Contents

Academic Calendar 1985-1986 ...................... 1
Fall Semester, 2
Spring Semester, 4
Testing Calendar, 7
Summer Session, 7
Programs of Study, 8

Profile of George Mason University ............... 10
Mission, 11
History, 12
Northern Virginia, 12
Academic Structures and Programs, 13
Facilities, 15
Educational Centers, 17
University Offices and Information, 20

Student Affairs .................................. 24
Student Services, 27
Student Regulations, 31
Tuition and Fees, 32
Financial Assistance, 35

Undergraduate Policies and Procedures .......... 39
Admission Policies, 40
Procedures, 42

College of Arts and Sciences .................... 57
American Studies, 62
Area Studies, 64
Art, 68
Biology, 70
Chemistry, 74
Communication, 75
Computer and Information Sciences, 77
Economics, 78

Electrical and Computer Engineering, 79
English, 81
Foreign Languages and Literatures, 83
Geology, 85
History, 86
Mathematical Sciences, 88
PAGE (Plan for Alternative General Education), 90
Performing Arts, 91
Philosophy and Religion, 102
Physics, 105
Psychology, 107
Public Affairs, 109
Social Work, 112
Sociology and Anthropology, 113

College of Professional Studies ................. 115
Education, 117
Health and Physical Education, 123
Nursing, 128

School of Business Administration ............. 131
Accounting and Business Legal Studies, 136
Decision Sciences, 136
Finance/Real Estate and Urban Development, 137
Management, 138
Marketing/Logistics, 138

Division of Continuing Education ............... 139
Certificate Programs, 148
University Courses, 151

Course Dictionary ................................ 153
Glossary, 154
Course Numbering and Abbreviations, 155

Administration and Faculty ...................... 227
Board of Visitors, 228
Administration, 228
Faculty, 230

Reference ....................................... 257
Honor Code, 258
State Domicile Legislation, 261
Areas of Study Leading to Degrees, 264
General Regulations, 267
Notices, 268
Campus Map, 270
Visiting the Campuses, 272
Index, 276

Directory ....................................... 286

http://catalog.gmu.edu
Academic Calendar
1985–1986
Fall Semester 1985

Friday, March 1.
Last day for filing freshman and all international student (nonimmigrant status) undergraduate admissions applications for Fall 1985.

Monday, April 1.
Last day for filing Graduate School fellowship applications for doctoral students.

Monday, April 1.
Last day for filing Ph.D. Biology and Ph.D. Economics admissions applications for Fall 1985.

Monday, April 15.
Last day for filing transfer undergraduate admissions applications for Fall 1985.

Wednesday, April 24 through Friday, April 26
Foreign language placement testing for undergraduates.

Monday, April 29 and Tuesday, April 30.
Foreign language placement testing for undergraduates.

Wednesday, May 1.
Last day for filing master's admissions applications for Fall 1985.

Wednesday, May 1.
Last day for filing Graduate School fellowship applications for master's students.

Monday, June 10 and Tuesday, June 11.
Foreign language placement testing for undergraduates.

Wednesday, June 12 through Friday, June 14.
Orientation programs and placement testing for undergraduates; early registration for certain newly admitted students (by invitation only); English composition proficiency exam (Thursday only).

Monday, July 15.
Dance major auditions (by appointment).

Monday, July 19.
Last day for mail-in/hand-in registration for Fall. Registration in person continues by priority groups.

Tuesday, July 16 through Thursday, July 18.
Orientation program and early registration for certain newly admitted students (by invitation only).

Thursday, July 18
Last day for taking Nursing proficiency exams for academic year 1984-85.

Friday, July 26.
Summer master's theses and doctoral dissertations due in Office of the Graduate Dean.

Tuesday, August 6.
Tuition and fees due for early-registered students (Payment with late fee will be accepted until August 16).

