forensics (p. 47) and social science (p. 80).

SOCY 100 Introduction to Sociology (3)
An introduction to the fundamental concepts and principles of sociology. Topics include the study of cultures, patterns of social values, social institutions, stratification, and social change. Students may receive credit for only one of the following courses: BEHS 102 or SOCY 100.

SOCY 105 Introduction to Contemporary Social Problems (3)
An exploration of various personal, institutional, cultural, historical, and global problems that confront American society today. Problems range from drugs, divorce, crime, mental illness, and alienation in modern society to the environment and national and global economic and political conflicts. Special attention is paid to issues of technology and social change. Students may receive credit for only one of the following courses: BEHS 102 or SOCY 100.

SOCY 300 American Society (3)
A survey of the social structure and organization of American society, with special reference to recent social changes. The character, structure, values, and ideology of American social movements are examined from a sociological perspective. Topics include urban demographic changes and other population trends, as well as changes in the conduct of work, family life, and recreation.

PSYC 486A Psychology Field Experience Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in psychology. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to psychology and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

PSYC 486B Psychology Field Experience Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in psychology. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to psychology and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
INFORMATION ON COURSES

SOCY 312 Family Demography (3)
Prerequisite: SOCY 100 or SOCY 243. A study of the family and population dynamics. Discussion covers issues of fertility (such as teenage pregnancy, the timing of parenthood, and the determinants and consequences of family size) as they relate to family behavior (such as marital patterns, the use of child-care options, and the relationship between work and the family). Issues of policy as related to demographic changes in the family are also considered.

SOCY 313 The Individual and Society (3)
Prerequisite: SOCY 100. An examination of changing concepts of the interaction between the individual and society. Analysis employs the framework of classical functional, conflict, and social constructivist theories, as well as considering the context of rapidly changing communication technology and globalization. Topics include the construction of social order; the role of trust in social interaction; and work, power, social organization, and the social self. Selected readings are taken from the sociologies of work, gender, postmodernism, globalization, and human rights. Persistent social problems, such as poverty and social inequality, are analyzed. Students may receive credit for only one of the following courses: BEHS 312, SOCY 311, or SOCY 313.

SOCY 325 The Sociology of Gender (3)
Prerequisite: SOCY 100. An inquiry into the institutional bases of gender roles and gender inequality, cultural perspectives on gender, gender socialization, feminism, and gender-role change. Emphasis is on contemporary American society.

SOCY 398 Special Topics in Sociology (3)
Prerequisite: SOCY 100. A study of topics of special interest.

SOCY 403 Intermediate Sociological Theory (3)
Prerequisite: SOCY 100. A study of major theoretical approaches to sociology, including functionalism, conflict, and symbolic interactionism. Original works of major theorists are examined in historical perspective.

SOCY 410 Social Demography (3)
Prerequisite: SOCY 100. A study of social demography. Topics include types of demographic analysis, demographic data, population characteristics, migration, mortality, fertility, population theories, world population growth, and population policy.

SOCY 423 Ethnic Minorities (3)
Prerequisite: SOCY 100. An exposition of basic social processes in the relations of ethnic groups, immigrant groups, African Americans, and Native Americans in the United States and of ethnic minorities in Europe.

SOCY 424 Sociology of Race Relations (3)
Prerequisite: SOCY 100. An analysis of race-related issues, focusing mainly on American society. Topics include the historical emergence, development, and institutionalization of racism; the effects of racism on its victims; and conflicts that are racially based.

SOCY 426 Sociology of Religion (3)
A survey of the varieties and origins of religious experience and religious institutions. The role of religion in social life is explored.

SOCY 427 Deviant Behavior (3)
Prerequisite: SOCY 100. An exploration of current theories of the genesis and distribution of deviant behavior. Topics include definitions of deviance, implications for a general theory of deviant behavior, labeling theory, and secondary deviance.

SOCY 432 Social Movements (3)
Prerequisite: SOCY 100. An examination of movements that seek change in the social and political structure of society. Topics include the origins, tactics, organization, recruitment, and success of such movements. Case studies feature movements in the areas of labor, civil rights, feminism, the environment, student and neighborhood activism, and gay rights.

SOCY 443 The Family and Society (3)
Prerequisite: SOCY 100. An examination of changing concepts of the interaction between the individual and society. Analysis employs the framework of classical functional, conflict, and social constructivist theories, as well as considering the context of rapidly changing communication technology and globalization. Topics include the construction of social order; the role of trust in social interaction; and work, power, social organization, and the social self. Selected readings are taken from the sociologies of work, gender, postmodernism, globalization, and human rights. Persistent social problems, such as poverty and social inequality, are analyzed. Students may receive credit for only one of the following courses: BEHS 312, SOCY 311, or SOCY 313.

SOCY 461 Industrial Sociology (3)
A study of the sociology of human relations in American industry and business. Topics include complex industrial and business organizations as social systems and social relationships within and between industry, business, community, and society. Students may receive credit only once under this course title.

SOCY 462 Women in the Military (3)
A cross-national analysis of past, present, and future trends in women’s roles in the military. Topics include the effects on women’s roles in the armed forces by cultural forces, national security, technological changes, demographic patterns, occupational structures, labor shortages, and considerations of efficiency and rationality.
INFORMATION ON COURSES

SOCY 464 Military Sociology (3)
Prerequisite: SOCY 100. An overview of social change and its effects on the growth of military institutions. Topics include the structure of complex formal military organizations, the sociology of military life as a distinct cultural ethos, and the interrelationships of military institutions, civilian communities, and society. Military service is evaluated as an occupation or a profession.

SOCY 473 Sociology of Urban Environments (3)
Prerequisite: SOCY 100. A study of the rise of urban civilization and metropolitan regions. Topics include ecological process and structure, the city as a center of dominance, social problems, control, and planning.

SOCY 486A Internship in Sociology Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in sociology. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to sociology and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

SOCY 486B Internship in Sociology Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in sociology. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to sociology and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

SOCY 498 Selected Topics in Sociology (1–3)
Prerequisite: SOCY 100. An advanced study of topics of special interest in sociology. Assignments include advanced reading and research.

Spanish
Courses in Spanish (designated SPAN) may be applied as appropriate (according to individual program requirements) toward
• the general education requirement in the arts and humanities and for international perspective coursework;
• a major or minor in humanities;
• a certificate in Workplace Spanish; and
• electives.
UMUC offers a limited number of foreign language courses each term.
A description of the curriculum for the humanities major and minor begins on p. 56.
SPAN 111 Elementary Spanish I (3)
(Fulfills the international perspective requirement.) A basic foundation in listening, speaking, reading, and writing in Spanish. Spanish culture, history, current events, and geography provide the context for instruction in grammatical structures, vocabulary, pronunciation, and writing. Focus is on acquiring the skills necessary to communicate with native Spanish speakers orally and in writing at an elementary level. Students may receive credit for only one of the following courses: SPAN 101 or SPAN 111.

SPAN 112 Elementary Spanish II (3)
(Fulfills the international perspective requirement.) Prerequisite: SPAN 111. A continuation of the development of basic skills in listening, speaking, reading, and writing in Spanish. Spanish culture, history, current events, and geography provide the context for instruction in grammatical structures, vocabulary, pronunciation, and writing. Focus is on acquiring the skills necessary to communicate with native Spanish speakers orally and in writing at an advanced elementary level. Much of the class is conducted in Spanish. Students may receive credit for only one of the following courses: SPAN 102 or SPAN 112.

SPAN 211 Intermediate Spanish I (3)
(Fulfills the international perspective requirement.) Prerequisite: SPAN 112. Further development of skills in listening, speaking, reading, and writing in Spanish. Spanish culture, history, current events, and geography provide the context for instruction in grammatical structures, vocabulary, pronunciation, and composition. Focus is on acquiring the skills necessary to communicate with native Spanish speakers orally and in writing at an intermediate level. Class is conducted primarily in Spanish. Students may receive credit for only one of the following courses: SPAN 201, SPAN 114, or SPAN 211.

SPAN 318 Commercial and Workplace Spanish (4)
(Fulfills the international perspective requirement.) Prerequisite: SPAN 201 or equivalent Spanish proficiency. A study of business terminology, vocabulary, formats, and practices. Emphasis is on everyday spoken and written workplace Spanish, using authentic text from native speakers. Written and oral practice is provided in finding and communicating information, especially on commercial topics in business and other workplace situations. Assignments include a project involving specific vocabulary, forms of professional communication, and cultural protocols relevant to the student’s workplace or major. Students may receive credit for only one of the following courses: SPAN 315 or SPAN 318.

SPAN 486A Internship in Spanish Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in Spanish. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to Spanish and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

SPAN 486B Internship in Spanish Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in Spanish. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to Spanish and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
Speech Communication

Courses in speech communication (designated SPCH) may be applied as appropriate (according to individual program requirements) toward

• the general education requirement in communications;
• a major in communication studies or laboratory management;
• a minor in communication studies or speech communication; and
• electives.

A description of the curriculum for the speech communication minor begins on p. 82. Descriptions of related curricula may be found on the following pages: communication studies (p. 27) and journalism (p. 64).

SPCH 100 Foundations of Speech Communication (3)

(Fulfills the prerequisite for all 300- or 400-level speech courses.) An overview of the principles of communication. Verbal and nonverbal language, listening, group dynamics, and public speaking are highlighted. Emphasis is on applying communication principles to contemporary problems and preparing various types of oral discourse. Students may receive credit for only one of the following courses: SPCH 100, SPCH 100X, SPCH 101, SPCH 107, or SPCH 108.

SPCH 125 Introduction to Interpersonal Communication (3)

An overview of the concepts of interpersonal communication. Topics include nonverbal communication, perception, listening, the relationship of language to meaning, and feedback.

SPCH 200 Advanced Public Speaking (3)

Prerequisite: SPCH 100, SPCH 100X, SPCH 101, SPCH 107, or SPCH 108. A study of rhetorical principles and models of speech composition. Principles are studied in conjunction with preparing and presenting particular forms of public communication.

SPCH 220 Small-Group Discussion (3)

A consideration of the principles, methods, and types of discussion. Principles are applied to the analysis of contemporary problems.

SPCH 222 Interviewing (3)

A presentation of the principles and practices used in the recognized types of interview. Special attention is given to behavioral objectives and variables in communication as they figure in the process of interviewing. Students may receive credit for only one of the following courses: SPCH 222 or SPCH 422.

SPCH 230 Argumentation and Debate (3)

A study of the fundamental principles of reasoning, analysis, and evidence preparation of debate briefs and presentation of standard academic debate.

SPCH 324 Communication and Gender (3)

Prerequisite: Any SPCH course or COMM 300. An investigation of the way communication creates images of male and female. Consideration is given to what constitutes masculine and feminine characteristics, the differences between male and female behavior and styles in communicating, and the implications of those images and styles for interpersonal transactions.

SPCH 397 Organizational Presentations (3)

Prerequisite: Any SPCH course or COMM 300. A study of techniques for planning small- and large-group presentations, including audience profiling and needs analysis. Topics include listener patterns and preferences, presentation organization, confidence-building techniques, platform skills, and audio/video technology and presentation software such as PowerPoint.

SPCH 420 Small Group Communication (3)

Prerequisite: Any SPCH course or COMM 300. A study of the principles and practices that govern small-group communication in business, government, and the wider community. Topics include team building, group roles in decision making, leadership, and conflict resolution. Analysis covers communicating online and face-to-face with group members. Assignments include in-depth reading, writing, research, and group discussion.

SPCH 424 Communication in Complex Organizations (3)

Prerequisite: Any SPCH course or COMM 300. An examination of the structure and function of communication in organizations. Organizational climate and culture, information flow, networks, and role relationships are major themes.
SPCH 426 Negotiation and Conflict Management (3)
(Fulfills the civic responsibility perspective requirement.) Prerequisite: Any SPCH course or COMM 300. A study of the role of communication in shaping negotiation and conflict processes and outcomes. Simulation and role play are used to model workplace practices.

SPCH 470 Listening (3)
Prerequisite: Any SPCH course or COMM 300. A survey of theories of the listening process. Emphasis is on functional analysis of listening behavior. Students may receive credit only once under this course number.

SPCH 472 Theories of Nonverbal Communication (3)
Prerequisite: Any SPCH course or COMM 300. A survey of nonverbal communication in human interactions. Theory and research on proxemics, kinesics, and paralinguistics are recognized and identified in expressions of relationship, affect, and orientation both within and across cultures.

SPCH 482 Intercultural Communication (3)
(Fulfills the international perspective requirement.) Prerequisite: Any SPCH course or COMM 300. An examination of the major variables of communication in an intercultural context. Topics include cultural, racial, and national differences; stereotypes; values; cultural assumptions; and verbal and nonverbal channels.

SPCH 486A Internship in Speech Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in speech communication. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to speech communication and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

SPCH 486B Internship in Speech Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in speech communication. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to speech communication and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor's degree and up to 9 credits toward a second bachelor's degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

Statistics and Probability
Courses in statistics and probability (designated STAT) may be applied as appropriate (according to individual program requirements) toward
• a minor in mathematical sciences;
• the statistics requirement for a variety of majors and minors; and
• electives.
A description of the curriculum for the mathematical sciences minor begins on p. 73.
Students are expected to own and use scientific calculators in all mathematics and statistics courses.

STAT 200 Introduction to Statistics (3)
Prerequisite: MATH 107. An introduction to statistics. Topics include descriptive statistics, methods of sampling, tables, graphs, percentiles, concepts of probability, normal and chi-square distributions, sampling distributions, confidence intervals, hypothesis testing of one and two means, proportions, binomial experiments, sample size calculations, correlation, and regression. Applications in business, social sciences, and other fields are discussed. Students who receive credit for STAT 200 may not receive credit for the following courses: BEHS 202, BEHS 302, BMGT 230, ECON 321, GNST 201, MATH 111, MGMT 316, PSYC 200, SOCY 201, STAT 100, STAT 225, or STAT 230.
STAT 225 Introduction to Statistical Methods in Psychology (3)
(Formerly PSYC 200.) Prerequisites: PSYC 100 and college algebra (MATH 107 or MATH 115). An introduction to quantitative methods in the behavioral and social sciences and psychological research. Topics include the measurement of variables, measures of central tendency and dispersion, correlation, statistical inference and probability, hypothesis testing, t-tests, analysis of variance, and chi-square tests. Students may receive credit only once under this course number. Students who receive credit for PSYC 200 may not receive credit for the following courses: BEHS 202, BEHS 302, BMGT 230, ECON 321, GNST 201, MGMT 316, PSYC 200, STAT 200, STAT 225, or STAT 230.

STAT 230 Business Statistics (3)
(Formerly BMGT 230.) Prerequisite: MATH 107. An introduction to the essential concepts of statistics for business and management. Concepts reviewed include descriptive statistics, probability theory, discrete and continuous probability distributions, sampling theory, estimation, hypothesis testing, regression, and decision theory. Discussion also covers the application of these concepts to solving problems in business and management. Students may receive credit for only one of the following courses: BEHS 202, BEHS 302, BMGT 230, ECON 321, GNST 201, MGMT 316, PSYC 200, SOCY 201, STAT 200, STAT 225, or STAT 230.

STAT 400 Applied Probability and Statistics I (3)
Prerequisite: MATH 141. An intermediate study of statistical theory. Topics include random variables and standard distributions, sampling methods, law of large numbers and the central-limit theorem, moments, estimation of parameters, and testing of hypotheses.

STAT 410 Introduction to Probability Theory (3)
Prerequisites: MATH 240 and 241. A discussion of probability and its properties. Presentation covers random variables and distribution functions in one dimension and in several dimensions, as well as moments, characteristic functions, and limit theorems.

STAT 450 Regression and Variance Analysis (3)
Prerequisite: STAT 401. A study of statistical techniques, concentrating on one-, two-, three-, and four-way layouts in analysis of variance. Concepts and techniques presented include multiple-regression analysis, the Gauss-Markov theorem, fixed-effects models, linear regression in several variables, and experimental designs.

STAT 486A Internship in Statistics Through Co-op (3)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in statistics. At least 12 hours per week must be devoted to new tasks for a minimum of 180 hours during the Co-op session; four new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to statistics and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).

STAT 486B Internship in Statistics Through Co-op (6)
Prerequisite: Formal admission to the Co-op program (program requirements are listed on p. 239). An opportunity to combine academic theory with new, career-related experience in statistics. At least 20 hours per week must be devoted to new tasks for a total of 300 hours during the Co-op session; five to eight new tasks must be delineated in the Learning Proposal; and the course requirements must be completed. May be repeated upon approval of a new Learning Proposal that demonstrates new tasks and objectives related to statistics and that continues to advance application of academic theory in the workplace. Students may earn up to 15 credits in all internship coursework through Co-op toward a first bachelor’s degree and up to 9 credits toward a second bachelor’s degree. Co-op credits may not be used for general education requirements and, unless otherwise specified, no more than 6 Co-op credits may be used in the academic major and minor (combined).
Theatre

Courses in theatre (designated THET) may be applied as appropriate (according to individual program requirements) toward

• the general education requirement in the arts and humanities;
• a major or minor in humanities; and
• electives.

A description of the curriculum for the humanities major and minor begins on p. 56.

THET 110 Introduction to the Theatre (3)

An introduction to the people of the theatre: actors, directors, designers, and backstage personnel. Topics include the core and characteristics of a script, theatrical forms and styles, and theatre history. Students may receive credit for only one of the following courses: HUMN 110 or THET 110.

THET 120 Acting I (3)

An introduction to basic acting techniques, with exercises to develop concentration, imagination, sensing abilities, and emotional memory. Textual analysis, character analysis, and scene study are introduced. Assignments include applying techniques to character portrayal by performing short scenes. Students may receive credit for only one of the following courses: HUMN 111 or THET 120.

THET 320 Acting II (3)

(A continuation of THET 120.) Prerequisite: THET 111, THET 120, or audition. Further study of the fundamentals of acting. Focus is on textual analysis, personalization, objectives, and characterization by performing short plays.