Monday, August 19.
Fall registrations canceled for early registered students who have not made arrangements for payment with Cashier. (Students who cancel and do not reregister for Fall classes are assessed a $20 administrative fee.)

Wednesday, August 21 through Thursday, August 29.
Registration and adjustment. (For times and priorities see Schedule of Classes.)

Friday, August 23.
BIOL 124-125 examination for nurses. Music competency placement tests.

Saturday, August 24.
Choral auditions (by appointment).

Monday, August 26 and Tuesday, August 27.
Welcoming days, orientation programs for new faculty and for certain newly admitted students (by invitation only); English composition proficiency examination and mathematics placement testing (Monday only).

Monday, August 26 through Friday, August 30.
Foreign language placement testing.

Monday, August 26.
Music major auditions and choral auditions (by appointment).
Wednesday, August 28.
Music major auditions (by appointment).

Thursday, August 29.
Choral auditions (by appointment).

Thursday, August 29.
Extra schedule adjustment day.

Saturday, August 31.
Chamber orchestra and choral auditions (by appointment).

Monday, September 2.
Labor Day; University closed.

Tuesday, September 3.
First day of classes.

Tuesday, September 3 through Wednesday, September 4.
Foreign language placement testing.

Friday, September 6 through Friday, September 27.
Pick up Winter bachelor's degree applications at the Office of the Registrar. (Application must be completed and returned with fee no later than September 28.)

Tuesday, September 10.
Last day for adding new courses (except those meeting only once a week).

Tuesday, September 10.
Last day for a full tuition refund (less $20 fee).

Wednesday, September 11.
Second deferred tuition payment due.

Tuesday, September 17.
Last day for adding those new courses which meet only once a week.

Tuesday, September 17.
Last day for a partial tuition refund—second week.

Friday, September 20.
Patriots Day

Tuesday, September 24.
Last day for partial tuition refund—third and final week.

Tuesday, September 24.
Last day for dropping a course without incurring a grade of F.

Monday, September 30.
Last day for filing Winter degree and certificate applications (master's and doctoral) in Office of the Graduate Dean.

Tuesday, October 1.
Last day to apply for acceptance to junior standing in the School of Business Administration for Spring 1986.

Tuesday, October 1.
Last day for filing Ph.D. Economics admissions applications for Spring 1986.

Thursday, October 10.
Third deferred tuition payment due.

Sunday, October 13 through Tuesday, October 15.
Recess (Note: Monday classes and laboratories meet on Wednesday this week only).

Wednesday, October 16.
Monday classes and laboratories meet on Wednesday at Monday scheduled times and places: Wednesday scheduled classes and laboratories do not meet this week.

Thursday, October 31.
Spring Semester Schedule of Classes (registration calendar) published. Mail-in/hand-in registration commences for designated categories of students the day after schedules are distributed. For times and priorities, see Schedule of Classes.

Friday, November 1.
Last day for filing master's, Ph.D. Biology, and Ph.D. Information Technology admissions applications for Spring 1986.

Friday, November 1.
Last day for filing undergraduate admissions applications for Spring 1986 for international students (nonimmigrant status).

Friday, November 1.
Music major auditions (by appointment)

Friday, November 15.
Deadline for application for junior standing in Nursing for Spring semester.

Friday, November 15.
Last day for financial aid applications for Spring 1986.

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Spring Semester 1986

Friday, November 15.
Winter master’s theses and doctoral dissertations due in Office of the Graduate Dean.

Monday, November 18.
Start counseling for Spring Extended Studies enrollees.

Thursday, November 28 through Sunday, December 1.
Thanksgiving recess: University closed.

Monday, December 2.
Last day for filing undergraduate admissions applications for Spring 1986 (international student deadline November 1).

Wednesday, December 4 through Thursday, December 5.
Foreign language placement testing for undergraduates.

Thursday, December 5.
Orientation and registration for new undergraduates (by invitation).

Friday, December 6.
Last day for mail-in/hand-in registration for Spring 1986. Registration in person continues by priority groups.