Women’s Studies

Courses in women’s studies (designated WMST) may be applied as appropriate (according to individual program requirements) toward

• a minor in women’s studies; and
• electives.

The description of the curriculum for the women’s studies minor begins on p. 84.

WMST 200 Introduction to Women’s Studies: Women and Society (3)

(Fulfills the general education requirement in behavioral and social sciences.) An interdisciplinary study of the status, roles, and experiences of women in contemporary society. Sources from a variety of fields (such as literature, psychology, history, and anthropology) focus on the writings of women themselves.
Academic and Administrative Requirements

SCHOLASTIC AND ADMINISTRATIVE STANDARDS

Institutional Credit
A course that may not be applied toward graduation may be assigned a credit value for purposes of course load per term and tuition. This institutional credit is included in the grade point average (GPA) and in determining eligibility for financial aid and veterans educational benefits. However, students required to take these courses do so in addition to the 120 units of graduation credit required for the degree.

Grading Methods
There are four grading methods at UMUC. The most commonly used is the standard method. The pass/fail alternative is available only under limited conditions. The satisfactory/D/fail method is restricted to certain specified courses. Any course may be audited. Regulations for each are given in the following paragraphs.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Interpretation</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Outstanding scholarship</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good scholarship</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory scholarship</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Marginal performance</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
</tr>
<tr>
<td>FN</td>
<td>Failure for nonattendance</td>
<td>0</td>
</tr>
<tr>
<td>G</td>
<td>Grade under review</td>
<td>0</td>
</tr>
<tr>
<td>P</td>
<td>Passing (D or higher)</td>
<td>0</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory (C or higher)</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
<td>0</td>
</tr>
<tr>
<td>AU</td>
<td>Audit</td>
<td>0</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawal</td>
<td>0</td>
</tr>
</tbody>
</table>

Standard
Unless students choose either the pass/fail or audit option at the time of registration, they will be given a letter grade according to the standard method. Under the standard grading method, students are given a grade of A, B, C, D, or F on the basis of their performance in meeting the requirements of each course. For only a very few courses, the standard grading method is replaced by the satisfactory/D/fail method.

Pass/Fail
Degree-seeking students who have earned 30 credits (including at least 15 credits at UMUC) and who have a cumulative grade point average of 2.0 may take one course of up to 6 credits each standard term (fall, spring, or summer) on a pass/fail basis, up to a maximum of 18 credits. Students must elect pass/fail grading at the time of registration. This status may not be changed after the second week of classes has ended.

This grading method is allowed only for electives. Required courses (e.g., general education courses and courses for the major and minor) may not be taken pass/fail, nor may pass/fail grading be used in retaking a course for which a letter grade was earned previously.

Students who register for pass/fail grading must still complete all the regular requirements of the course. The teacher evaluates the work under the normal procedure for letter grades and submits a regular grade. Grades of A, B, C, or D are then converted to the grade P, which is entered into the permanent record.

A grade of F remains unchanged.

Although a grade of P earns credit toward graduation, it is not included in calculating a grade point average. A failing grade carries no credit, and the failing grade is included in the computation of grade point averages.

Satisfactory/D/Fail
This grading method is available only on a limited basis. Although a grade of satisfactory (S) earns credit toward graduation, it is not included in calculating grade point averages. The grade of D earns credit and is included in computing grade point averages. While a failing grade (F) earns no credit, it is included in computing grade point averages.

Audit
Students who do not wish to receive credit may register for courses as auditors after they have been admitted. Students must indicate this intention when they register. Students may request a change from credit to audit status anytime before the end of the fifth scheduled week of a semester or the third week of classes in an eight-week term.

Audited courses are listed on the permanent record, with the notation AU. No letter grade is given for audited courses, nor are credits earned.

Grades and Marks

Passing: The Grade of P
The grade of P is conferred after a teacher has evaluated coursework under the normal procedure for letter grades and has submitted a standard grade (A, B, C, or D). Then Undergraduate Student Affairs converts that standard grade into the grade of P.

A passing grade is recorded on the permanent record and confers credit toward graduation. However, courses graded P are not included in calculating grade point averages.
**Satisfactory: The Grade of S**
The grade of S is equivalent to a grade of C or higher. This grade is used to denote satisfactory progress in an experiential setting or practicum, such as EXCL 301. Although the grade of S confers credit and appears on the permanent record, courses graded S are not used in determining grade point averages.

**Failure: The Grade of F**
The grade of F means a failure to satisfy the minimum requirements of a course. Although it carries no credit, it is included in calculating the grade point average. A student assigned the grade of F must register again for the course, pay the applicable fees, repeat the course, and earn a passing grade in order to receive credit for that course.

**Failure for Nonattendance: The Grade of FN**
The grade of FN means a failure in the course because the student has not attended or participated in course assignments and activities. It is assigned when the student ceases to attend class but has not officially withdrawn.

**Grade Under Review: The Mark of G**
The mark of G is an exceptional and temporary administrative mark given only when the final grade in the course is under review. It is not the same as a mark of Incomplete.

**Incomplete: The Mark of I**
The mark of I (incomplete) is an exceptional mark given only to students whose work in a course has been satisfactory but who for reasons beyond their control have been unable to complete all the requirements of a course. The following criteria must be met:

- The student must have completed at least 60 percent of the work in the course with a grade of C or better.
- The mark of I must be requested before the end of the course.

The procedure for awarding the mark of I is as follows:

- The student must ask the teacher for a mark of I. (Teachers cannot award a mark of I on their own initiative.)
- The teacher decides whether to grant the request.
- The teacher sets a date (no more than four months after submitting the original grade) for completion of the remaining requirements of the course.
- The teacher and the student together agree on the remaining requirements of the course and the deadline for submitting the work.

- The student is responsible for completing the work.
- After the work is completed, the teacher submits a grade change to replace the mark of I on the student’s record with a grade.

If the mark of I is not made up within four months or by the agreed-upon deadline, the I is changed to an F. Students should be aware that a mark of I in their final semester may delay graduation.

The mark of I cannot be removed by means of credit by examination, nor can it be replaced by a mark of W (defined below). Students who elect to repeat an incomplete course must register again for the course, pay all applicable fees, and repeat the course. For purposes of academic retention, the course grade is counted as an F. The mark of I is not used in determining grade point averages.

**Withdrawal: The Mark of W**
Students may receive the mark of W by officially withdrawing from a course. Procedures for withdrawing are detailed on the UMUC Web site at [www.umuc.edu/students](http://www.umuc.edu/students). Students must withdraw from a course at least two weeks before the last scheduled class in a semester or term. (For accelerated courses, withdrawals must be submitted before the close of business on the first day of class.)

For most courses, this mark appears on the permanent record unless withdrawal is completed before the end of the schedule adjustment period. For intensive format courses, students must withdraw before the class starts in order to avoid a mark of W. For purposes of academic retention, the mark of W is counted as attempted hours. It is not used in determining grade point averages.

**Changes in Grade**
Teachers may change a grade previously assigned through MyUMUC, the university’s online academic and administrative services portal. Any change must be made no later than four months after the original grade was awarded.

**Grading Repeated Courses**
When a course is repeated, only the higher grade earned in the two attempts is included in the calculation of the GPA. For purposes of academic retention, both attempts are counted. Both grades are entered on the permanent record, with a notation indicating that the course was repeated. Students cannot increase the total hours earned toward a degree by repeating a course for which a passing grade was conferred previously.

To establish credit in a course previously failed or withdrawn from, students must register, pay the full tuition and fees, and repeat the entire course successfully.
Reinstatement After Dismissal
A student seeking reinstatement is required to
• Have all official transcripts from previously attended colleges and universities sent to UMUC, preferably before meeting with an advisor.
• Meet with an advisor before petitioning for reinstatement.
• Wait at least one standard term before petitioning for reinstatement. Such an appeal should be made in writing to the associate provost, Student Affairs.

Deadlines for requesting reinstatement are as follows:
- Fall enrollment: July 15
- Spring enrollment: November 15
- Summer enrollment: April 15

After the student’s record, the advisor’s recommendation, and the student’s petition have been reviewed, the student will receive a written response. Reinstated students will be placed on warning immediately or will retain provisional status, as appropriate.
Scholastic Recognition

Dean's List
Students who complete at least 12 credits (in courses graded A, B, C, D, or F) with a GPA of at least 3.5 in an academic year at UMUC are eligible for the Dean's List.

Students who fail to earn the required average by the end of the academic year must complete a minimum of 12 more credits during the next academic year to be considered for the Dean's List again. All courses taken during an academic year are used in computing the average, even though the total number of credits may exceed 12. An academic year is designated as summer through spring terms. Eligibility for the Dean's List is calculated once a year, after the summer term.

Academic Honors
Academic honors for excellence in scholarship are determined by the students' cumulative GPA at UMUC. The distinction of summa cum laude is conferred on those students with a cumulative GPA of 4.000, magna cum laude honors is conferred on those students with a cumulative GPA of 3.901 up to 3.999, cum laude honors is conferred on those students with a cumulative GPA of 3.800 up to 3.900. To be eligible for any of these categories of recognition, a student must have earned at least 45 credits at UMUC in courses for which a letter grade and quality points were assigned. For honors to be conferred with a second bachelor's degree, the student is required to have a total of 45 new UMUC credits and the requisite GPA. (More information on attaining a second bachelor's degree may be found on p. 11.)

Honor Societies
Inquiries concerning honor societies should be addressed to the student's advisor.

Phi Kappa Phi
The honor society of Phi Kappa Phi promotes the pursuit of excellence in all fields of higher education and recognizes outstanding achievement by students, faculty, and others through election to membership and through various awards for distinguished achievement. To qualify for membership in Phi Kappa Phi, candidates must have completed at least 90 credits toward the bachelor's degree, at least 45 of which must have been for UMUC courses carrying letter grades of A, B, C, D, or F. The candidate's GPA in UMUC courses must be in the top 10 percent of the previous UMUC graduating class.

Alpha Sigma Lambda
UMUC students are eligible for membership in Alpha Sigma Lambda, the national honor society for students in continuing higher education. To qualify for membership, a student must be pursuing a first bachelor's degree, have completed at least 30 credits at UMUC in courses graded A, B, C, D, or F, and maintained a GPA of 3.7 or higher in all UMUC courses. At least 15 credits, from UMUC or transferred, must be in courses outside the major.

Sigma Mu
Sigma Mu is the psychology honor society of UMUC. The society recognizes superior scholarship by degree-seeking psychology students and provides a venue for active participation and professional exposure in psychological practice, research, and education. To qualify for membership, a student must have declared a major in psychology, complete at least 9 credits in psychology through UMUC, maintain an overall GPA of 3.4 or higher at UMUC, and provide a letter of recommendation from a member of the UMUC psychology faculty.

Sigma Tau Delta
Membership in Sigma Tau Delta, the international English honor society, is open to qualified UMUC students with a major in English. To be eligible, students must have completed at least 45 credits toward the bachelor's degree with an overall GPA of 3.5 or higher. At least 30 credits must have been earned through UMUC, and provide a letter of recommendation from a member of the UMUC psychology faculty.

Phi Alpha Theta
UMUC students may qualify for membership in Phi Alpha Theta, the international honor society in history. To qualify for membership, students must attain a GPA of 3.5 or higher in at least 12 credits of UMUC history courses and have an overall UMUC GPA of 3.4.
CURRENT INFORMATION AND LINKS TO POLICIES AND RESOURCES ARE AVAILABLE IN THE ONLINE STUDENT HANDBOOK AT WWW.UMUC.EDU/STUDENTS/HANDBOOK. STUDENTS SHOULD REFER TO THE HANDBOOK FOR THE MOST CURRENT INFORMATION.

ATTENDANCE

The student is responsible for attending all classes and any related activities regularly and punctually. In some courses, teachers may base part of the final grade on class participation.

Students are expected to achieve the same learning objectives and do the same amount of work in an online course as they would in an on-site course. Active participation is required in all online courses, and students should expect to log in to their online courses several times a week.

Absence from class does not excuse a student from missed coursework. The student is responsible for obtaining detailed information about missed class sessions, including their content, activities covered, and any announcements or assignments. Failure to complete any required coursework may adversely affect the student’s grade. Teachers are not expected to repeat material that a student has missed because of the student’s absence from class.

INTERNET ACCESS

UMUC is committed to ensuring that students acquire the level of fluency in information technology they need to participate actively in contemporary society and have access to up-to-date resources. All UMUC students must be prepared to participate in asynchronous, computer-based class discussions, study groups, online database searches, course evaluations, and other online activities whether their course is held online or in a classroom.

All UMUC students must therefore ensure that they have access to the Internet and have a current e-mail address. If the student does not have Internet access through a home computer, he or she may use one at a UMUC computer lab, a university or public library, or another source. However, that source should be regularly available.

The most current technical requirements are available online at http://tychousa.umuc.edu/tech/min_tech.html.

Examinations

The student is responsible for obtaining information about quizzes and examination schedules and policies. Final examinations are usually given during the last scheduled class meeting for classes meeting on-site. For online classes, the final examination is usually given during the last week of the term.

Makeup examinations and tests may be given to students who for valid reasons are unable to take exams at the scheduled time. Teachers are not required to offer makeup examinations because of a student’s absence unless the student can present evidence that it was caused by unavoidable circumstances or occurred on a religious holiday. In such cases, an examination may be rescheduled for the mutual convenience of student and teacher and must cover only the material for which the student was originally responsible. Such a rescheduling must not cause a conflict with the student’s other classes. Exams and Testing Services (www.umuc.edu/testing) schedules makeup exam sessions for students whose teachers cannot schedule a special makeup session. There is a fee for this service.

COURSE LOAD

No student may register for courses whose scheduled meeting times overlap to any extent. Decisions on the number of courses a student can successfully complete in any one term are normally left to the student’s discretion. It should be noted, however, that the majority of UMUC students register for between 3 and 9 credits, and students are strongly advised not to exceed this limit. Students should carefully and realistically assess other commitments before registering for more than 9 credits. In no case may a student register for more than 18 credits in a 15-week period without written permission from an advisor. Permission to register for more than 18 credits is based on demonstrated academic excellence at UMUC. A minimum GPA of 3.5 and an enrollment history indicating success in carrying a heavier-than-average course load at UMUC are required.

ACADEMIC INTEGRITY

Integrity in teaching and learning is a fundamental principle of a university. UMUC believes that all members of the university community share the responsibility for academic integrity, as expressed in the University System of Maryland policy “Faculty, Student, and Institutional Rights and Responsibilities for Academic Integrity.” Details are available from the Office of the Dean, School of Undergraduate Studies.

At UMUC, faculty members are expected to establish classroom environments conducive to the maintenance of academic integrity by promptly giving students a complete syllabus describing the course and its requirements, grading submitted work promptly and adequately, and arranging appropriate testing conditions, including having faculty members monitor examinations given in class.

Students at UMUC are expected to conduct themselves in a manner that will contribute to the maintenance of academic integrity. Failure to maintain academic integrity (academic dishonesty) may result in disciplinary action.

* The UMUC policy on religious holidays is stated in the appendices.
Change of Address
Students who move during the term or session should not only leave a forwarding address with the U.S. Postal Service but should also notify UMUC by updating their personal information in MyUMUC.

Transfer of Credits from UMUC
To have credits earned through UMUC transferred, each student must obtain authoritative guidance from the destination institution (including other institutions in the University System of Maryland). Only the destination institution can answer specific questions about its own residency and degree requirements or about the applicability of UMUC courses to its curricula. Specific policies dealing with transfer students are given in the appendices.

Code of Civility
To promote a positive, collegial atmosphere among students, faculty, and staff, UMUC has developed a Code of Civility, which is also available in the Student Handbook at www.umuc.edu/students/civility.html.

Appealing a Grade
Procedures for appealing a grade are detailed in UMUC Policy 130.80 Procedures for Review of Alleged Arbitrary and Capricious Grading, which is available from the Office of the Dean, School of Undergraduate Studies, or online at www.umuc.edu/policy.

There is a time limit for appealing a grade. Therefore, students who want to appeal a grade must initiate the process within 30 days of the posting of the grade.

Code of Student Conduct
Students are subject to the UMUC Policy 151.00 Code of Student Conduct, which can be found at www.umuc.edu/policy or is available from the Office of the Dean, School of Undergraduate Studies. Violations of the code are considered to be violations of UMUC policy and are grounds for discipline by UMUC. Allegations of misconduct by UMUC students should be referred to the provost and chief academic officer.

Student Grievance Procedures
The procedures necessary to file a formal complaint concerning the actions of members of the UMUC faculty or administrative staff are detailed in UMUC Policy 130.70 Student Grievance Procedures, which is available at www.umuc.edu/policy or from the Office of the Dean, School of Undergraduate Studies. Students who wish to seek redress for the acts or omissions of a faculty or staff member must first request a conference with that person and attempt to resolve the complaint informally within 14 calendar days of the alleged act or omission.
Admission and Enrollment

GENERAL INFORMATION AND ORIENTATION

Before the beginning of each term, UMUC holds open houses and orientations (online and on-site) for new and prospective students. These events offer an opportunity to learn about UMUC and its programs, student services, academic and career options, faculty members, and fellow students. Prospective students can be admitted and register for courses at these times.

For general information, or to be directed to specific offices, students may call 800-888-UMUC. Most offices are open weekdays from 8:30 a.m. to 5 p.m. eastern time.

ADMISSION

Admission Requirements

The admission procedures of UMUC were designed to meet the needs of adult, part-time students. Most applicants who have a high school diploma or the equivalent can be admitted either online via the Web or in one visit during walk-in admission and registration. In most cases, neither transcripts nor test scores are required. By the end of the first term, a student who plans to earn a degree at UMUC must make sure that official transcripts have been sent from each institution previously attended.

Student Status

Upon being admitted to UMUC, students are assigned to regular or provisional status. Admission of foreign-educated applicants is governed by requirements given on p. 233.