Saturday, December 14.
Last day of classes.

Monday, December 16.
Tuition and fees due for early registered students. Payment with late fee will be accepted until January 3.

Monday, December 16 through Monday, December 23.
Examinations (for times, see Schedule of Classes).

Thursday, December 19.
Early registration ends.

Tuesday, December 24.
Intersemester break begins.

Wednesday, December 25 through Wednesday, January 1.
University closed.

Friday, January 4.
Last day for payment with late fee for early registered students for Spring 1986.

Monday, January 6.
Spring registrations canceled for early registered students who have not made arrangements for payment with cashier. Students who cancel and do not reregister for Spring are assessed a $20 administrative fee.

Wednesday, January 8 through Thursday, January 16.
Registration and schedule adjustment (for times and priorities see Schedule of Classes).

Thursday, January 9 and Friday, January 10.
Foreign language placement testing for undergraduates.

Friday, January 10.
Dance major auditions (by appointment).

Friday, January 10.
BIOL 124-125 examinations for nurses. Music competency placement tests.

Friday, January 10 and Monday, January 13.
Welcoming day; orientation programs and early registration for new undergraduates; English composition proficiency examination and mathematics placement testing for undergraduates.

Monday, January 13.
Choral auditions (by appointment).

Monday, January 13 through Friday, January 17.
Foreign language placement testing for undergraduates.

Tuesday, January 14.
Music major auditions (by appointment).

Thursday, January 16.
Extra schedule adjustment day for Spring classes.

Thursday, January 16.
Choral auditions (by appointment).

Saturday, January 18 and Saturday, January 25.
Chamber orchestra and choral auditions (by appointment).

Monday, January 20.
First day of classes.
Monday, January 20 and Tuesday, January 21.
Foreign language testing for undergraduates.

Monday, January 27.
Last day for adding new courses (except those meeting only once a week).

Monday, January 27.
Last day for a full tuition refund (less $20 fee).

Saturday, February 1.
Last day to apply for acceptance to junior standing in the School of Business Administration for Fall 1986.

Monday, February 3.
Last day for filing D.A.Ed. admissions applications for Fall 1986.

Monday, February 3.
Last recommended date for filing financial aid applications for Fall 1986.

Monday, February 3.
Last day for adding those new courses which meet only once a week.

Monday, February 3.
Last day for partial tuition refund—second week.

Thursday, February 6.
Second deferred tuition payment due.

Friday, February 7 through Friday, February 28.
Pick up return Spring bachelor’s degree applications at Office of the Registrar (application must be completed and returned with fee no later than February 28).

Monday, February 10.
Last day for dropping a course without incurring a grade of F.

Monday, February 10.
Last day for a partial tuition refund—third and final week.

Friday, February 14.
Last day for filing Psy.D. admissions applications for Fall 1986.

Friday, February 28.
Last day for filing Spring degree and certificate applications (master’s and doctoral) in Office of the Graduate Dean.

Monday, March 3.
Last day for filing freshman and all international student (nonimmigrant status) undergraduate admissions applications for Fall 1986.

Monday, March 3.
Last day for filing master’s admissions applications for Summer Session.

Thursday, March 6.
Third deferred tuition payment due.

Friday, March 7.
Music major auditions (by appointment).

Friday, March 7.
Last day for filing financial aid applications for freshmen and transfer students for Fall 1986.

Friday, March 7 through Friday, March 28.
Pick up Summer bachelor’s degree applications at Office of the Registrar. (Applications must be completed and returned with fees no later than March 28.)

Sunday, March 9 through Sunday, March 16.
Midsemester recess.

Friday, March 17.
Deadline for application for junior standing in Nursing for Fall semester.

Monday, March 24.
Fall Semester Schedule of Classes (registration calendar) published. Mail-in/hand-in registration commences for designated categories of students the day after schedules are distributed. For times and priorities, see Schedule of Classes.