Regular

A qualified applicant who wants to receive credit for courses (whether he or she intends to receive a degree or not) is admitted as a regular student. For financial aid purposes, a regular student must be seeking a degree or certificate at UMUC. Admission as a regular student is granted to applicants who submit a completed, signed application; pay the admission fee specified on the form; and fulfill the following academic requirements that apply to their educational level:

- Graduation from a regionally accredited or state-approved high school in the United States
- or
- Successful completion of the General Education Development (GED) examination with a total score of 225 and no individual test score below 40 (for tests completed before January 2002) or a total score of 2250 and no individual test score below 410 (for tests completed after January 2002).

To be granted regular admission status, students should have maintained a cumulative grade point average of at least 2.0 (on a 4.0 scale) in all college-level work attempted at other regionally accredited colleges and universities, including other University System of Maryland institutions. However, an academic probation or dismissal that occurred at least two years before the date when the student applies for admission has no bearing on the student’s admission status.

Students are not required to submit official transcripts for admission. However, students must have all official documents of their educational background on file by the end of the first term of attendance. Students who present at least 24 credits of transferable college coursework are not required to submit official high school transcripts or GED scores.

Provisional

Two categories of students may be admitted in provisional status:

1. Applicants who, during the last two years, earned a cumulative grade point average of less than 2.0 (on a 4.0 scale) at another institution and/or were academically dismissed from another institution (regardless of their cumulative grade point average).

2. Foreign-educated students who have not completed at least 24 credits of transferable college coursework.

All provisional students may enroll for a maximum of 7 credits during a fall, spring, or summer term.

During their first term of enrollment at UMUC, provisional students in the first category must submit transcripts from all colleges and universities they have attended. If the student’s term grade point average at UMUC is less than 2.0, the student is placed on probation. If, while on probation, the student’s term grade point average is 2.0 or better, she or he returns to provisional status. If, while on probation, the student’s term and cumulative grade point averages are less than 2.0, he or she is dismissed and must follow the standard reinstatement procedures that apply to all dismissed students. The student’s status is automatically changed to regular after the student has successfully completed 7 credits of graded coursework with a cumulative grade point average of 2.0 or higher.

Students educated abroad must submit official transcripts verifying completion of the equivalent of a U.S. secondary education. They are eligible for regular admission status once UMUC has verified that they have completed the equivalent of a U.S. high school education.

More details on the admission of noncitizens and foreign-educated students are on p. 233.
Procedures for Admission
To apply for admission, students must complete an undergraduate admission application and pay the nonrefundable fee. Before attempting to register, students must have been officially admitted to the university. Applications for admission may be submitted online through MyUMUC (https://my.umuc.edu). Deadlines for admission and registration are listed in the current undergraduate Schedule of Classes.

Determination of Residency for Tuition Purposes
An initial determination of in-state or out-of-state status for tuition purposes is made when a student applies for admission. The determination made at that time remains in effect thereafter unless it is successfully challenged. The student is responsible for providing the information necessary to establish eligibility for in-state status. Official criteria for determining residency are in the appendices.

Further information on tuition and fees may be found on p. 235.

Reenrollment
Students who have not attended UMUC for two years must file a new application with Undergraduate Admissions before they will be allowed to register. However, they need not pay another application fee.

Transfer from UMUC Europe or UMUC Asia
Students who previously attended UMUC overseas and who wish to attend UMUC in the United States must complete an official relocation request form. This form is located on the Web sites of the overseas divisions. There is no fee for divisional transfers.

Forwarding of Overseas Students’ Records
Records of students formerly enrolled in UMUC Europe or UMUC Asia are retained in the Office of Admission and Registration of that program. If such a student later enrolls in UMUC stateside, the student’s records are then requested by Undergraduate Student Affairs. (Note: Records of students who attended UMUC at its former campus in Schwäbisch Gmünd, Germany, are now retained at UMUC headquarters in Adelphi, Maryland.)

Admission of College Graduates
A student who has received a bachelor’s degree from a U.S. institution is automatically admissible to UMUC as a regular (undergraduate) student upon submission of the admission application and fee. A former graduate student in the University System of Maryland whose time limit in a program has expired may also be admitted as a regular (undergraduate) student. Students who have been admitted to UMUC as graduate students may take undergraduate courses at the undergraduate rate of tuition. Courses taken while in regular (undergraduate) status, however, cannot ordinarily be applied to a graduate degree program.

Students from Other USM Institutions
Undergraduate students from other institutions of the University System of Maryland may take undergraduate courses without applying to UMUC. Instead, they must either submit a letter of permission from their department or complete a “Notification of Registration with University of Maryland University College” form, certifying good standing and eligibility to return to the last institution attended. Graduate students from other institutions of the University System of Maryland may also take undergraduate courses without applying to UMUC, but must pay graduate tuition and related fees. Transferability of academic work completed at UMUC is determined by the student’s home institution. Undergraduate courses taken by graduate students may not be applied toward graduate degree requirements.

Noncitizens and Foreign-Educated Students
Prospective students who are not U.S. citizens or who were educated abroad will need to complete the following steps:

1. If English is not the student’s native language, the student may not be admitted until college-level proficiency in written English is demonstrated in one of the following ways:
   • A score of at least 550 on a written version, 213 on a computer-based version, or 79 on the Internet-based version of the TOEFL (Test of English as a Foreign Language),
   • A grade of C or higher in an English composition course from an accredited U.S. college or university,
   • Graduation from a U.S. high school or university.

2. If the applicant has earned fewer than 24 credits at a U.S. college or university, completion of the equivalent of a U.S. secondary education must be verified by
   • An evaluation from the American Association of Collegiate Registrars and Admissions Officers (AACRAO), the approved international credential agency (specific information is available on the UMUC Web site).
   • Official transcripts showing successful completion of the U.S. GED exam with a total score of at least 225 and no individual test score below 40 (for tests completed before January 2002) or a total score of at least 2250 and no individual test score below 410 (for tests completed after January 2002).
Until this verification is received by UMUC, the student is admitted provisionally, for one term only, and may register for a maximum of 7 credits. Once verification is received, the student’s status is changed to regular and he or she may register for up to 18 credits. Students are not permitted to register for subsequent terms until verification is received.

3. Noncitizens who plan to study while resident in the United States (as opposed to studying online from abroad) must provide information on visa or immigration status. To do so, the student should enclose with the admission application a copy of their permanent resident card, their visa and I-94 card, or an approval notice from the U.S. Citizenship and Immigration Services noting their visa or immigration status.

Applicants Previously Suspended or Dismissed

An academic probation or dismissal from another institution that took place at least two years before the date when a student applies for admission has no bearing on the student’s admission status. However, all students previously dismissed from UMUC must apply for reinstatement.

Applicants academically suspended or dismissed from other institutions within the previous two years, regardless of their cumulative grade point average, may be admitted as provisional students. They must fulfill the requirements for provisional status. Details are given on p. 232.

An applicant who has received a disciplinary suspension or dismissal from another institution within the last three years may not be considered for admission to UMUC until officials have thoroughly reviewed the case. Such an applicant must make certain that the institution where the action was taken sends all records explaining the circumstances directly to Undergraduate Admissions. The length of time necessary for the documents to be sent and reviewed may preclude the student’s registering during the term of initial application.

Concurrent Secondary Enrollment

With the recommendation of a high school guidance counselor, an academically gifted high school senior may carry a maximum of 7 credits per term at UMUC while finishing work toward a high school diploma. At least a month before a term begins, UMUC must receive the student’s application for admission, the application fee, official high school transcripts, and written permission from the appropriate officials at the high school. Such a student is required to demonstrate a cumulative grade point average of at least 3.5 (B+) in high school academic subjects. After being accepted, the student may continue to register as a “concurrent secondary” student until graduation from high school. For purposes of categorization, the student is treated as having provisional status.

Golden Identification Card for Senior Citizens

Senior citizens may qualify for admission and a Golden Identification Card. Participants in the Golden Identification Card program may register for two courses that total up to 7 credits each term for credit, on a space-available basis, without paying tuition. They may enroll at late registration only. Although the late-registration fee is waived for senior citizens, they must pay all other fees. Credits and fees associated with EXCEL Through Experiential Learning must also be paid.

To qualify for the Golden Identification Card, the prospective student must meet the following criteria:

• Be a resident of Maryland,
• Be a U.S. citizen or produce a resident alien card (formerly an alien registration card),
• Be 60 years of age by the beginning of the term being applied for,
• Not be employed more than 20 hours a week.

Students may consult an advisor for further information.
**The Waiting List**

If a class is already full at the time of registration, the student has the option of placing his or her name on a waiting list for that class.

**Waiting List Policies**

Regardless of how the student registers, the following policies apply:

- Students may put their name on the waiting list for only six courses or sections.
- Students may not attend a class for which they are on the waiting list.
- Faculty members and academic advisors are not authorized to add students to a closed class.
- If a space becomes available, the first student on the waiting list will automatically be registered for it, and the charge will appear on his or her account. An e-mail will be sent to notify the student of the enrollment. If that student is ineligible for enrollment (because he or she has not met prerequisites or is enrolled in another class that conflicts in time), the space will go to the next person on the waiting list.

Students who no longer want a class should remove their name from the waiting list to prevent the possibility of automatic enrollment.

**Schedule Adjustment**

Students may make certain adjustments to their schedule through the end of late registration. The schedule-adjustment options available include changing a section, dropping a class, or adding a class. Students may drop or add a course only within the same academic term or session. Students may drop a class or change a grading option without charge. Information on schedule adjustment is available online at [www.umuc.edu/register](http://www.umuc.edu/register).

**Withdrawals or Dropped Courses**

Stopping payment on checks for registration fees, or not paying at registration, does not constitute an official withdrawal or relieve the student of his or her financial obligation to UMUC. Never attending or ceasing to attend class(es) does not constitute a withdrawal.

Students who officially withdraw from a course after the schedule adjustment period receive a mark of W (described on p. 227). Undergraduate students must officially withdraw no later than two weeks (14 days) before the final class. For accelerated courses, a withdrawal must be submitted before the close of business on the first day of class.

Policies and procedures for withdrawing from a course are available online at [www.umuc.edu/register](http://www.umuc.edu/register).

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**Tuition and Fees**

All tuition and applicable fees must be paid in full at registration, unless the student is enrolled in UMUC’s interest-free monthly payment plan. Students registering by phone via IRIS are granted a certain number of days for payment to be received. (If payment is not received by the specified deadline, the registration may be canceled.)

Payment may be made by cash, check, money order, or Visa or MasterCard credit cards. Checks should be payable to University of Maryland University College. Students who qualify for tuition assistance, financial aid, or veterans benefits should consult the appropriate sections. Students interested in the monthly payment plan, administered by Academic Management Services (AMS), should contact AMS at 800-635-0120 or visit [www.amsweb.com](http://www.amsweb.com) on the Web.

**Current Tuition and Fees**

Tuition rates and fees are published each term in the undergraduate Schedule of Classes and are available on the Web at [www.umuc.edu/tuition](http://www.umuc.edu/tuition). Students should review the fee schedule carefully to see which ones apply. Fees are commonly charged for applications for admission and graduation, late registration, laboratory use (in science and some computer courses), makeup testing, transcripts, and various options for earning credit (such as Cooperative Education, Experiential Learning, and credit by examination). There is also a service charge for dishonored checks.

**Refunds**

A student who withdraws from a course before the first class meeting will receive a full tuition refund. A student who withdraws after classes begin will be refunded a portion of the tuition, the amount to be determined by the date of the withdrawal. Refunds for Cooperative Education courses follow university policy and are based on the date the student registered for the course. The schedule for partial refunds is given in the current undergraduate Schedule of Classes.

If the tuition for a student who withdraws was paid by employer contract, the refund is returned to the employer. If the aid was a partial payment, the aid is returned to the employer, and excess payments are refunded to the student. Financial aid awards may be canceled or reduced for financial aid recipients who withdraw from classes. Financial aid recipients should check with a financial aid advisor when withdrawing from a course to determine the impact on their awards.
No offer of financial aid is considered an active, final award until the refund period has ended. Students who withdraw before the end of that period are liable for all costs incurred and are billed accordingly.

**Dishonored Checks**

For each check returned unpaid by the payer’s bank (whether because of insufficient funds, stopped payment, postdating, or drawing against uncollected items), UMUC assesses a service charge of $25 (over and above any service charges levied by the financial institution).

A student who stops payment on a check for tuition is thereby neither disenrolled nor relieved of responsibility for paying tuition and fees. Anyone whose checks for tuition or fees remain dishonored may be barred from classes.

**Indebtedness to the University**

Students who incur debts to UMUC must clear them to be permitted to register. Requests for services, including transcripts and diplomas, are denied until all debts have been paid. Outstanding debts are collected against refunds due the student. After a reasonable period of time, uncollected debts are forwarded to the Central Collection Unit of the State Attorney General’s Office.

The Board of Regents has authorized UMUC to charge students’ delinquent accounts for all collection costs incurred by UMUC. The normal collection fee is 17 percent plus attorney and/or court costs. Delinquent students are reported to a credit bureau.

**Employer-Provided Tuition Assistance**

If an employer is going to pay for part or all of a student’s tuition, the student must submit two copies of appropriate documentation at the time of registration. Requirements are listed at [www.umuc.edu/students/registration](http://www.umuc.edu/students/registration). Documents that restrict payment or are in any way confidential will not be accepted.

If the employer does not pay UMUC, the student is responsible for payment.

UMUC cannot issue refunds for authorizing documents submitted after registration. If the document authorizes payment for books and supplies, the student must submit a separate copy to a participating bookstore (listed at [www.umuc.edu/genoptions.shtml](http://www.umuc.edu/genoptions.shtml)) when charging books, within 15 days after the end of the registration period.
Ways of Earning Credit

UMUC is unlike any other institution of higher education in the world in its combination of access with academic quality. It opens doors to learning by taking education to students wherever they may be. Because UMUC understands the importance of lifelong learning, it has established academic policies that encourage the appropriate use of transfer credit from other institutions. Recognizing that adult students bring to the university not only a willingness to learn but also an educational history informed by experiential learning, it incorporates the assessment of nontraditional learning (i.e., learning gained outside the classroom) into the evaluation of students. Understanding the importance of lifelong learning, it encourages appropriate use of transfer credit from other institutions.

CLASSROOM AND ONLINE STUDY

UMUC uses every feasible instructional delivery mechanism or platform to extend degree opportunities to students. Most of UMUC’s degree and certificate programs are available both on-site and online. Students may choose to complete their academic studies through either or both formats to suit their schedules and preferences.

UMUC courses observe the same standards of quality regardless of delivery format. Any given course maintains the same course objectives and requirements, awards the identical amount of academic credit, and may be applied toward the same undergraduate degrees whether it is delivered in a stateside classroom, overseas, or via the Internet.

Both classroom and online programs are also supported by a full range of student services and academic resources—from extensive online library databases to admission, advising, and registration—that can be accessed on-site, online, and by phone (details are on pp. 242–49).

Classroom-Based Study

Students take UMUC courses in classrooms at locations in Maryland and the national capital region; in classrooms on U.S. military bases throughout Europe and Asia through longstanding partnerships with overseas military commands; and at work sites through contractual arrangements with employers. With so many course and service locations (listed on p. 270–71) available, students in the Maryland area who prefer direct interaction can be sure of finding courses and services close to home. On-site courses are also enriched by access to online materials and resources.

Online Study

UMUC’s role as a virtual and global university means that students can access and participate in the university experience from any place in the state, the nation, or the world. UMUC’s award-winning online courses and programs offer a technology-enriched experience conducted by the same excellent faculty as its on-site offerings.

In online courses, students are linked to faculty and classmates via computer and the Internet. The faculty member leads discussions, responds to student inquiries, and posts reviewed assignments in individual folders online. Students are expected to participate frequently in online discussions.

Online students should have strong reading and writing skills, as well as a basic knowledge of the Windows environment. Technical requirements for participating in online courses are provided online at tech.umd.edu/tech/min_tech.html.

LEARNING GAINED THROUGH EXPERIENCE

Learning acquired outside the college classroom may be assessed for credit toward a degree at UMUC. There are two ways students can make use of life experience for possible college credit: Prior Learning and Cooperative Education. Details on each method follow. Advisors can help in determining the best routes to use in fulfilling any academic plan.

Prior Learning

Students may earn credit for college-level learning acquired outside the classroom through two avenues: course-challenge examinations and EXCEL Through Experiential Learning. As many as 30 credits may be earned through a combination of course-challenge examinations and EXCEL and applied toward the bachelor’s degree. However, no more than half the credits required for an undergraduate major, minor, or certificate program may be earned through Prior Learning (EXCEL and course-challenge examinations) and credit by examination (described on p. 241). Any excess credits awarded are applied where appropriate in the student’s program of study.
WAYS OF EARNING CREDIT

Course-Challenge Examinations

UMUC credit can be earned for any undergraduate course for which UMUC can prepare and administer a suitable examination (called a course-challenge examination). Advisors and Prior Learning office staff can inform students about specific courses that may not be challenged by examination. Degree- or certificate-seeking students at UMUC who have received a degree progress report and have a cumulative grade point average of at least 2.0 in UMUC coursework should carefully review the rules, procedures, and limitations described at www.umuc.edu/priorlearning before applying online.

Course-challenge exams are not intended as a substitute for independent study. Students may be required to show evidence of prior learning before being authorized to take a course-challenge exam. Credit may be applied toward a first or second bachelor's degree or toward a certificate. No exam may be taken more than twice, and course-challenge examinations may not be taken for courses for which the student has previously enrolled. Only one course in a sequence may be tested at one time, and students may not take an exam for a course that is prerequisite for a higher-level course they have already taken.

Credit earned by course-challenge examination earns a letter grade, according to the exam score, that is computed in the grade point average. However, this credit may not be applied to the requirement for graded coursework in the student's major.

Exams may only be canceled before the student receives the exam. Refunds are given only if a suitable exam cannot be prepared.

More information on course-challenge examinations may be obtained by visiting the UMUC Web site at www.umuc.edu/priorlearning or by calling 800-888-UMUC, ext. 2860.

EXCEL Through Experiential Learning

EXCEL Through Experiential Learning is a unique way for students to demonstrate and earn credit for college-level learning they have gained from work, community or political involvement, or other noncollegiate experiences. To be eligible for EXCEL, students must

- Complete an EXCEL application.
- Complete an orientation (available online).
- Meet basic standards in writing (either by having taken a college writing course or by qualifying for ENGL 101 on the English placement test).
- Be in good academic standing at UMUC (not on academic warning or probation).
- Have submitted all transcripts, exam scores, and military occupational specialty (MOS) scores to the Registrar's Office for an official evaluation of transfer credit.

Enrollment in EXCL 301 Learning Analysis and Planning is required. In this 3-credit course, the student prepares a portfolio describing and documenting college-level learning gained from past experiences. Because EXCL 301 is a demanding and complex course, part-time students should not register for more than one other course during the term in which they are enrolled in EXCL 301. After receiving credit for EXCL 301, students may not enroll in the class again.

EXCL 301 is graded on an S/D/F basis (explained on p. 235). If the quality of work in the portfolio merits a grade of C or higher, a grade of S is awarded and the portfolio is forwarded for credit evaluation. Faculty members from the appropriate disciplines assess the portfolio and recommend whether to award credits. Credit earned as a result of portfolio evaluation also earns a grade of S. The S grade is not computed in the grade point average and is not applicable toward honors.

Experiential-learning credits may be awarded at both the upper and lower levels. Although a maximum of 30 credits may be earned through EXCEL, the average award is between 15 and 18 credits. These credits are considered UMUC resident credit. However, they do not fulfill requirements for graded coursework and so may not exceed half the total credits for a major, minor, or certificate.

Credit for EXCL 301 is charged at the current tuition rate. Fees are also charged for enrollment in the program, portfolio evaluation, any additional evaluations, and credits awarded. Golden ID students and those receiving financial aid must pay all EXCEL fees.

Students should carefully review the requirements, rules, and procedures for EXCEL. More information may be obtained at www.umuc.edu/priorlearning or by calling 800-888-UMUC, ext. 2860.
Cooperative Education

Cooperative Education (Co-op) extends education beyond the traditional classroom experience by bringing theory into practice in the workplace. Co-op offers an opportunity for students to gain experience and develop new knowledge and skill in their chosen discipline while earning upper-level college credit, thus enabling them to accelerate completion of both their academic and career goals.

To be eligible for Co-op, students must

- Be seeking a degree or a certificate that includes a Co-op option from UMUC.
- Have completed 30 credits, including transfer credit, toward a degree (if seeking a degree).
- Have completed at least 9 credits in the discipline in which they plan to do their Co-op project.
- Have a GPA of 2.5 or better at UMUC.
- Be working in a position that offers an opportunity to apply classroom theory to practical projects that involve significant analysis and problem solving and are directly related to a given academic discipline. (Position may be paid or unpaid, part- or full-time.)

Students interested in pursuing a Cooperative Education experience must first develop a learning proposal that identifies several project tasks representing the new learning to be acquired as a result of the work experience; a faculty member in the appropriate discipline must then approve the learning proposal to ensure that it constitutes upper-level college learning. Once the learning proposal is approved, the student is given permission to register for Co-op. The learning proposal is then developed into a three-way learning contract among the employer, the student, and the faculty mentor.

Throughout the Co-op experience, students work under the supervision of the employer on completion of several of the identified project tasks and the faculty mentor on the completion of the academic assignments required to earn college credit for their work experience. The project tasks for the employer constitute the course content, which is augmented by the reflective academic assignments written for review by the faculty mentor. Students are required to communicate regularly with their faculty mentor throughout the Co-op term, which typically lasts 15 weeks.

Students may earn either 3 or 6 credits during the Co-op term. To earn 3 credits, students must devote at least 12 hours per week to tasks providing new learning (for a total of 120 hours during the Co-op term) and complete a minimum of four project tasks identified in the learning contract. To earn 6 credits, students must devote at least 20 hours per week to project tasks (for a total of 300 hours during the Co-op term) and complete five to eight project tasks identified in the learning contract.

Co-op projects may be developed in all undergraduate disciplines. Courses are listed in the UMUC catalog with the designator of the discipline and numbered 486A (for 3 credits) or 486B (for 6 credits). For example, a 3-credit Co-op in business and management would be listed as BMGT 486A, a 6-credit as BMGT 486B. Tuition for the Co-op course is charged at the current rate per credit, and an administrative fee is charged each time the student enrolls.

Students may apply up to 15 Co-op credits to their bachelor's degree. Certificates that include a Co-op option typically accept no more than 3 credits of Co-op coursework. Co-op courses may not be used to satisfy general education requirements or required academic coursework in the major. However, Co-op credits may be applied to electives as well as to upper-level supplemental courses in the major or minor. A standard letter grade is awarded for successful completion of Co-op courses. It is strongly recommended that students consult with a UMUC advisor to determine how Co-op credits may help them fulfill degree requirements.

For more information, students should review the information, policies, and procedures detailed online at www.umuc.edu/coop or call the Cooperative Education program office at 800-888-UMUC, ext. 2880.

TRANSFER CREDIT

(Further details and regulations are given in Appendix B and Appendix C.)

UMUC will not award credit for courses that repeat work done elsewhere. Students who have earned credit at other colleges or universities are responsible for determining whether courses they plan to take at UMUC would duplicate any previously earned credit. Students who are in doubt should consult an advisor before registering.

Credit toward a UMUC degree may be assigned for work completed through the kinds of institutions described in the following sections. As many as 45 credits of transferable college coursework may be counted toward the associate's degree; as many as 90 credits may be counted toward a bachelor's degree. A student who wants to transfer credit from other institutions to UMUC should request a review of previous credit from an enrollment specialist to determine the applicability of those credits to a degree from UMUC. No transfer credit is accepted without official transcripts.

Credits earned at other institutions during a period of disciplinary suspension or dismissal from UMUC are not accepted in transfer.
WAYS OF EARNING CREDIT

Credit from Other Colleges and Universities
When the grade earned was at least C, transfer credits from regionally accredited two- and four-year colleges and universities may be accepted for courses that apply to the student's curriculum and do not duplicate other courses for which credit has been awarded. Transfer credit for another institution's course-challenge examinations and prior learning program may be accepted if it is listed on the transcript with a passing grade.

Credit from Junior Colleges and Community Colleges
A total of 60 credits from two-year institutions (junior colleges or community colleges) may be applied toward a bachelor's degree at UMUC. A student who has already completed 60 credits may not apply further credit from a junior college or a community college to a degree from UMUC. (Students who have received an associate's degree from a Maryland public community college may be allowed to apply up to 70 credits of coursework from that degree toward an articulated bachelor's degree program at UMUC.)

A student who initially enrolled in the public community colleges of Maryland will be admitted to UMUC in conformance with the policy developed and approved by the Maryland Higher Education Commission. (Details are given in the section on transfer policies in the appendices.) Students participating in one of the community college alliances with UMUC should consult with their advisors at both institutions if they plan to enroll in courses at both institutions concurrently.

EDUCATIONAL EXPERIENCES IN THE ARMED SERVICES
UMUC grants credit for study completed in service schools and in Military Occupational Specialties (MOSs) on the basis of the recommendations by the American Council on Education (ACE) in its Guide to the Evaluation of Educational Experiences in the Armed Services. Such credit is granted only if it is applicable to the student's chosen curriculum. UMUC generally accepts recommendations of ACE for lower-level and upper-level credit. Recommendations made by ACE for vocational or technical credit are considered on the same basis as, and with the same limitations as, those placed on nonmilitary sources of credit.

Community College of the Air Force
UMUC awards credit for study at technical schools of the U.S. Air Force in accordance with recommendations from the Community College of the Air Force (CCAF). Credits must be applicable to the student's chosen curriculum at UMUC, must meet other UMUC requirements for transfer credit, and are subject to the same limitations as those placed on nonmilitary credit.

- All credit from the CCAF is lower level and is applicable only to freshman and sophomore requirements.
- Since the CCAF records satisfactorily completed courses as S (satisfactory) and specifies that S equals a grade of C or better, credit may be applied wherever appropriate in the UMUC curriculum. Courses that are vocational or technical may be used only as electives up to a maximum of 21 credits.

Servicemembers Opportunity College
As a designated four-year Servicemembers Opportunity College (SOC), UMUC provides opportunities for men and women in the military services to complete educational programs through various modes of instruction scheduled at times appropriate to their duty assignments. The SOC institutions have also developed a series of degree networks that correspond to Army, Navy, Coast Guard, and Marine career specialties and lead to associate's degrees (SOCAD-2, SOCSM-2, SOCCOAST-2, and SOCMAR-2 programs) and bachelor's degrees (SOCAD-4, SOCSM-4, SOCCOAST-4, and SOCMAR-4 programs).

The SOC concept itself was developed jointly by educational representatives from each of the military services, from the U.S. Department of Defense, and from 13 of the nation's leading associations of higher education.

TECHNICAL AND PROFESSIONAL CREDIT

Vocational and Technical Credit
Vocational and technical credit from regionally accredited institutions or ACE-approved organizations, when applicable, may be accepted as elective credit only.

This credit may be applied toward a degree at UMUC, up to the following limits:
- Associate's degree: A maximum of 12 credits.
- Bachelor's degree: A maximum of 21 credits of coherently related work.

Noncollegiate Courses
UMUC will accept for credit professional (not technical) noncollegiate courses applicable to the student's curriculum that have been evaluated by either (1) ACE (if the courses are listed in the National Guide to Educational Credit for Training Programs) or (2) the University of the State of New York National Program on Noncollegiate Sponsored Instruction (if listed in its College Credit Recommendations).
CREDIT BY EXAMINATION

UMUC may award as many as 60 credits by examination toward the bachelor’s degree (30 credits toward the associate’s degree), provided that (1) there is no duplication of other academic credit, and (2) the scores presented meet UMUC standards.

Examinations may include the Advanced Placement examinations administered by the College Board, the College-Level Examination Program (CLEP), Defense Activity for Non-Traditional Education Support (DANTES) examinations, and Excelsior College Examinations. UMUC also accepts credit for professional examinations listed in the ACE Guide to Educational Credit by Examination. As many as 30 credits by examination awarded by other regionally accredited institutions may be accepted for courses that appear on an official transcript with a grade of C or better. Students who have questions about credit by examination are encouraged to consult an advisor.

Advanced Placement

Advanced placement and college credit may be granted to students on the basis of scores on a College Board Advanced Placement (AP) examination. These examinations are normally administered to eligible high school seniors during the May preceding matriculation in college.

A student intending to transfer AP credit that was awarded at another college or similar institution must have a transcript of those scores sent directly to UMUC from the College Board. When those scores have been received, an advisor will determine whether they meet the standards established at UMUC for granting AP credit, and how much credit may be awarded.

Credit earned by advanced placement may be used to fulfill major, minor, or elective requirements.

College-Level Examination Program

Up to 24 credits may be awarded for general examinations in the College-Level Examination Program (CLEP). The scores must meet UMUC standards. UMUC may award 6 credits each for the examinations in English, mathematics, natural science, social sciences and history, and humanities.

Successful completion of certain subject-area examinations is another way of earning college credit. Advisors can furnish details.

DANTES Examinations

Credit may be awarded for successfully completing certain Subject Standardized Tests of DANTES (formerly known as USAFI). Advisors have information on which tests are acceptable.

Excelsior College Examinations

Students may earn credit for successfully completing subject tests offered by Excelsior College. Tests are available in various areas of the arts and sciences, as well as in business. Scores must meet UMUC standards. Advisors can furnish details.
Services and Resources

**Availability of Services**

UMUC provides services and resources to help students all over the world complete their educational programs—through automated systems and resources available online or by telephone, by e-mail and telephone communication, and in person at sites throughout the Maryland area. A number of offices are responsible for the delivery of these services, including Career Services, Student Financial Services, Information and Library Services, Information Technology, Enrollment Management, and Student Affairs.

Among these, the offices of Enrollment Management and Student Affairs respond to most of the student’s academic needs throughout his or her college career, providing general information; admission assistance; academic advising; registration, graduation, and transcript services; veterans benefits assistance; and services for disabled students.

In the Maryland area, services are available at the following locations:

- **Adelphi (UMUC Headquarters)**
  - umucinfo@umuc.edu
  - Phone 800-888-UMUC

- **Aberdeen Proving Ground**
  - Phone 410-272-8269

- **Andrews Air Force Base**
  - Phone 301-981-3123

- **Arundel Mills**
  - Phone 410-777-1882

- **Bethesda National Naval Medical Center**
  - Phone 301-654-1377

- **Bolling Air Force Base**
  - Phone 202-563-3611

- **Dorsey Station**
  - Phone 410-796-3178

- **Fort Meade**
  - Phone 410-551-0431 or 301-621-9882

- **Fort Myer**
  - Phone 703-696-3070

- **Henderson Hall, Navy Annex**
  - Phone 703-614-9104

- **Laurel College Center**
  - Phone 410-772-4160

- **Marine Corps Base Quantico**
  - Phone 703-630-1543

- **Navy College at Anacostia**
  - Phone 202-563-3611

- **Pentagon**
  - Phone 703-892-5394

- **Shady Grove Center**
  - Phone 301-738-6000

- **Southern Maryland Higher Education Center**
  - Phone 301-737-3228

- **University System of Maryland at Hagerstown**
  - Phone 240-527-2711

- **Waldorf Center for Higher Education**
  - Phone 301-632-2900

- **Walter Reed Army Medical Center**
  - Phone 202-782-3023

**General Information**

UMUC phone representatives are available all day, every day, at 800-888-UMUC to provide answers to general questions and to help callers navigate UMUC’s Web site (www.umuc.edu). Representatives can also make sure that callers are on the UMUC mailing list to receive upcoming class schedules, open house invitations, and other important announcements.

**Admission Assistance**

Enrollment specialists serve individuals who are inquiring about becoming UMUC students at some future time, are admitted but have not yet registered, have not attended UMUC for two or more years and need to be readmitted (at no charge), or attended UMUC overseas. They can help prospective students...
apply for admission, identify financial aid opportunities, plan their curriculum, and register for their first term or session. Enrollment specialists can also help qualified senior citizens apply for Golden Identification benefits. More information is on p. 234.

Students may contact an enrollment specialist by phone at 800-888-UMUC or by e-mail at enroll@umuc.edu. More detailed information on admission is available on p. 232.

AUTOMATED SERVICES

A number of automated services are available online to current students. Through MyUMUC (at https://my.umuc.edu), students have access to many of their personal UMUC records. The system enables them to register and pay for courses, change personal information (such as home address or phone numbers), view and print reports (such as their class schedule, grade report, statement of account, unofficial transcript, and degree progress report), find out the name of their assigned academic advisor, check on the status of their financial aid application, and register for final examinations for online courses.

To access services, students must enter their identification number and personal password.

ACADEMIC ADVISING

Academic advisors provide enrolled students the information needed to plan an academic program. This assistance can include a review of potential transfer credit, help with clarification of education and career goals, and aid in selecting appropriate courses. Advising services are available at times and places convenient to students. Students who are close to UMUC’s headquarters in Adelphi, Maryland or one of the UMUC sites in the Maryland region have the option to schedule an appointment to discuss their needs with an advisor in person by calling between 8:30 a.m. and 5 p.m. eastern time, Monday through Friday. Many students, however, choose to communicate with their advisor by phone, fax, or e-mail.

Students can access their advisor’s contact information through MyUMUC.

Initial Estimate of Transfer Credit

Prospective or newly admitted students can have a review of their potential transfer credit done by an enrollment specialist. This review is an estimate of the academic credit UMUC might accept toward a particular degree and of the requirements that would remain to be fulfilled. (Sources of credit are described on p. 237 and online at www.umuc.edu/students/ugp_ss/transfer.html.)

This review is not binding on either the student or UMUC and is subject to change.

Review of International Records

Students who are seeking a review of potential transfer credit from international postsecondary educational institutions need to

- Be admitted and be seeking an undergraduate degree at UMUC.
- Mail their official international transcripts to the international credit evaluation services selected by UMUC. (Forms are available online at www.umuc.edu/students/credeval.html.)
- Pay fees associated with the international evaluation.
- Have all official transcripts from any U.S. institution previously attended sent to UMUC.

Degree Progress Report

To access information about degree progress, students need to submit official transcripts from all colleges and universities previously attended, including other institutions of the University System of Maryland, whether or not transfer credit is requested or granted. UMUC may deny transfer credit from any institution not listed on the application for admission. Sources of transfer credit not listed at the time of admission or approved by an advisor after admission cannot be applied toward the UMUC degree.

A degree progress report

- Includes all transfer credits.
- Lists all courses completed at UMUC.
- Incorporates other types of academic credit.
- Remains in effect only while the student remains continuously enrolled.

In the degree progress report, a student’s most recent courses are applied to requirements first. Courses that could apply to multiple requirements are assigned to the first relevant category in the following order: general education requirements, then requirements for the selected academic major and minor, and finally electives. Verification of cross-curricular and other degree-wide requirements (such as minimum number of upper-level credits) follows and may affect the remaining credits needed for the degree.

Students are responsible for submitting all pertinent academic documents (such as academic transcripts, confirmation of credit conferred by examination, or records of credit from military service schools) during their first term at UMUC. To be considered official, documents must be sent directly from the issuer to the following address:

Undergraduate Student Affairs
University of Maryland University College
3501 University Boulevard East
Adelphi, MD 20783-8070
DISABLED STUDENT SERVICES

Reasonable accommodations are available for students who have disabilities and are enrolled in any program offered at UMUC. To allow for adequate planning, students who need accommodations should contact the director of Veteran and Disabled Student Services at least four to six weeks before the beginning of the term or session.

Students must request accommodations each time they register. The first time a student requests accommodation, current (within three years) documentation of a disability must be submitted. Depending on the disability, documentation may include secondary school records; medical, psychiatric, or psychological reports and diagnoses; or a psychoeducational evaluation. The documentation must provide clear and specific evidence of a disability and recommended accommodations from a qualified professional.