Friday, March 28.
Last day for filing Summer degree and certificate applications (master’s and doctoral) in Office of the Graduate Dean.

Monday, March 31.
Last day for financial aid applications for Summer 1986.

Tuesday, April 1.
Last day for filing D.P.A., Ph.D. Biology, and Ph.D. Economics admissions applications for Fall 1986.
Last day for filing Graduate School fellowship applications from doctoral students.

Friday, April 4.
Music major auditions (by appointment).
Tuesday, April 15.
Last day for filing transfer undergraduate admissions applications for Fall 1986.

Tuesday, April 15.
Spring master's theses due in Office of the Graduate Dean.

Friday, April 18.
Mason Day.

Thursday, April 24 and Friday, April 25.
Foreign language placement testing for undergraduates.

Thursday, April 24 and Monday–Tuesday, April 28–29.
Orientation and registration for new undergraduates (by invitation).

Monday, April 28 and Tuesday, April 29.
Foreign language placement testing for undergraduates.

Thursday, May 1.
Last day for financial aid applications for returning upperclassmen for Fall 1986.

Thursday, May 1.
Last day for filing master's admissions applications for Fall 1986.

Thursday, May 1.
Last day for master's degree students to file Graduate School fellowship applications.

Friday, May 2.
Music major auditions (by appointment).

Saturday, May 3.
Last day of classes.

Monday, May 5 through Monday, May 12.
Examinations (for times and snow day make-up, see Schedule of Classes).

Saturday, May 17.
Spring commencement.

Memorial Day observed; University closed.

Tuesday, May 27.
Summer Session begins.

Monday, June 2.
Music major auditions (by appointment).

Monday, June 9 and Tuesday, June 10.
Foreign language placement testing for undergraduates.

Wednesday, June 11 through Friday, June 13.
Orientation and registration of new undergraduates (by invitation).
## Testing Calendar

### On-Campus Testing Calendar for 1985-86

**1985**
- **CLEP**: 3/15; 4/19; 5/17; 6/14; 7/19; 8/16; 10/18; 11/15
- **CORE**: 3/30; 10/26
- **GMAT**: 3/16; 6/15; 10/19
- **GRE**: 4/13; 6/8
- **LSAT**: 3/2; 6/17; 10/5; 11/30
- **MAT**: 3/6; 4/3; 5/1; 6/5; 8/7; 9/4; 10/2; 11/6; 12/4
- **MCAT**: 4/27; 9/21
- **NAT TCH EXAM**: 4/20; 11/9
- **SAT**: 3/23; 5/4; 6/1; 8/3; 11/16
- **TESC**: 2/13; 3/7; 9/25; 10/17
- **TOEFL**: 3/9; 4/19; 5/11; 6/7; 7/12; 9/20; 12/6

**1986**
- **CLEP**: 3/14; 4/18; 5/16; 6/20
- **CORE**: 4/5
- **GMAT**: 1/25; 3/15; 6/21
- **GRE**: 
- **LSAT**: 2/15
- **MAT**: 1/8; 2/5; 3/5; 4/2; 5/7; 6/4
- **MCAT**: 4/19
- **NAT TCH EXAM**: 4/19
- **SAT**: 1/11; 3/8; 5/10
- **TESC**: 2/12; 3/6
- **TOEFL**: 2/7; 4/11; 6/6

## Summer Session

Summer Session consists of several terms, ranging in length from five to eight weeks, during the period May 27 through August 2. Classes are offered during both day and evening hours. For details, consult the Summer Session catalog, which is available mid-March.
Programs of Study