Note: All UMUC students are required to comply with university policies and procedures and meet the academic requirements of all undergraduate certificate and degree programs. Students with disabilities should review the requirements already listed in this catalog (beginning on p. 14 for bachelor's degree programs, p. 95 for certificate programs). Students should not apply to a UMUC certificate or degree program with the expectation that any academic requirement will be waived or that substitutions will be allowed.

For more information, students should contact the director of Veteran and Disabled Student Services by phone at 800-888-UMUC, ext. 7930, or 301-985-7466 (TTY) or by e-mail at vdsa@umuc.edu.

FINANCIAL AID

UMUC's Student Financial Services administers a variety of financial assistance programs—including grants, loans, federal work-study, and scholarships—to help students meet the costs of their university education. Aid is available for students who can prove financial need, academic merit, or both.

UMUC attempts to assist all adult students, particularly those studying part time, who would otherwise be unable to afford a college education. Regardless of income level, all students are encouraged to apply for assistance; many financing alternatives are available.

General Eligibility Requirements

An eligible applicant for UMUC assistance must

- Be enrolled for 3 or more credits for most federal and institutional aid programs. Federal loan programs require enrollment of at least 6 credits. Audited courses, some repeated courses, credit by examination, and EXCEL portfolio credits cannot be counted.
- Demonstrate satisfactory academic progress toward a degree or certificate according to UMUC policy.
- Have a high school or GED diploma.
- Possess a valid Social Security number.
- Register with Selective Service, if required to do so.
- Not be in default on any federal student loans, nor have borrowed in excess of loan limits, nor owe a refund on any grant under Title IV federal student aid programs.
- Not be ineligible based on a drug conviction.

Students enrolled in certificate programs may be subject to prorated aid eligibility depending upon the length of the certificate program. A financial aid advisor can provide more detailed information.

Financial Aid Programs

Most aid programs are available to both full- and part-time students. Amounts and eligibility for financial aid vary from year to year. Following is a brief description of amounts likely to be available for the 2006–7 award year.

Grants and Scholarships

Gift assistance, for which no repayment is required, is offered by the federal government, the state of Maryland, and UMUC. UMUC Student Financial Services administers several programs: Federal Pell Grants, Federal Supplemental Educational Opportunity Grants (SEOG), UMUC scholarships and grants, and Maryland state scholarships and grants.

The Federal Pell Grant program is a grant program for high-need, first-time undergraduates. Awards for the 2006–7 year will range from $200 to $2,025 per term. Award amounts vary by need level and enrollment status.

The Federal Supplemental Educational Opportunity Grant (SEOG) program offers need-based awards for high-need, first-time undergraduates. The amount and number of awards vary depending on the availability of funds allocated by the Department of Education. Typical awards during the 2006–7 year will range from $150 to $300 per term.

The UMUC President’s Grant program offers grants to students who demonstrate financial need. Typical awards during the 2006–7 year will range from $100 to $500 per term, based on need. Funds are limited, so students are urged to apply early.

UMUC scholarship programs, which include the UMUC President’s Scholarship and the UMUC Community College
Scholarship Program, offer a number of institutional scholarships as well as scholarships from corporate donors and foundations. A separate scholarship application must be completed for consideration. Requirements vary according to the individual scholarship programs. Typical awards range from $200 to $1,500 per term, depending on the specific program.

Maryland state grant and scholarship programs provide financial assistance to Maryland residents based primarily on financial need. Awards typically require enrollment of at least 12 credits per term. Award amounts range from $200 to $3,000 annually. For more information, students should contact the Maryland Office of Student Financial Assistance at 410-260-4565 or 800-974-1024. The Maryland Part-Time Grants program offers assistance to Maryland residents enrolled for at least 6, but fewer than 12, credits per term. Awards are based on need. Typical awards are $300 to $600 per term. Funds for these grants are allocated to UMUC on an annual basis.

Many UMUC students receive private scholarships offered by corporations, associations, foundations, and other organizations that offer awards on a competitive basis to students who meet specific criteria. Scholarship links and search tools are available through the Web at www.umuc.edu/financialaid.

Loans
Loan programs are available to students enrolled for at least 6 credits per standard term. Students who take loans to pay for college expenses must repay the principal and interest in accordance with the terms of the promissory note.

The Federal Perkins Loan program offers need-based, low-interest federal loans. UMUC is the lender. Award amounts typically range between $500 and $1,500 per term. The current interest rate is 5 percent. Repayment is made to UMUC and begins nine months after the borrower leaves school or attendance drops below half time.

The William D. Ford Federal Direct Loan program offers low-interest federal loans to students. Students may qualify for a subsidized Federal Direct Loan, which is based on financial need. Students can also acquire an unsubsidized Federal Direct Loan, which is not based on need. The federal government pays the interest on need-based Federal Direct Loans while the borrower is in school or a deferment status. Students with an unsubsidized Federal Direct Loan (not based on need) are responsible for the interest during in-school and deferment periods. The interest rate is variable but will not exceed 8.25 percent. Loan amounts vary based on grade level and dependency status. Repayment begins six months after the student leaves school or attendance drops below half time. For annual award amounts and general repayment terms, students should see the UMUC Guide to Financial Aid.

The Federal Direct PLUS Loan program enables parents with good credit histories to borrow for a dependent student enrolled for at least 6 credits per term. Parents are eligible to borrow up to the cost of education less other financial aid received by the student. Repayment begins 60 days after disbursement, though deferments (granted by the Department of Education) may allow for a delay in payment until after the period of enrollment. The PLUS interest rate is variable but is capped at 9 percent.

Alternative student loan programs are also an option for UMUC students. Students whose financial aid awards do not meet their financial need may be able to borrow up to their cost of attendance through private student loan programs offered by many banks and other lenders. These education loans are not federal loans; students borrow directly from and make payments to the lender. Students who are interested in an alternative student loan should contact the bank of their choice or visit UMUC’s Web page on alternative student loans at www.umuc.edu/financialaid for more information.

Employment
UMUC recognizes the importance of flexible, part-time employment for students who are in transition or who have financial need.

The Federal Work-Study program is a need-based program that provides jobs to assist students in meeting college costs. The amount of award varies according to financial need and availability of funds. Funds are paid biweekly, based on hours worked. Students must apply and be hired for employment at UMUC or in a community-service setting.

UMUC Financial Aid Standards for Satisfactory Academic Progress
Federal regulations require students receiving financial aid to maintain satisfactory academic progress toward their degree or certificate. Students who fail to meet the minimum academic standard are placed on financial aid probation for one standard term, during which they may receive financial aid. If a student fails to meet the minimum requirements during probation, the student is denied aid the following term and financial aid is not disbursed. Students should refer to the appendices for details of the appeal process and the complete Satisfactory Academic Progress policy for financial aid students.

The Financial Aid Application Process
Students must complete the Free Application for Federal Student Aid (FAFSA) and the UMUC Financial Aid Data Form to be considered for any type of financial aid at UMUC. The FAFSA must also be completed for a student to be considered for need-based Maryland state scholarships. The application process can take from six to ten weeks, so students are encouraged to apply early.
To be given high priority for their financial aid applications and a determination of eligibility early enough for funds to be reserved by registration, students should complete both their Free Application for Federal Student Aid (FAFSA) and the UMUC Financial Aid Data Form by the priority deadlines listed below.

Students meeting these dates will have the opportunity to be considered for the various grant and scholarship programs with limited funds. Those who do not meet these deadlines may not receive their financial aid in time for registration.

Students who apply late may still receive aid, depending on their eligibility and the availability of funds. Eligibility for both loans and grants can be authorized even after the term has begun.

<table>
<thead>
<tr>
<th>Program or Period Being Applied for</th>
<th>Priority Deadline for Filing Financial Aid Forms</th>
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<tbody>
<tr>
<td>Maryland State Scholarships</td>
<td>March 1</td>
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<tr>
<td>Full Academic Year or</td>
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<td>Fall Term Only</td>
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<td>Spring Term Only</td>
<td>November 1</td>
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<td>Summer Term</td>
<td>April 1</td>
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Federal Return of Funds Policy

Students receiving federal financial aid have the responsibility to follow the institution’s withdrawal procedures, which are outlined on the UMUC Web site (www.umuc.edu). The 1998 Reauthorization of the Higher Education Act requires the university to calculate a return of Title IV funds for all federal financial aid students who withdraw from all classes on or before the 60-percent attendance point in the term. Students who stop attending all classes without officially withdrawing are also subject to a return of funds calculation at the end of the term based on the last documented date of attendance as determined by the teachers. For further information, students should refer to the UMUC Guide to Financial Aid.

For Further Information

All financial aid information and forms also are available at www.umuc.edu/financialaid on the UMUC Web site. Students with additional questions should contact the Student Financial Services either by phone at 800-888-UMUC or by e-mail at finaid@umuc.edu.

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**Veterans Benefits Programs**

Students may apply for the following educational assistance programs administered by the U.S. Department of Veterans Affairs:

- The Montgomery GI Bill–Active Duty Educational Assistance Program (MGIB, Chapter 30)
- Vocational Rehabilitation (Chapter 31)
- The Post–Vietnam Era Educational Assistance Program (Chapter 32)
- The Survivors' and Dependents’ Educational Assistance Program (Chapter 35)
- Montgomery GI Bill–Selected Reserve Educational Assistance Program (Chapter 106)
- Montgomery GI Bill–Reserve Educational Assistance Program (Chapter 1607)

Detailed information on all assistance programs is available on the UMUC Web site at www.umuc.edu/vabenefits or on the Department of Veterans Affairs Web site at www.gibill.va.gov/education/benefits.html.

**Application Procedures**

Students who are eligible for educational benefits from the U.S. Department of Veterans Affairs should review the online information and application procedures (at www.umuc.edu/vabenefits). Every educational assistance program requires different paperwork and documentation to process a claim. Initial applications for benefits may be submitted online directly to the U.S. Department of Veterans Affairs. All students must also complete a UMUC Veterans Certification form each term they wish to receive benefits. The U.S. Department of Veterans Affairs processes claims and issues payment six to eight weeks after receiving completed paperwork.

**Amounts and Methods of Payment**

The amount of money a student may receive from the U.S. Department of Veterans Affairs depends on the educational assistance program for which the student is eligible, the number of credits for which the student is registered, the length of the term, and (for certain programs) the number of dependents the student has. The current monthly payment for each educational assistance program is available online at www.umuc.edu/vabenefits.

Benefits are paid directly to students on a monthly basis. The money may be used to help with tuition, books, or other costs of college education. Tuition is due upon registration, regardless of eligibility for benefits.

The U.S. Department of Veterans Affairs offers an accelerated program, which provides a lump-sum payment of 60 percent of
the student’s tuition and fees for certain high-cost, high-tech programs. Only undergraduate students who are paying nonresident fees and are enrolled for 17 credits or more are eligible for accelerated payment.

**Work-Study Allowance**

Students who are registered at least three-quarters time (9 credits) and who need money to attend school may participate in work-study. Recipients of benefits under the provisions of Chapters 30, 31, 32, 35, and 106 may be eligible. Students may work up to 400 hours during a term and receive either the federal minimum wage or the state minimum wage, whichever is greater.

**For Further Information**

Information and applications are available from the student’s advisor or at [www.umuc.edu/vabenefits](http://www.umuc.edu/vabenefits) on the UMUC Web site.

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**Evaluation of Prior Training**

When a student files a claim for educational benefits, the U.S. Department of Veterans Affairs requires previous training to be evaluated so that the student receives correct transfer credit. (Information about types of training that qualify begins on p. 240; these include military training and service schools, post-secondary education, certain correspondence courses, and credit by examination.) Each student must have an evaluation completed during the first term. Students who do not comply may find future benefits delayed. After their first registration, eligible students are provided with information on the necessary procedure.

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**Students’ Responsibilities**

Students receiving benefits are expected to follow all regulations and procedures of the U.S. Department of Veterans Affairs while attending UMUC.

At UMUC, all regulations of the U.S. Department of Veterans Affairs are enforced. Students should be aware of the following requirements and consequences:

- Each student is expected to make satisfactory progress toward a degree or certificate; everyone must comply with the academic standards of UMUC.
- Each student must report all changes in enrollment—including drops, adds, withdrawals, changes to audit, and changes in degree objective.
- Registering for a course and then not attending, or ceasing to attend without officially withdrawing, is a misuse of federal funds that is punishable by law.
- Payment of benefits will be disallowed for any course in which a nonpunitive grade is assigned.
- Payment of benefits will be disallowed for repeating a course for which transfer credit has been granted or for which a passing grade of A, B, C, D, P, or S was assigned.
- Payment of benefits will be disallowed for any course that is not a requirement in a student’s degree or certificate program.

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**Tutorial Assistance**

Veterans, active-duty military personnel, and reservists receiving funding assistance from the U.S. Department of Veterans Affairs may qualify for tutorial assistance. Students enrolled at least half time may qualify. Payments are allowed when students demonstrate deficiency in courses that are required for their degree programs.

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**GRADUATION SERVICES**

A graduation ceremony is held in May each year. Students who completed degree requirements the previous August and December, as well as those who complete their requirements that May, are invited to participate.

Students who expect to complete the requirements for a degree are responsible for making sure they have completed a degree progress report (details on p. 243), filing an application for a diploma (available online at [http://my.umuc.edu](http://my.umuc.edu)) with Undergraduate Student Affairs, and paying the appropriate fee (currently $50). This may be done at the time of the final term’s registration or up to the following dates:

- December graduation: October 1
- May graduation: February 15
- August graduation: June 15

Students whose applications for a diploma are received after the deadlines will be considered for receiving degrees at the next graduation. Students who do not complete degree requirements in the term or session in which they first applied for graduation must complete a new application for diploma and pay the fee for the term or session in which they will graduate.

Students pursuing certificates must apply for certificates by the same deadlines. The application form is available online at [http://my.umuc.edu](http://my.umuc.edu).

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**TRANSCRIPT SERVICES**

Official academic records are maintained by Undergraduate Student Affairs at UMUC. Official transcripts show coursework taken through UMUC. For students who have received an official evaluation and have regular status, transfer credit from other institutions (including others in the University System of Maryland) is listed as well. Students’ records are considered confidential. Therefore, UMUC releases transcripts only upon receiving a signed request from the student and payment of the
appropriate fee. (For students who submit requests online, the student and personal identification numbers are considered an official signature.)

Procedures and forms for requesting transcripts are available online at www.umuc.edu/students/transreq.html. A fee is charged for each UMUC transcript that is issued; an additional fee is charged for rush processing. Transcripts should be requested at least two weeks before they will actually be needed. No transcripts will be released until all financial obligations to the university have been satisfied.

**STUDENT ADVISORY COUNCIL**

The Student Advisory Council provides an avenue for students to express their concerns about UMUC or their academic career. The council consists of 12 members, elected by their fellow students, who act in an advisory capacity to the university president, provost, deans, and other officials on behalf of all students.

Students who would like to see certain issues addressed or who have questions should contact their council representative by e-mail at stac@umuc.edu.

More information on shared governance is available in the appendices of this catalog and online at www.umuc.edu/gov.

**OTHER RESOURCES**

**Bookstores**

Students can order required textbooks and software for all courses from MBS Direct online through the UMUC Virtual Bookstore (www.umuc.edu/bookstore) or by mail. MBS guarantees availability of new and used inventory, discounts for online sales, no sales tax, and an easy return and buyback program. Orders are shipped via UPS within 24 hours of receipt, Monday through Friday. Overnight and two-day delivery is available for an additional fee. Payment by personal check, MasterCard, Visa, American Express, and Discover is accepted. Some employer contracts may be accepted.

Students may also order most required textbooks and software from University Book Center/Barnes & Noble online and by mail, phone, and fax, as well as at the College Park store. Walk-in customers should inquire at the customer service desk. Most major credit cards and some employer-provided assistance documents are accepted. Students should call 800-343-6621 for additional information and store hours.

**Career Services**

Career Services provides personalized assistance with clarifying skills, interests, and work-related values; making career- or life-related decisions; researching career options; planning for graduate school; and searching for employment. Through the Career Services Web page at www.umuc.edu/careerservices, students can access a variety of career and job search information and materials. Career Services offers job fairs, employability skills workshops such as résumé writing, tutorials, and access to CareerQuest, UMUC’s online job and internship database.

Services are available on a walk-in basis, by appointment, or online via e-mail and through the ReadyMinds Distance Career Counseling program. More information can be found on the Career Services Web page.

**Computer Labs and Services**

Computer labs are available at many UMUC sites (including Adelphi, Dorsey Station, Shady Grove, and Waldorf). These labs are available primarily for the use of students completing coursework, but are also open to faculty members, staff, and alumni on a first-come, first-served basis on presentation of a valid UMUC ID. Students must bring media to save data or documents. Acceptable media include flash drives, floppy disks, and zip disks.

Lab assistants are available during scheduled hours to help users with resident software programs, but cannot provide tutoring. Students may also access host computers at UMUC via the Internet using Telnet. Two host systems are accessible: Nova and Polaris. Students must have an account for the particular system they wish to use. For most students taking courses in computing, accounts are set up automatically as part of the coursework and are valid for the duration of the class.

Students who are considering enrolling in online courses offered via WebTycho, the university’s proprietary course delivery system, should review the technical requirements at tech/min_tech.html for the most current detailed information.

Technical support for students taking online courses is available 24 hours a day, seven days a week, at webtychosupport@umuc.edu or 800-807-4862.

**Drug and Alcohol Awareness**

As required by federal law, UMUC provides referral services for students with concerns about the use or abuse of alcohol and drugs. Students may discuss referrals with their advisor.