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<thead>
<tr>
<th>Undergraduate Degrees, Certificates, and Preprofessional Study</th>
<th>Certificate Programs</th>
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<tbody>
<tr>
<td>Existing, or planned for 1985-86. (See Reference Section for further information.)</td>
<td>Gerontology</td>
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<tr>
<td><strong>Undergraduate Degrees</strong></td>
<td>Teaching of English as a Second Language</td>
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<td>Accounting B.S.</td>
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<td>American Studies B.A.</td>
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<td>Anthropology B.A.</td>
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<td>Area Studies B.A.</td>
<td>Premedical</td>
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<td>Art B.A.</td>
<td>Preveterinary</td>
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<td>Biology B.A., B.S.</td>
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<td>Business Administration B.S.</td>
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<td>Chemistry B.A., B.S.</td>
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<td>Computer and Electronics Engineering B.S.</td>
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<td>Computer Science B.S.</td>
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<td>Dance B.F.A.</td>
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<td>Decision Sciences B.S.</td>
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<td>Early Childhood Education B.S. Ed.</td>
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<td>Economics B.A., B.S.</td>
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<td>Elementary Education B.S.Ed.</td>
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<td>English B.A.</td>
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<td>Finance B.S.</td>
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<td>Fire Administration and Technology B.S.</td>
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<td>French B.A.</td>
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<td>Geography B.A.</td>
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<td>Geology B.S.</td>
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<td>German B.A.</td>
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<td>Government and Politics B.A.</td>
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<td>Health Education B.S. Ed.</td>
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<td>History B.A.</td>
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<td>Individualized Study B.I.S.</td>
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<td>International Studies B.A.</td>
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<td>Medical Technology B.S.</td>
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<td>Park, Recreation, and Leisure Studies B.S.</td>
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<td>Psychology B.A., B.S.</td>
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<td>Public Administration B.S.</td>
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<td>Social Work B.S.</td>
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<td>Spanish B.A.</td>
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<td>Speech Communication B.A.</td>
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<td>Theatre B.A., B.F.A.</td>
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<td>Vocational Education B.S.Ed.</td>
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Profile of George Mason University
George Mason University, the State University in Northern Virginia, is a young and dynamic institution whose progressive and innovative approach to higher learning encompasses a modern emphasis on high technology for the future, along with the traditional respect for a liberal arts education that produces literate, well-rounded individuals who will be the leaders of tomorrow.

Located in a serene wooded setting that covers 583 acres in suburban Fairfax County, George Mason is just over half-an-hour’s drive from the nation’s capital. Students at George Mason can use the area’s vast libraries, laboratories, and museums, including the Library of Congress, the National Archives, the Smithsonian Institution, the Folger Shakespeare Library, the National Gallery of Art, the Brookings Institution, the National Geographic Society, and the Pan American Union. Washington is also a city of great parks and beautiful churches, excellent theatres, fine restaurants, internationally recognized art galleries, and historical places—all within easy reach.

Founded in 1957 as a two-year branch of the University of Virginia, the University was named for George Mason, author of the Virginia Bill of Rights in 1776. Mason was the chief designer of Virginia’s first constitution, an active participant in writing the Federal Constitution, a fiery orator, and a guardian of civil liberties. He exerted a profound influence on the political ideas of the Western world.

Since the main campus opened in Fairfax in 1964, the University has expanded its programs and facilities to include: the College of Arts and Sciences, the College of Professional Studies, the School of Business Administration, the School of Nursing, the School of Information Technology, the Graduate School, and the School of Law. It offers graduate, professional, and undergraduate degree programs in more than 90 fields on its main campus and 10-acre Metro campus in Arlington. Classes are also available through the Division of Continuing Education.

Modern student dormitories capable of housing more than 1,000 students are available, with additional units soon to be opened. An extensive sports and recreation complex housing a 200-meter track; basketball, tennis, and volleyball courts; a baseball and softball diamond; fencing lanes; handball/ racquetball courts; a weight room and saunas, will soon be complemented by a sports arena seating 10,000 persons. In addition, a Humanities Center for the performing arts has been approved for construction in the near future.

Major programs are offered in the Fine and Performing Arts, with George Mason’s own Harris Theatre serving as a focal point for student and professional drama, music, and dance presentations.

George Mason’s English Department is establishing a national reputation, with several distinguished writers on its faculty, while it attracts many internationally known authors as guests at its seminars and workshops.

Modern, fully-equipped scientific facilities, as well as computer services and facilities featuring the latest in state-of-the-art technology are also available to George Mason students. The University has computer centers with Hewlett-Packard 3000 computers, a CYBER 170/720 computer system and a Hewlett-Packard 2000 minicomputer, and manages two microcomputer labs containing Apples and IBM-PCs and numerous student and faculty terminal areas located throughout the George Mason campus.

Through cooperative programs with many of the outstanding high-technology firms in the surrounding area, such as PRC, Honeywell, Mitre, BDM, Hewlett-Packard, and Comsat, George Mason students benefit from first-hand contact with the engineering and technology community that many will seek to enter on graduation.

More than 250 student athletes from George Mason compete in 19 men’s and women’s sports, including
baseball, basketball, cross-country, golf, soccer, tennis, indoor and outdoor track and field, volleyball, and fencing.

George Mason is a sophisticated university with a diversified student population. The larger, full-time undergraduate student body is made up of students between the ages of 18 and 24, however, there is a growing number of part-time undergraduate and graduate students at George Mason who are 25 years of age or older. Foreign students, representing more than 90 different countries, comprise 9 percent of the student population. Highly qualified applicants, bringing a wide range of interests and backgrounds, come from every segment of modern society.

Dedicated to the education of the whole person, George Mason strives to provide an environment that supports and extends the formal learning situation beyond the classroom through its Student Affairs Program, which offers counseling, health and career planning centers, a student judicial system, and student activity groups. Six fraternities, five national sororities, and one local sorority represented on campus encourage their members to achieve academic excellence while participating in social and service activities to the University and surrounding communities.

The University library is a member of the consortium of universities of the Washington metropolitan area, providing direct borrowing privileges at the other universities. Facilities on both campuses house more than 448,000 volumes and acquire approximately 20,000 new books and 3,800 periodicals each year. Fenwick Library, on the main campus, is a leader in the field of applying computerized automation to library functions and services. In addition, it provides microcomputer-based access to more than 300 data bases of interest to researchers in all fields. Fenwick Library has been a selective depository for U.S. government documents since 1969, including special collections such as the Federal Theatre Project Collection.

George Mason University encourages the development of critical powers committed to the assumption of responsibility and action, respect for tradition and human reason, and an appreciation of life and all its endeavors. Dedicated to these goals, George Mason is moving forward with confidence into the twenty-first century.

“George Mason University will provide superior, traditional education enabling students to develop critical and analytical modes of thought and to make rigorous, honorable decisions,” said the 1980 Board of Visitors mission statement. “The University seeks to prepare students to interpret the complex questions facing them and society. It further seeks to meet the needs of students by providing the opportunity for innovative educational methods and programs; and it will enhance these programs with undergraduate, graduate and professional courses of study that are cross-disciplinary.

“The University will support a faculty which is excellent in teaching, active in pure and applied research and responsible to the needs of the community.

“The University will strive to be a resource of the Commonwealth serving government and private enterprise, and to be the intellectual and cultural focus of Northern Virginia.”
History

The University was named for George Mason of Gunston Hall in Fairfax County. During the American Revolution, this Northern Virginian framed the Virginia Declaration of Rights and later convinced his countrymen to adopt a Bill of Rights to the United States Constitution. Written guarantees spelling out the rights of free citizens are George Mason's greatest legacy.

George Mason University dates its beginnings from 1957 when the University of Virginia established a two-year branch college in Northern Virginia. Two years later, the City of Fairfax purchased and then donated 150 acres of land in Fairfax County just south of the city limits to the University of Virginia as a permanent campus for its new branch. The Board of Visitors of the University of Virginia named the school George Mason College in 1960.