**Information and Library Services**

UMUC’s Information and Library Services promotes the use of library technology and resources, teaches courses in library research, and provides access to a variety of online library resources on its Web page at www.umuc.edu/library. Services to students include direct borrowing privileges at all University System of Maryland and affiliated institution (USMAI) campus libraries, access to the USMAI online catalog interlibrary loan services, and access to library resources via the Internet.
Library Resources
Students may access an extensive array of online journal databases and national and international newspapers via the Information and Library Services Web page at www.umuc.edu/library or through WebTycho, UMUC’s online course delivery system. Authorized library users may access more than 140 databases—most of which index or link to full-text articles covering business, management, social science, science, arts and humanities, and computer and information systems. Currently enrolled students have borrowing privileges at USMAI libraries. The USMAI online catalog provides access to USMAI books. Students can access the USMAI online catalog from the Information and Library Services Web page at www.umuc.edu/library, through WebTycho, and at any USMAI library or UMUC regional site.

USMAI library materials can be delivered to any USMAI library or UMUC circulation site for pickup. UMUC students who reside outside Maryland (but within the continental United States) may have books sent to their address of record. In addition, all UMUC students may use interlibrary loan to request that journal articles or book chapters not available online in full text be sent to them either by mail or electronically in portable document format (PDF) via the Web.

Library Instruction and Research Assistance
Students are often overwhelmed by or are unaware of the vastness of the resources—print, nonprint, and automated—available to them. Information and Library Services provides classroom and online instruction and individualized research assistance.

At the request of a faculty member, Information and Library Services can arrange for an on-site or online class presentation to introduce students to locating and learning to use relevant library resources. Online students may access the Peck Virtual Library Classroom within WebTycho as an additional free resource to help them improve their research skills. UMUC also offers LIBS 150 Information Literacy and Research Methods, a required 1-credit course that focuses on developing information literacy skills.

UMUC reference librarians are available by phone, online, and at several locations to assist students with their research needs. Specific locations and hours are listed online at www.umuc.edu/library. Chat, e-mail, and phone assistance are available 24 hours a day, seven days a week. Students may obtain reference assistance or information about library services by accessing UMUC’s real-time online interactive chat or library conference via the Web at www.umuc.edu/library (students should click on “Ask a Question”), by sending an e-mail message to library@umuc.edu; or by calling Information and Library Services at 800-888-UMUC, ext. 7209 (during office hours), or 800-295-2084 (after hours).

Tutoring
A number of online, on-site, and referral services are available to students who are interested in academic help beyond the classroom. UMUC services that are provided online or on-site (in computing and writing) carry no charge. Fees for tutors on UMUC referral lists are arranged privately between student and tutor. Students may call 800-888-UMUC for general tutoring information.

Writing Resources and Tutoring
UMUC’s Effective Writing Center provides a variety of services and resources for students, including individual tutors, self-study modules, and reference tools. The Center may be accessed on the Web at www.umuc.edu/writingcenter.

The Center’s Web page also hosts an interactive tutorial on “How to Avoid Plagiarism.” The tutorial helps students review guidelines for documenting sources, see examples of different documentation styles, and test mastery of their techniques.

Free in-person writing services are also available to UMUC students at the University of Maryland, College Park (UMCP) Writing Center in room 0125 of Tualiferro Hall on the UMCP campus. Students should call 301-405-3785 for information and appointments.

UMUC’s Guide to Writing and Research is required for use in all undergraduate courses where another such guide is not already required. The online guide may be found on the Effective Writing Center Web page.

Alumni Association
The UMUC Alumni Association was established in 1990 to support, enhance, and promote UMUC and its community of alumni and students worldwide. The Alumni Association reaches out to all members of the UMUC community with opportunities to become involved in association activities as well as professional and personal development seminars and workshops.

With a membership of more than 100,000 alumni, the association offers programs and services that are beneficial to both alumni and students. In addition to funding scholarships for UMUC students, the association seeks to encourage alumni and students to participate actively in the UMUC community by attending events, volunteering, and staying connected to their alma mater in ways that contribute to its success.

Membership in the UMUC Alumni Association is automatic upon graduation—there are no applications or fees. Benefits include discounts and special services, free subscriptions and access to online listservers, and access to career planning resources and computer labs.

More information about the UMUC Alumni Association is available online at www.umucalumni.org by contacting the Alumni Relations office by phone at 800-888-UMUC, ext. 7179; or by e-mail at alumni@umuc.edu. Student inquiries are always welcome.
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Appendices

STATEMENTS ON POLICIES AND PROCEDURES

Appendix A

Policy on Student Classification for Admission, Tuition, and Charge Differential Purposes

(Approved by the Board of Regents August 28, 1990; Amended July 10, 1998; Amended November 27, 2000; Amended April 11, 2003)

I. Policy

It is the policy of the Board of Regents of the University System of Maryland (USM) to recognize the categories of in-state and out-of-state students for the purpose of admission, tuition, and charge differentials at those institutions where such differentiation has been established.

A. An in-state student is a student whom the university determines to be a permanent resident of the state of Maryland. For the purposes of this policy, "permanent resident" is defined as a person who satisfies all the following conditions and has done so for at least twelve (12) consecutive months immediately prior to and including the last date available to register for courses in the semester/term for which the person seeks in-state status:

1. Is not residing in the state of Maryland primarily to attend an educational institution;
2. Owns and continuously occupies or rents and continuously occupies living quarters in Maryland. There must exist a genuine deed or lease in the individual's name reflecting payments/rents and terms typical of those in the community at the time executed. Persons not having such a lease may submit an affidavit reflecting payments/rents and terms, as well as the name and address of the person to whom payments are made that may be considered as meeting this condition. As an alternative to ownership or rental of living quarters in Maryland, a student may share living quarters in Maryland that are owned or rented and occupied by a parent, legal guardian, or spouse;
3. Maintains within Maryland substantially all personal property;
4. Pays Maryland income tax on all earned taxable income, including all taxable income earned outside the state;
5. Registers all owned motor vehicles in Maryland in accordance with Maryland law;
6. Possesses a valid Maryland driver's license, if licensed, in accordance with Maryland law;
7. Is registered in Maryland, if registered to vote;
8. Receives no public assistance from a state other than the state of Maryland or from a city, county or municipal agency other than one in Maryland; and
9. Has a legal ability under federal and Maryland law to live permanently without interruption in Maryland.

B. In addition, persons with the following status shall be accorded the benefits of in-state status for the period in which they hold such status:

1. A full-time or part-time (at least 50 percent–time) regular employee of the USM.
2. The spouse or financially dependent child of a full-time or part-time (at least 50 percent–time) regular employee of the USM.
3. A full-time active member of the Armed Forces of the United States whose home of residency is Maryland or one who resides or is stationed in Maryland, or the spouse or a financially dependent child of such a person.
4. For UMUC, a full-time active member of the Armed Forces of the United States on active duty, or the spouse of a member of the Armed Forces of the United States on active duty.
5. A graduate assistant appointed through the USM for the semester/term of the appointment. Except through prior arrangement, this benefit is available only for enrollment at the institution awarding the assistantship.

C. Students not entitled to in-state status under the preceding paragraphs shall be assigned out-of-state status for admission, tuition, and charge-differential purposes.

D. Assignment of in-state or out-of-state classification will be made by the university upon an assessment of the totality of facts known or presented to it. The person seeking in-state status shall have the burden of proving that he or she satisfies all requirements.

E. Either of the following circumstances raise a presumption that the student is residing in the state of Maryland primarily for the purpose of attending an educational institution:

1. The student was attending high school or residing outside Maryland at the time of application for admission to a USM institution, or
2. The student is both (a) not financially independent and (b) is financially dependent upon a person who is not a resident of Maryland.

The burden shall be on the student to rebut the presumption.

II. Procedures

A. An initial determination of in-state status will be made by the university at the time a student's application for admission is under consideration. The determination made at that time, and any determination made thereafter, shall prevail for each semester/term until the determination is successfully challenged in a timely manner.
A. A change in status must be requested by submitting a USM “Petition for Change in Classification for Admission, Tuition, and Charge Differential.” A student applying for a change to in-state status must furnish all required documentation with the petition by the last published date to register for the forthcoming semester/term for which the change in classification is sought.

C. The student shall notify the institution in writing within fifteen (15) days of any change in circumstances that may alter in-state status.

D. In the event incomplete, false, or misleading information is presented, the institution may, at its discretion, revoke in-state status and take disciplinary action provided for by the institution’s policy. Such action may include suspension or expulsion. If in-state status is gained due to false or misleading information, the university reserves the right to retroactively assess all out-of-state charges for each semester/term affected.

E. Each institution of the USM shall develop and publish additional procedures to implement this policy. Procedures shall provide that on request the president or designee has the authority to waive any residency criterion set forth in Section I if it is determined that the student is indeed a permanent resident and the application of the criteria creates an unjust result. These procedures shall be filed with the Office of the Chancellor.

III. Definitions

A. Financially Dependent: For the purposes of this policy, a financially dependent student is one who is claimed as a dependent for tax purposes or who receives more than one-half of his or her support from another person during the twelve- (12-) month period immediately prior to the last published date for registration for the semester or session. If a student receives more than one-half of his or her support in the aggregate from more than one person, the student shall be considered financially dependent on the person providing the greater amount of support.

B. Financially Independent: A financially independent student is one who (1) declares himself or herself to be financially independent as defined herein; (2) does not appear as a dependent on the federal or state income tax return of any other person; (3) receives less than one-half of his or her support from any other person or persons; and (4) demonstrates that he or she provides through self-generated support one-half or more of his or her total expenses.

C. Parent: A parent may be a natural parent, or, if established by a court order recognized under the law of the state of Maryland, an adoptive parent.

D. Guardian: A guardian is a person so appointed by a court order recognized under the law of the state of Maryland.

E. Spouse: A spouse is a partner in a legally contracted marriage.

F. Child: A child is a natural child or a child legally adopted pursuant to a court order recognized under the law of Maryland.

G. Self-Generated: Self-generated describes income that is derived solely from compensation for an individual’s own efforts as evidenced, for example, by federal or state W-2 forms or IRS Form 1099, where interest income is based upon finances created from one’s own efforts. For the purposes of this policy, grants, stipends, awards, benefits, loans, and gifts (including federal and state aid, grants, and loans) may not be used as self-generated income.

H. Regular Employee: A regular employee is a person employed by the USM who is assigned to a state budget line or who is otherwise eligible to enroll in a state retirement system. Examples of categories not considered regular employees are graduate students, contingent employees, and independent contractors.

IV. Implementation

This policy as amended by the Board of Regents on November 27, 2000, shall be applied to all student residency classification decisions made on or after this date.

Appendix B

Policies of the Maryland Higher Education Commission on General Education and Transfer from Public Institutions in Maryland

(Code of Maryland Regulations Title 13B, Subtitle 06, Chapters 1–10)

I. Scope and Applicability

This chapter applies only to public institutions of higher education.

II. Definitions

A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined

1. “AA degree” means the Associate of Arts degree.

2. “AAS degree” means the Associate of Applied Sciences degree.

3. “Arts” means courses that examine aesthetics and the development of the aesthetic form and explore the relationship between theory and practice. Courses in this area may include fine arts, performing and studio arts, appreciation of the arts, and history of the arts.

4. “AS degree” means the Associate of Sciences degree.
5. “Biological and physical sciences” means courses that examine living systems and the physical universe. They introduce students to the variety of methods used to collect, interpret, and apply scientific data, and to an understanding of the relationship between scientific theory and application.

6. “English composition courses” means courses that provide students with communication knowledge and skills appropriate to various writing situations, including intellectual inquiry and academic research.

7. “General education” means the foundation of the higher education curriculum providing a coherent intellectual experience for all students.

8. “General education program” means a program that is designed to
   a. Introduce undergraduates to the fundamental knowledge, skills, and values that are essential to the study of academic disciplines;
   b. Encourage the pursuit of lifelong learning; and
   c. Foster the development of educated members of the community and the world.

9. “Humanities” means courses that examine the values and cultural heritage that establish the framework for inquiry into the meaning of life. Courses in the humanities may include the language, history, literature, and philosophy of Western and other cultures.

10. “Mathematics” means courses that provide students with numerical, analytical, statistical, and problem-solving skills.

11. “Native student” means a student whose initial college enrollment was at a given institution of higher education and who has not transferred to another institution of higher education since that initial enrollment.

12. “Parallel program” means the program of study or courses at one institution of higher education that has objectives comparable to those at another higher education institution, for example, a transfer program in psychology in a community college is definable as a program parallel to a baccalaureate psychology program at a four-year institution of higher education.

13. “Receiving institution” means the institution of higher education at which a transfer student currently desires to enroll.

14. “Recommended transfer program” means a planned program of courses, both general education and courses in the major, taken at a community college, that is applicable to a baccalaureate program at a receiving institution—and ordinarily the first two years of the baccalaureate degree.

15. “Sending institution” means the institution of higher education of most recent previous enrollment by a transfer student at which transferable academic credit was earned.

16. “Social and behavioral sciences” means courses that examine the psychology of individuals and the ways in which individuals, groups, or segments of society behave, function, and influence one another. The courses include, but are not limited to, subjects that focus on
   a. History and cultural diversity;
   b. Concepts of groups, work, and political systems;
   c. Applications of qualitative and quantitative data to social issues; and
   d. Interdependence of individuals, society, and the physical environment.

17. “Transfer student” means a student entering an institution for the first time, having successfully completed a minimum of 12 semester hours at another institution that are applicable for credit at the institution the student is entering.

III. Admission of Transfer Students to Public Institutions

A. Admission to Institutions

1. A student attending a public institution who has completed an AA, AAS, or AS degree, or who has completed 56 or more semester hours of credit, shall not be denied direct transfer to another public institution if the student attained a cumulative grade point average of at least 2.0 on a 4.0 scale or its equivalent in parallel courses, except as provided in Section A.4 below.

2. A student attending a public institution who has not completed an AA, AAS, or AS degree, or who has completed fewer than 56 semester hours of credit, is eligible to transfer to a public institution regardless of the number of credits earned if the student
   a. Satisfied the admission criteria of that receiving public institution as a high school senior; and
   b. Attained at least a cumulative grade point average of 2.0 on a 4.0 scale or its equivalent in parallel courses.

3. A student attending a public institution who did not satisfy the admission criteria of a receiving public institution as a high school senior, but who has earned sufficient credits at a public institution to be classified by the receiving public institution as a sophomore, shall meet the stated admission criteria developed and published by the receiving public institution for transfer.

4. If the number of students seeking admission exceeds the number that can be accommodated at a receiving public institution, admission decisions shall be
   a. Based on criteria developed and published by the receiving public institution; and
   b. Made to provide fair and equal treatment for native and transfer students.
B. Admission to Programs
1. A receiving public institution may require higher performance standards for admission to some programs if the standards and criteria for admission to the program
   a. Are developed and published by the receiving public institution; and
   b. Maintain fair and equal treatment for native and transfer students.
2. If the number of students seeking admission exceeds the number that can be accommodated in a particular professional or specialized program, admission decisions shall be
   a. Based on criteria developed and published by the receiving public institution; and
   b. Made to provide fair and equal treatment for native and transfer students.
3. Courses taken at a public institution as part of a recommended transfer program leading toward a baccalaureate degree shall be applicable to related programs at a receiving public institution granting the baccalaureate degree.

C. Receiving Institution Program Responsibility
1. The faculty of a receiving public institution shall be responsible for development and determination of the program requirements in major fields of study for a baccalaureate degree, including courses in the major field of study taken in the lower division.
2. A receiving public institution may set program requirements in major fields of study that simultaneously fulfill general education requirements.
3. A receiving public institution, in developing lower-division coursework, shall exchange information with other public institutions to facilitate the transfer of credits into its programs.

IV. General Education Requirements for Public Institutions
A. While public institutions have the autonomy to design their general education program to meet their unique needs and mission, that program shall conform to the definitions and common standards in this chapter. A public institution shall satisfy the general education requirement by
1. Requiring each program leading to the AA or AS degree to include no fewer than 30 and no more than 36 semester hours, and each baccalaureate degree program to include no fewer than 40 and no more than 46 semester hours of required core courses, with the core requiring, at a minimum, coursework in each of the following five areas:
   a. Arts and humanities,
   b. Social and behavioral sciences,
   c. Biological and physical sciences,
   d. Mathematics, and
   e. English composition

or
2. Conforming with COMAR 13B.02.02.16D(2)(b)-(c).
B. Each core course used to satisfy the distribution requirements of Section A.1 of this regulation shall carry at least 3 semester hours.
C. General education programs of public institutions shall require at least
   1. One course in each of two disciplines in arts and humanities;
   2. One course in each of two disciplines in social and behavioral sciences;
   3. Two science courses, at least one of which shall be a laboratory course;
   4. One course in mathematics at or above the level of college algebra; and
   5. One course in English composition.
D. Interdisciplinary and Emerging Issues
1. In addition to the five required areas in Section A of this regulation, a public institution may include up to 8 semester hours in a sixth category that addresses emerging issues that institutions have identified as essential to a full program of general education for their students. These courses may
   a. Be integrated into other general education courses or be presented as separate courses; and
   b. Include courses that
      (i) Provide an interdisciplinary examination of issues across the five areas; or
      (ii) Address other categories of knowledge, skills, and values that lie outside of the five areas.
2. Public institutions may not include the courses in this section in a general education program unless they provide academic content and rigor equivalent to the areas in Section A.1 of this regulation.
E. General education programs leading to the AAS degree shall include at least 20 semester hours from the same course list designated by the sending institution for the AA and AS degrees. The AAS degree shall include at least one 3-semester-hour course from each of the five areas listed in Section A.1 of this regulation.
F. A course in a discipline listed in more than one of the areas of general education may be applied only to one area of general education.
G. A public institution may allow a speech communication or foreign language course to be part of the arts and humanities category.
V. Transfer of General Education Credit

A. A student transferring to one public institution from another public institution shall receive general education credit for work completed at the student’s sending institution as provided by this chapter.

B. A completed general education program shall transfer without further review or approval by the receiving institution and without the need for a course-by-course match.

C. Courses that are defined as general education by one institution shall transfer as general education even if the receiving institution does not have that specific course or has not designated that course as general education.

D. The receiving institution shall give lower-division general education credits to a transferring student who has taken any part of the lower-division general education credits described in Regulation IV of this chapter at a public institution for any general education courses successfully completed at the sending institution.

E. Except as provided in Regulation IV.M of this chapter, a receiving institution may not require a transfer student who has completed the requisite number of general education credits at any public college or university to take, as a condition of graduation, more than 10–16 additional semester hours of general education and specific courses required of all students at the receiving institution, with the total number not to exceed 46 semester hours. This provision does not relieve students of the obligation to complete specific academic program requirements or course prerequisites required by a receiving institution.

F. A sending institution shall designate on or with the student transcript those courses that have met its general education requirements, as well as indicate whether the student has completed the general education program.

G. AAS Degrees

1. While there may be variance in the numbers of hours of general education required for AA, AS, and AAS degrees at a given institution, the courses identified as meeting general education requirements for all degrees shall come from the same general education course list and exclude technical or career courses.

2. An AAS student who transfers into a receiving institution with fewer than the total number of general education credits designated by the receiving institution shall complete the difference in credits according to the distribution as designated by the receiving institution. Except as provided in Regulation IV.M of this chapter, the total general education credits for baccalaureate-degree-granting public receiving institutions may not exceed 46 semester hours.

H. Student Responsibilities

A student is held

1. Accountable for the loss of credits that
   a. Result from changes in the student’s selection of the major program of study,
   b. Were earned for remedial coursework, or
   c. Exceed the total course credits accepted in transfer as allowed by this chapter.

2. Responsible for meeting all requirements of the academic program of the receiving institution.

VI. Transfer of Nongeneral Education Program Credit

A. Transfer to Another Public Institution

1. Credit earned at any public institution in the state is transferable to any other public institution if the
   a. Credit is from a college- or university-parallel course or program,
   b. Grades in the block of courses transferred average 2.0 or higher, and
   c. Acceptance of the credit is consistent with the policies of the receiving institution governing native students following the same program.

2. If a native student’s “D” grade in a specific course is acceptable in a program, then a “D” earned by a transfer student in the same course at a sending institution is also acceptable in the program. Conversely, if a native student is required to earn a grade of “C” or better in a required course, the transfer student shall also be required to earn a grade of “C” or better to meet the same requirement.
B. Credit earned in or transferred from a community college is limited to
   1. One-half the baccalaureate degree program requirement but may not be more than 70 semester hours, and
   2. The first two years of the undergraduate education experience.
C. Nontraditional Credit
   1. The assignment of credit for AP, CLEP, or other nationally recognized standardized examination scores presented by transfer students is determined according to the same standards that apply to native students in the receiving institution, and the assignment shall be consistent with the state minimum requirements.
   2. Transfer of credit from the following areas shall be consistent with COMAR 13B.02.02. and shall be evaluated by the receiving institution on a course-by-course basis:
      a. Technical courses from career programs,
      b. Course credit awarded through articulation agreements with other segments or agencies,
      c. Credit awarded for clinical practice or cooperative education experiences,
      d. Credit awarded for life and work experiences.
   3. The basis for the awarding of the credit shall be indicated on the student’s transcript by the receiving institution.
   4. The receiving institution shall inform a transfer student of the procedures for validation of coursework for which there is no clear equivalency. Examples of validation procedures include ACE recommendations, portfolio assessment, credit through challenge examinations, and satisfactory completion of the next course in sequence in the academic area.
   5. The receiving baccalaureate-degree-granting institution shall use validation procedures when a transferring student successfully completes a course at the lower-division level that the receiving institution offers at the upper-division level. The validated credits earned for the course shall be substituted for the upper-division course.
D. Program Articulation
   1. Recommended transfer programs shall be developed through consultation between the sending and receiving institutions. A recommended transfer program represents an agreement between the two institutions that allows students aspiring to the baccalaureate degree to plan their programs. These programs constitute freshman/sophomore-level coursework to be taken at the community college in fulfillment of the receiving institution’s lower-division coursework requirement.
   2. Recommended transfer programs in effect at the time that this regulation takes effect, which conform to this chapter, may be retained.

VII. Academic Success and General Well-Being of Transfer Students
A. Sending Institutions
   1. Community colleges shall encourage their students to complete the associate’s degree or to complete 56 hours in a recommended transfer program that includes both general education courses and courses applicable toward the program at the receiving institution.
   2. Community college students are encouraged to choose as early as possible the institution and program into which they expect to transfer.
   3. The sending institution shall
      a. Provide to community college students information about the specific transferability of courses at four-year colleges;
      b. Transmit information about transfer students who are capable of honors work or independent study to the receiving institution; and
      c. Promptly supply the receiving institution with all the required documents if the student has met all financial and other obligations of the sending institution for transfer.
B. Receiving Institutions
   1. Admission requirements and curriculum prerequisites shall be stated explicitly in institutional publications.
   2. A receiving institution shall admit transfer students from newly established public colleges that are functioning with the approval of the Maryland Higher Education Commission on the same basis as applicants from regionally accredited colleges.
   3. A receiving institution shall evaluate the transcript of a degree-seeking transfer student as expeditiously as possible, and notify the student of the results no later than midsemester of the student’s first semester of enrollment at the receiving institution, if all official transcripts have been received at least 15 working days before midsemester. The receiving institution shall inform a student of the courses that are acceptable for transfer credit and the courses that are applicable to the student’s intended program of study.
   4. A receiving institution shall give a transfer student the option of satisfying institutional graduation requirements that were in effect at the receiving institution at the time the student enrolled as a freshman at the sending institution. In the case of major requirements, a transfer student may satisfy the major requirements in effect at the time when the student was identifiable as pursuing the recommended transfer program at the sending institution. These conditions are applicable to a student who has been continuously enrolled at the sending institution.
VIII. Programmatic Currency
A. A receiving institution shall provide to the community college current and accurate information on recommended transfer programs and the transferability status of courses. Community college students shall have access to this information.
B. Recommended transfer programs shall be developed with each community college whenever new baccalaureate programs are approved by the degree-granting institution.
C. When considering curricular changes, institutions shall notify each other of the proposed changes that might affect transfer students. An appropriate mechanism shall be created to ensure that both two-year and four-year public colleges provide input or comments to the institution proposing the change. Sufficient lead time shall be provided to effect the change with minimum disruption. Transfer students are not required to repeat equivalent coursework successfully completed at a community college.

IX. Transfer Mediation Committee
A. There is a Transfer Mediation Committee, appointed by the Secretary, which is representative of the public four-year colleges and universities and the community colleges.
B. Sending and receiving institutions that disagree on the transferability of general education courses as defined by this chapter shall submit their disagreements to the Transfer Mediation Committee. The Transfer Mediation Committee shall address general questions regarding existing or past courses only, not individual student cases, and shall also address questions raised by institutions about the acceptability of new general education courses. As appropriate, the committee shall consult with faculty on curricular issues.
C. The findings of the Transfer Mediation Committee are considered binding on both parties.

X. Appeal Process
A. Notice of Denial of Transfer Credit by a Receiving Institution
   1. Except as provided in Section A.2 of this regulation, a receiving institution shall inform a transfer student in writing of the denial of transfer credit no later than midsemester of the transfer student’s first semester, if all official transcripts have been received at least 15 working days before midsemester.
   2. If transcripts are submitted after 15 working days before midsemester of a student’s first semester, the receiving institution shall inform the student of credit denied within 20 working days of receipt of the official transcript.
   3. A receiving institution shall include in the notice of denial of transfer credit:
      a. A statement of the student’s right to appeal, and
      b. A notification that the appeal process is available in the institution’s catalog.
   4. The statement of the student’s right to appeal the denial shall include notice of the time limitations in Section B of this regulation.
B. A student believing that the receiving institution has denied the student transfer credits in violation of this chapter may initiate an appeal by contacting the receiving institution’s transfer coordinator or other responsible official of the receiving institution within 20 working days of receiving notice of the denial of credit.
C. Response by Receiving Institution
   1. A receiving institution shall
      a. Establish expeditious and simplified procedures governing the appeal of a denial of transfer of credit, and
      b. Respond to a student’s appeal within 10 working days.
   2. An institution may either grant or deny an appeal. The institution’s reasons for denying the appeal shall be consistent with this chapter and conveyed to the student in written form.
   3. Unless a student appeals to the sending institution, the written decision in Section C.2 of this regulation constitutes the receiving institution’s final decision and is not subject to appeal.
D. Appeal to Sending Institution
   1. If a student has been denied transfer credit after an appeal to the receiving institution, the student may request that the sending institution intercede on the student’s behalf by contacting the transfer coordinator of the sending institution.
   2. A student shall make an appeal to the sending institution within 10 working days of having received the decision of the receiving institution.
E. Consultation Between Sending and Receiving Institutions
   1. Representatives of the two institutions shall have 15 working days to resolve the issues involved in an appeal.
   2. As a result of a consultation in this section, the receiving institution may affirm, modify, or reverse its earlier decision.
   3. The receiving institution shall inform a student in writing of the result of the consultation.
   4. The decision arising out of a consultation constitutes the final decision of the receiving institution and is not subject to appeal.

XI. Periodic Review
A. Report by Receiving Institution
   1. A receiving institution shall report annually the progress of students who transfer from two-year and four-year institutions within the state to each community college and to the Secretary of the Maryland Higher Education Commission.
2. An annual report shall include ongoing reports on the subsequent academic success of enrolled transfer students, including graduation rates, by major subject areas.

3. A receiving institution shall include in the reports comparable information on the progress of native students.

B. Transfer Coordinator

A public institution of higher education shall designate a transfer coordinator, who serves as a resource person to transfer students at either the sending or receiving campus. The transfer coordinator is responsible for overseeing the application of the policies and procedures outlined in this chapter and interpreting transfer policies to the individual student and to the institution.

C. The Maryland Higher Education Commission shall establish a permanent Student Transfer Advisory Committee that meets regularly to review transfer issues and recommend policy changes as needed. The Student Transfer Advisory Committee shall address issues of interpretation and implementation of this chapter.

Appendix C

Statement on Transferring Undergraduate College-Level Credits to UMUC

University of Maryland University College actively subscribes to the policy of the Maryland Higher Education Commission on the transfer of undergraduates within Maryland (found in Appendix B) and welcomes transfer students. UMUC is also a designated four-year Servicemembers Opportunity College (SOC); the SOC institutions have developed degree networks corresponding to Army, Navy, Coast Guard, and Marine career specialties. UMUC grants transfer credit for courses graded C or higher if they are applicable to an Associate of Arts (AA), a Bachelor of Arts (BA), a Bachelor of Science (BS), or a Bachelor of Technical and Professional Studies (BTPS) degree.

Credit earned elsewhere during a period of disciplinary dismissal or suspension may not be applied toward a degree from UMUC.

Students must submit official transcripts from all colleges and universities previously attended in order to receive a degree progress report, which includes transfer credit. (More information on credit evaluation is given on p. 243.)

Maximum Number of Transfer Credits Accepted

UMUC accepts up to 90 semester hours (45 semester hours for the associate's degree) of transfer credit from all sources combined toward the bachelor's degree. No more than 60 of the 90 semester hours may be accepted from two-year institutions (details on pp. 239–40).

Maximum Number of Credits Allowed for Innovative Learning

UMUC allows up to 60 semester hours of credit (one-half the total credit required for the bachelor's degree) for innovative learning that is applicable to the student's curriculum (subject to limitations as follows):

- Up to 30 semester hours of credit for a combination of portfolio assessment, course-challenge examinations, or military occupational specialties, i.e., MOS, NER, etc. (details on pp. 237 and 240).
- Up to 60 semester hours of credit for learning evaluated by means of standardized examinations such as the Advanced Placement examinations administered by the College Board, the College-Level Examination Program (CLEP), DANTES examinations, or the Excelsior College Testing Program, if (1) there is no duplication of other academic credit and (2) the scores presented meet the standards of UMUC (details on p. 241).
- Up to 15 semester hours of cooperative education credit (details on p. 239). However, cooperative education credit does not count toward requirements for graded coursework within the academic major, minor, or certificate. Students seeking a second bachelor's degree may receive up to 9 semester hours of cooperative education credit.
- Up to 60 semester hours of credit for study completed in military service schools based on recommendations made by the American Council on Education (ACE) in its Guide to the Evaluation of Educational Experiences in the Armed Services (details on p. 240).
- Up to 60 semester hours of credit for professional (not technical) courses that have been evaluated by either (1) the ACE National Guide to Educational Credit for Training Programs or (2) the University of the State of New York National Program on Noncollegiate Sponsored Instruction (PONSI) College Credit Recommendations (details on p. 240).
- Up to 21 semester hours of coherently related vocational and technical credit from regionally accredited institutions (details on p. 240).

Minimum Number of Credits Required for Instruction in the Major and for the Degree

UMUC requires students to complete 120 semester hours of credit for the bachelor's degree. Regardless of the number of transfer credits they present, students must complete a minimum of 30 credits at UMUC. Students must earn at least one-half of the credits required for the major, minor, or certificate through graded coursework. Graded coursework does not include credit earned through portfolio assessment, examination, or internship/Cooperative Education.

Grade Level Acceptable for Transfer

UMUC may accept transfer credits from regionally accredited two- and four-year colleges and universities for courses graded C or above, if they apply to the student's curriculum. The grade of C-minus is not acceptable in transfer.
Appendix E

Policy on Religious Observances
(UMUC Policy 51.00)

I. UMUC conforms to the Board of Regents Policy III-5.10 Concerning the Scheduling of Academic Assignments on Dates of Religious Observance, approved on January 11, 1990.

II. So that the academic programs and services of UMUC shall be available to all qualified students who have been admitted to its programs, regardless of their religious beliefs, students shall not be penalized because of observances of their religious holidays. Students who miss a course session because of an observance of their religious beliefs must be allowed
A. To make up any examinations, other written tests, or class work;
B. To have access to any handouts or other material distributed in class; and
C. To have the opportunity to obtain or review any duplicated lecture notes or slides presented in class.

III. UMUC prohibits scheduling examinations on the following religious holidays: Rosh Hashanah, Yom Kippur, and Good Friday.

Appendix D

Policy on Nondiscrimination
UMUC is committed to ensuring that all individuals have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by UMUC and/or University System of Maryland policy or by federal, state, or local authorities. UMUC does not discriminate against or harass any person because of race, religion, color, creed, gender, marital status, age, national origin, ancestry, political affiliation, mental or physical disability, sexual orientation, or veteran status (including Vietnam Era veterans). All inquiries regarding UMUC’s nondiscrimination statement or compliance with applicable statutes and regulations should be directed to the director, Diversity Initiatives, Office of the President, 3501 University Boulevard East, Adelphi, MD 20783-8000 (Phone: 301-985-7940; Fax: 301-985-7678; E-mail: diversity-initiatives@umuc.edu; Web site: www.umuc.edu/diversity).

In accordance with this nondiscrimination statement and UMUC’s commitment to equal access, UMUC has revised Policy 40.3 (Policy and Procedures on Affirmative Action, Equal Opportunity, and Sexual Harassment). Students may access the revised policy and procedures, online at www.umuc.edu/policy/admin04030.shtml or may contact the Office of Diversity Initiatives to have a copy mailed to them.

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Appendix F

Financial Aid Satisfactory Academic Progress Standard for Undergraduate Students

(UMUC Policy 220.30)

I. Introduction

A. These guidelines have been developed in accordance with federal financial aid statutes and regulations governing student eligibility. Students who receive financial aid must demonstrate financial need and make satisfactory academic progress as determined by University of Maryland University College pursuant to federal law.

B. Financial aid recipients are required to be in good standing and to maintain satisfactory academic progress toward their degree requirements for each semester in which they are enrolled. In addition to meeting the academic standards outlined in UMUC Policy 158.00 Academic Level of Progress, financial aid recipients are required to meet the satisfactory academic progress standards outlined in this policy. Satisfactory academic progress for financial aid recipients, as described below, is evaluated three times annually, in January, June, and August. Failure to maintain satisfactory academic progress, as described below, may result in cancellation of financial aid awards, and the student may have to repay any funds already received.

II. Minimum Standards for Undergraduate Students

A. UMUC’s institutional requirements for minimum satisfactory academic progress requirements for financial aid recipients are defined as follows:

1. Minimum cumulative grade point average (GPA). The student must maintain a minimum cumulative GPA of 2.0.

2. Minimum completion rate. The student must maintain a minimum cumulative completion rate of two-thirds of credits attempted (67 percent).

3. Maximum timeframe to completion—Federally mandated maximum timeframe to complete the program or degree. The student must complete his or her educational program within a time frame no longer than 150 percent of the published length of the educational program, as measured by credits attempted and including transfer credits (for example, the student must complete his or her program after attempting a maximum of 180 credits for a 120-credit program).

B. Federal regulations require that UMUC track the academic progress of financial aid recipients from the first date of enrollment at UMUC, whether or not financial aid was received. Credits transferred from all other credit sources will be considered as attempted and completed credits in the evaluation of the completion rate standards.

C. Students who do not earn their degree within the maximum timeframe to completion, outlined above, will be placed in Financial Aid Denied status, not Financial Aid Probation. No financial aid will be disbursed for the student during subsequent semesters/periods of enrollment unless the student has made an appeal of the Financial Aid Denied status and the appeal (described in section VI) is granted.

III. Treatment of W, I, AU, F, S, P, RT, H, and G Grades; No Grade Reported; and Repeated Coursework

A. Course withdrawals (W) after the drop/add period are not included in the GPA calculation, but are considered a noncompletion of attempted coursework.

B. Incomplete (I) grades are not included in the GPA calculation and are considered a noncompletion of attempted coursework until the I grade is replaced with a permanent grade and academic progress can be re-evaluated.

C. An audit (AU) grade or a course taken out of sequence grade (H) is not considered attempted coursework. It is not included in the GPA calculation or completion rate determinations.

D. A satisfactory grade (S), a passing grade (P), or a repeat through transfer grade (RT) is treated as attempted credits, which are earned but not included in calculation of the GPA.

E. F grades will be treated as attempted credits that were not earned, and so will be included both in the calculation of the GPA and minimum completion rate. This is true for both F grades (failure, academic) and for FN grades (failure due to nonattendance).