In keeping with the vision that has shaped George Mason University, the first master plan was implemented in the early 1960s. It called for the construction of 19 buildings and an enrollment of 2,500 nonresident full-time students, based on the idea of cluster colleges. In 1964, 365 students occupied four new buildings and the first stage in the plan was completed.

George Mason College became a four-year degree-granting institution in 1966 when the General Assembly authorized its expansion. The Assembly also gave it a mandate to develop into a major regional university. In June 1968, the first senior class received degrees. Graduate programs began in 1970; the first graduate degrees were conferred in August 1971.

In the early 1970s, the George Mason College Board of Control, supported by the citizens of Alexandria, Falls Church, Arlington, and Fairfax County, acquired 422 additional acres, bringing George Mason's Main Campus near to its current size of 583 acres.

George Mason was ready to take the next step in meeting the growing needs of its constituents. On April 7, 1972, the Governor signed into law the legislation making George Mason an independent institution with university status. The welcome addition of the School of Law occurred in 1979, and in 1980 the University began its first doctoral programs.

Northern Virginia

Northern Virginia had a prophetic role in the founding of the Republic. In the summer of 1774, the "Freeholders and Inhabitants of the County of Fairfax" assembled to protest Britain's mistreatment of Massachusetts following the Boston Tea Party. By adopting the 24 resolutions of the Fairfax Resolves of July, 1774, they laid the groundwork for the Continental Congress and the subsequent American Revolution.

Today Northern Virginia, with a population of 1.2 million, is the scene of a rapid expansion in high technology. More than 800 high-tech firms operate in the fields of electronic research and development; operations research; computer programming, data processing; biology, chemistry and the environment; and telecommunications. Some of the largest firms are AT&T Long Lines Division, BDM Corporation, Boeing Computer Services, Comsat, Hazleton Laboratories, IBM, and Satellite Business Systems.

These corporations and the highly educated Northern Virginia citizens expect the region's major university to provide students with the complex skills needed in today's technological world. George Mason is meeting its citizens expectations not only in the areas of research and development, but also in the fields of literature and the fine and performing arts. Tomorrow's answers are not simply technical, but require the whole human imagination.

As our national economy makes the transition from an industrial economy to one based on service and largely dependent on technology, George Mason is providing well-trained leaders who understand the needs of the community and the nation and are prepared to meet them with foresight and imagination.

Today's college students are like their predecessors in their basic goal of working hard and sharing in America's spiritual and material prosperity. But the problems they face are perhaps more enigmatic and the strategies more untested than those facing previous generations. Universities such as the Massachusetts Institute of Technology, the University of North Carolina, and Stanford University are meeting these economic and social challenges boldly. George Mason University's vision is as great, its strategy as enterprising and its will to serve Northern Virginia as steadfast as these other institutions.

The Northern Virginia region is rich in history and natural resources. The fertile Shenandoah Valley and the Blue Ridge Mountains lie within an hour's drive to the west. Students can travel easily the 45-minute
drive east to Washington, D.C., and observe sessions of the House and Senate, conduct research at the Library of Congress, attend Kennedy Center performances, or view major science and art exhibitions at the National Gallery of Art and at the numerous national museums that belong to the Smithsonian Institution.

With its long and fascinating history, its modern high-tech facilities, and cultural and recreational opportunities, Northern Virginia is the right setting for the University of the twenty-first century—George Mason University.

The University has seven units headed by deans: Arts and Sciences; Professional Studies; Graduate School; Continuing Education; Business Administration; School of Law; and Summer Session. The catalog describes this organization, details programs and offerings, and outlines regulations, policies, procedures and support services.

College of Arts and Sciences

The College of Arts and Sciences is the largest and most diverse of the academic units. It grows out of what was earlier College I of George Mason College of the University of Virginia. The College has 20 departments—Art, Biology, Chemistry, Communication, Computer and Information Sciences, Economics, Electrical and Computer Engineering, English, Foreign Languages and Literatures, Geology, History, Mathematical Sciences, Performing Arts, Philosophy and Religion, Physics, Psychology, Public Affairs, Social Work, Sociology and Anthropology, and Systems Engineering.