F. If a G grade (grade pending) or no grade is assigned, for any reason, it will not be included in the GPA calculation and will be considered a noncompletion of attempted coursework until a grade is assigned and academic progress can be re-evaluated.

G. The highest grade earned in a course that is repeated will count in the GPA computation, but every repeated attempt will be included in the completion rate determinations. No financial aid can be disbursed for a repeated attempt if the student already has achieved a passing grade for that course.
IV. Financial Aid Probation Status
A. Undergraduate students who fail to meet the minimum 2.0 cumulative GPA standard or fail to complete at least two-thirds of cumulative credits attempted will be placed on Financial Aid Probation for the subsequent semester/period of enrollment.
B. Financial aid is received during the probationary period. Financial aid disbursements for the following semester/period of enrollment will be held until the grades and course completions have been reviewed for the probationary semester/period of enrollment.
C. Undergraduate students receiving financial aid for the first time will be placed on Financial Aid Probation if they do not meet the minimum GPA or course-completion standards as noted in this policy.

V. Financial Aid Denied Status
A. Undergraduate students who, while on Financial Aid Probation or in Financial Aid Denied status, fail to maintain the minimum completion rate of 67 percent and/or fail to maintain a minimum cumulative GPA of 2.0 will be placed in Financial Aid Denied status for the following semester/period of enrollment. No financial aid will be disbursed during subsequent semesters/periods of enrollment until the student is removed from Financial Aid Denied status.
B. Undergraduate students who do not earn their degree within the maximum timeframe to completion will also be placed in Financial Aid Denied status. No aid will be disbursed during subsequent semesters/periods of enrollment unless the student has made an appeal and the appeal is granted for that semester/period of enrollment (section VII of this policy describes appeal procedures). There are no exceptions to this requirement.

VI. Reinstatement of Aid After Financial Aid Denied Status
A. Reinstatement of financial aid after a student is placed in Financial Aid Denied status is achieved in one of the following ways:
   1. The student submits a written letter of appeal in accordance with the appeal process, and the Financial Aid Appeals Committee grants the appeal. The student is placed on Financial Aid Probation for the semester/period of enrollment rather than in Financial Aid Denied status.
   2. The student attends UMUC, pays for tuition and fees without the help of student financial aid, and does well enough in the course work to satisfy all the satisfactory academic progress standards. The student regains aid eligibility in a probationary status. Students who are in Financial Aid Denied status for failure to graduate within the maximum timeframe to completion cannot regain eligibility this way. Students who are beyond the maximum timeframe to completion cannot regain financial aid eligibility except on a semester/period of enrollment–by–semester/period of enrollment basis through the appeal process.

VII. Appeal Process
A. The student must submit an appeal of Financial Aid Denied status in writing to the associate director of Financial Aid by the date specified in the Financial Aid Denied notification letter.
B. The Financial Aid Appeals Committee will review the appeal and notify the student in writing of their decision within 14 working days after the Appeals Committee meets and makes its determination.

Appendix G
Policy on Disclosure of Student Records
(UMUC Policy 210.14)

I. Introduction
In accordance with the Family Educational Rights and Privacy Act (FERPA) of 1974 (also known as “the Buckley Amendment”), this policy informs students of their rights to:
A. Inspect and review their education records;
B. Seek an amendment of their education records, where appropriate;
C. Limit disclosure to others of personally identifiable information from education records without the student’s prior written consent; and
D. File formal complaints alleging a violation of FERPA with the Department of Education.

II. Definitions
A. “Student” is an individual who is attending or who has attended UMUC. It does not include any applicant for admission to UMUC who does not matriculate, even if he or she previously attended UMUC.
B. “Education records” are records that contain information directly related to a student that are maintained by UMUC or by a third party on behalf of UMUC. The following records are not education records:
C. Procedure to Request Review and/or Inspection of Education Records

Requests for review and/or inspection of education records should be made in writing to the appropriate custodian of records, as defined above. The custodian of records or designee will comply with a request for access within a reasonable time by arranging for the student to review his or her records in the presence of a staff member. If facilities permit, a student may obtain copies of his or her records by paying reproduction costs. The fee for copies is 20 cents per page. UMUC will not provide copies of any transcripts in the student's records other than the student's current UMUC transcript. Official transcripts (with the seal of UMUC) will be provided for a separate fee.

IV. Amendment of Education Records

Students may request an amendment of their education records in accordance with this procedure:

A. Request to Amend Education Records

A student who believes that his or her education record is inaccurate, misleading, or in violation of the student's rights of privacy may ask the custodian of the education records to amend the record. The custodian of the education records or designee will decide whether to amend the record within a reasonable time after the request. If the custodian of the education records or designee decides not to amend the record, he or she will inform the student of the right to a hearing.

B. Hearings

1. A student may submit a written request for a hearing to challenge the content of his or her education records to the university registrar. The written request must state what records the student believes are inaccurate, misleading, or in violation of the student's privacy rights.

2. A hearing will be conducted by the university registrar or designee. The hearing may take place via telephone or video conferencing. The student will be given an opportunity to present evidence relevant to the issues raised and may be assisted or represented by individuals of his or her choice at his or her own expense, including an attorney.

3. A written decision will include a summary of the evidence and the reasons for the decision.
V. Disclosures

UMUC will not disclose education records or the personally identifiable information contained therein unless permitted by FERPA and under the following circumstances:

A. Prior Written Consent

The custodian of the records will provide the education records or personally identifiable information contained therein if the student provides prior written consent that the information may be disclosed. The consent must

1. Specify the records that may be disclosed;
2. State the purpose for the disclosure;
3. Identify to whom the disclosure is to be made; and
4. Be signed and dated by the student.

At the student's request and expense, a copy of the records disclosed will be provided to the student.

B. Directory Information

1. UMUC designates the following categories of information as directory information:

   a. Name;
   b. Major field of study;
   c. Dates of attendance;
   d. Degrees and awards received;
   e. Previous educational institution most recently attended; and
   f. Birth date.

2. Directory information may be disclosed in the absence of consent unless the student files a written notice, within three weeks of the first day in which the student is enrolled, informing UMUC not to disclose any or all of the categories. To prevent automatic disclosure of directory information, this notice must be filed annually within the time allotted above, with the appropriate custodian of the education records, as defined in this policy.

C. Additional Disclosures Without Prior Consent

Prior consent is not required for disclosure of education records or the personally identifiable information contained therein in the following circumstances:

1. The disclosure is to other school officials generally within the University System of Maryland (USM) or UMUC who have legitimate educational interests.
   a. “School officials” includes internal and external instructional or administrative personnel who are or may be in a position to use the information in furtherance of a legitimate educational objective, such as to provide student services. This includes, but is not limited to, faculty, staff members, and security personnel.
   b. “Legitimate educational interests” include interests directly related to the academic environment.

2. The disclosure is to officials of other schools in which a student seeks to enroll or is enrolled. Upon his or her request and at his or her expense, the student is provided with a copy of the records that have been transferred.

3. The disclosure is to authorized representatives of the comptroller general of the United States, the secretary of the U.S. Department of Education, and state or local educational authorities.

4. The disclosure is to authorized persons and organizations in connection with a student’s application for, or receipt of, financial aid—but only to the extent necessary for such purposes as determining eligibility, amount, conditions, and enforcement of terms and conditions.

5. The disclosure is to state and local officials to whom, according to effective state law adopted prior to November 19, 1974, such information is specifically required to be reported.

6. The disclosure is to organizations conducting educational studies for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction. The studies shall be conducted so as not to permit personal identification of students to outsiders, and the information is destroyed when it is no longer needed for those purposes.
Appendix H

Policy on Shared Governance

In accordance with Board of Regents I-6.00 Policy on Shared Governance in the University System of Maryland, UMUC developed a new worldwide shared governance structure. Each of the three primary stakeholder groups—students, faculty, and staff—of UMUC has an advisory council consisting of elected representatives. These councils advise senior UMUC leadership on broad issues related to the university’s strategic planning, communications, academic initiatives, and other issues. Further, there is a University Advisory Council, made of representatives from each of the three stakeholder councils, to advise and assist the president of UMUC.

Student Advisory Council

The Student Advisory Council consists of twelve (12) student representatives from UMUC locations worldwide and includes both undergraduate and graduate students. Student Advisory Council representatives serve on the overall University Advisory Council, the Graduate Council, and the Undergraduate Curriculum Committee. The Student Advisory Council provides senior management with critical input on a wide variety of institutional initiatives that affect students and student life at UMUC. To learn more about the Student Advisory Council or contact a representative, students should visit the Web page at www.umuc.edu/gov/stac.

D. Record of Disclosures

UMUC maintains with the student’s education records a record of each request and each disclosure, except for

1. Disclosures to the student himself or herself.
2. Disclosures made pursuant to the written consent of the student (the written consent itself suffices as a record).
3. Disclosures to USM instructional or administrative officials.
4. Disclosures of directory information. This record of disclosures may be inspected by the student, the official custodian of the records, and other officials of UMUC and governmental officials.

VI. Right to File Complaint

A student alleging that UMUC has not complied with the Family Educational Rights and Privacy Act (FERPA) may file a student grievance in accordance with UMUC’s Student Grievance Procedures (Policy 130.70) or submit a written complaint to

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-4605
UMUC SITES

Service and Classroom Locations
Major administrative centers are indicated by an asterisk.

Stateside

Maryland
Aberdeen Proving Ground
Adelphi
(UMUC headquarters)*
Allegany Community College
Andrews Air Force Base
Anne Arundel Community College
Arundel Mills (Anne Arundel Community College Center)
Baltimore City Community College
Bethesda National Naval Medical Center
Carroll Community College
Cecil Community College
Chesapeake College
College of Southern Maryland
(St. Mary’s, Leonardtown, Prince Frederick)
Community College of Baltimore County
Dorsey Station*
Fort Detrick
Fort Meade
Frederick Community College
Garrett Community College
Hagerstown Community College
Harford Community College
Howard Community College
Laurel College Center
Montgomery College
Patuxent River Naval Air Warfare Center
Prince George’s Community College
Southern Maryland Higher Education Center
University of Maryland, College Park
USM at Hagerstown
USM Shady Grove Center*
Waldorf Center for Higher Education*
Wor-Wic Community College

District of Columbia and Virginia
Bolling Air Force Base
Fort Belvoir
Fort Myer
Henderson Hall, Navy Annex
Marine Corps Base Quantico
Navy College–Anacostia
Pentagon
Walter Reed Army Medical Center

Europe

Afghanistan
Bagram
Kabul
Kandahar
Salerno

Bahrain
Manama

Belgium
Brussels
Kleine Brogel

Bosnia-Herzegovina
Tuzla-Eagle Base

Egypt
Sinai North Camp
Sinai South Camp

Germany
Ansbach
Babenhausen
Bamberg
Baumholder
Böblingen
Büchel
Bühlungen
Darmstadt
Dresden
Friedberg
Garmisch

Greece
Souda Bay

Italy
Aviano
Gaeta
Ghedi
La Maddalena
Livorno
Naples
Siconella NAS1
Vicenza

Kuwait
Ali Al Salem Air Base
Camp Arifjan
Camp Buehring
Camp Patriot
Camp Virginia

* Administrative center
Netherlands
AFNORTH
Volkel

Portugal
Lajes
Lisbon

Qatar
Aluweid
Camp As Sayliyah
Qatar-Doha

Serbia and Montenegro
Bondsteel
Montieth

Spain
Rota

Turkey
Incirlik
Izmir

United Kingdom
Alconbury
Croughton
Fairford
Harrogate
Lakenheath
Mildenhall
Molesworth
St. Mawgan
West Ruislip

Asia

Australia
Alice Springs

Central Japan
Atsugi
Camp Fuji
Iwakuni
Misawa
Sasebo
Yokosuka
Yokota*
Zama

China
U.S. Embassy, Beijing

Guam
Andersen
COMNAVVAR
NCTS

Marshall Islands
Kwajalein

Okinawa
Camp Courtney
Camp Foster
Camp Hansen
Camp Kinser
Camp Lester
Camp Schwab
Camp Shields
Futenma
Kadena*
Torii Station

Singapore
497th Combat Training Squadron

South Korea
Camp Carroll
Camp Casey
Camp Colber
Camp Henry
Camp Hialeah
Camp Hovey
Camp Humphreys
Camp Long
Camp Red Cloud
Camp Stanley
Chinhae
K-16
Kunsan
Kwangju
Osan
Pilsong Range
Pohang
Suwon
Yongsan*

Thailand
JUSMAG THAI/
U.S.Embassy

* Administrative center
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Degree Planning Worksheet

This worksheet is designed to help you plan and track your progress toward your degree. It lists all of the graduation requirements in the recommended sequence. For full course descriptions, please refer to pp. 112–225 of this catalog.

<table>
<thead>
<tr>
<th>SEQUENCE</th>
<th>COURSE TAKEN</th>
<th>TERM TAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses are listed in the order in which you should take them. Changes in courses and order may affect other elements of the degree plan. Recommendations will differ for specific majors. Refer to catalog for alternatives to recommended general education requirements (GERs). Courses used for GERs may not be applied toward major or minor requirements.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FIRST COURSES (10 credits) Take within first 18 credits.**
Take placement exams before registering for English and math courses.

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TAKEN</th>
<th>TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDCP 100 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIBS 150 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 101 or ENGL 101X (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 105 or higher (3)</td>
<td></td>
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</tr>
</tbody>
</table>

**INTRODUCTORY COURSES (16 credits) Take within first 30 credits.**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TAKEN</th>
<th>TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVPT 170 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 101 and BIOL 102 (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 291 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFSM 201 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHIL 140 or foreign language course (3)</td>
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</tr>
</tbody>
</table>

**FOUNDATION COURSES (24 credits) Take within first 60 credits.**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TAKEN</th>
<th>TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 200 or other statistics course (3) if required for major</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSYC 100 or SOCY 100 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSCI 100 or ASTR 100 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIST 142 or HIST 157 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPCH 100, COMM 380, or ENGL 281 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFSM 304 or BMGT 496 (3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SEQUENCE

At least half of credits for major must be upper level and half taken through UMUC. See catalog for requirements for specific major.

<table>
<thead>
<tr>
<th>COURSE TAKEN</th>
<th>TERM TAKEN</th>
</tr>
</thead>
</table>

### ADDITIONAL REQUIRED COURSES FOR MAJOR AND DEGREE (36–44 credits)

Take after introductory/foundation courses.

- ENGL 391/391X, COMM 393/393X, or COMM 394/394X (3) Upper-level intensive writing
- ANTH 344, BMGT 392, or HUMN 351 (3) Or other international perspective course
- Major course requirement (3) See requirements of specific major
- Major course requirement (3)
- Major course requirement (3)
- Major course requirement (3)
- Major course requirement (3)
- Major course requirement (3)
- Major course requirement (3)
- Major course requirement (3)
- Major course requirement (3)
- Major course requirement (3)

### MINOR OR ELECTIVES (15 credits, at least 9 upper level for minor)

Complete in last 60 credits along with major courses.

See requirements of specific minor.

### ADDITIONAL ELECTIVES (14–22 credits)

Choose any courses to meet 120 credits for degree. Note upper-level minimum requirements.

Complete in last 60 credits along with major and minor courses.

### TOTAL: 120 CREDITS

### CHECKLIST FOR FULFILLMENT OF DEGREE REQUIREMENTS

- 30 credits at UMUC, including at least half of the major and minor and 15 credits upper level.
- 45 credits upper-level credit, including half the credit for the major and for the minor.
- All required courses and minimum number of credits for major and minor.
- Prerequisites for major and minor courses, if needed.
- All general education requirements.
- International perspective requirement.
- Historical perspective requirement.
- Civic responsibility perspective requirement.
- Grade of C or better in all courses for the major and minor.
- Overall GPA of at least 2.0.
- At least half the credit for the major earned through graded coursework.
- Total 120 credits.
At University of Maryland University College (UMUC), a high-quality education is always within reach. UMUC is dedicated to offering on-site and online courses and resources to adult students in Maryland and around the world. The leading education provider for the U.S. military, UMUC serves nearly 54,000 servicemembers worldwide. With more than 130 global course locations and 100 undergraduate and graduate degree and certificate programs offered entirely online, UMUC makes it possible to earn a widely respected degree from just about anywhere.

UMUC’s commitment to students around the globe extends far beyond providing access to excellent degree programs. An online academic and administrative services portal, MyUMUC, makes it simple for students to register for courses, pay tuition, and order textbooks and other supplies when it’s convenient for them. Students can also access academic and career advising, financial aid counseling, library services, and much more online via the university’s Web site or by phone or e-mail. All over the world, UMUC gives its students what they need to succeed, putting goals within their reach.

This catalog provides the degree requirements and recommended curriculum for students who begin continuous study on or after August 1, 2006. (Details are listed on p. 8.) Students should keep their catalog available for easy reference throughout their degree program.

### ACADEMIC CALENDAR

#### STATESIDE

**FALL 2006**
- Registration begins: May 2006
- Standard term: September 5–December 19, 2006
- Session 1: September 5–October 24, 2006
- Session 2: October 25–December 19, 2006

**SPRING 2007**
- Registration begins: October 2006
- Standard term: January 24–May 10, 2007
- Session 1: January 24–March 18, 2007
- Session 2: March 26–May 10, 2007
- Midspring: March 26–June 30, 2007

#### SUMMER 2007

- Registration begins: February 2007

**UMUC ASIA**
- Term I: August 21–October 14, 2006
- Term II: October 30–December 23, 2006
- Term III: January 22–March 17, 2007
- Term IV: April 2–May 26, 2007
- Term V: June 4–July 28, 2007

**UMUC EUROPE**
- Term I: August 21–October 14, 2006
- Term II: October 30–December 23, 2006
- Term III: January 15–March 10, 2007
- Term IV: March 26–May 19, 2007
- Term V: June 4–July 28, 2007

#### COMMENCEMENT
- May 12, 2007

### ACCREDITATION

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