With more than 400 faculty, the College provides more than 1,500 courses leading to the B.A., B.F.A., B.S., and B.M. degrees. The College also administers several interdisciplinary and interdepartmental programs and certificates. The College plans additional programs to complement current offerings. The broad range of graduate work of the Arts and Sciences departments, leading to M.A., M.S., M.F.A., M.P.A., D.P.A., Psy.D., and Ph.D. degrees is coordinated by the Graduate School.

Administrative offices of the College are located in Thompson Hall.

College of Professional Studies

The College of Professional Studies was created in 1972 by the division of George Mason College into two colleges. More than 100 faculty members in the College prepare students for human service professions by providing knowledge and challenges to stimulate inquiry and professional performance of an ethical nature.

Three academic departments—Education, Health and Physical Education, and Nursing—offer seven undergraduate degree programs leading to B.S., B.S.Ed., or B.S.N. degrees and seven graduate degree programs leading to the M.Ed., D.A.Ed., and M.S.N.

Administrative offices are in Robinson Hall.
School of Business Administration

The School of Business Administration offers six undergraduate programs of business study leading to the B.S. degree. Graduate study in the School of Business Administration is coordinated by the Graduate School of the University.

The School is composed of more than 60 faculty members, organized into five units: Accounting/Business Legal Studies; Decision Sciences; Finance/Real Estate and Urban Development; Management; and Marketing.

Administrative offices are in Robinson Hall.

Graduate School

Graduate study began at the University in 1970, with students receiving master’s degrees in 1971. The Graduate School was established in 1972, shortly after George Mason became an independent state university. The first two doctoral programs began in 1980.

The faculty are recognized for graduate faculty membership on the basis of outstanding scholarship and teaching. The School admits students to graduate programs following departmental recommendations, and coordinates all master’s- and doctoral-level offerings.

The School plans significant numbers of new master’s programs, together with implementation of select doctoral programs. For more information, see the 1984–85 Graduate Catalog.

Administrative offices are in Academic III.

School of Law

Until 1979, the George Mason University School of Law was a private institution, the International School of Law, founded in 1972 in the District of Columbia and relocated in the spring of 1977 to its present site in Arlington. The School of Law is one of three Virginia law schools functioning under the direction of state institutions. The School enrolls over 500 students and offers a regular curriculum for full- and part-time study, leading to the Juris Doctor (J.D.) degree.

Division of Continuing Education

The Division of Continuing Education performs functions associated with continuing and adult education, special programs, and lifelong learning.

The Division administers the Bachelor of Individualized Study (B.I.S.); evening undergraduate programs; the Extended Studies Enrollment procedure; off-campus credit courses; contract courses; undergraduate guest matriculant and senior citizen enrollment; education and nursing continuing education; and community service and noncredit activities.

The Division provides mechanisms for offering special programs. These programs originate in the appropriate University units, and remain subject to University regulations and procedures.

Administrative offices are in East Building.

Summer Session

The Summer Session at George Mason University has markedly increased educational opportunities for students in Northern Virginia. Four summer terms, ranging in length from five to eight weeks, are offered from May 27 to August 2. Both day and evening classes are available. Summer Session is presently in a separate catalog, which is available in early March from the Summer Session office. The offering of summer courses is controlled by a funding pattern more restrictive than that for the regular semesters. Students who wish to complete graduation requirements for summer commencement should understand that the University does not necessarily offer all required courses in any particular Summer Session.

http://catalog.gmu.edu
Facilities

Libraries and Special Collections

The students, faculty, and staff of George Mason University have access to library facilities on both campuses. The libraries are open for use by the general public; borrowing privileges are extended to those holding valid Library Borrower’s Cards. This includes authorized borrowers from member institutions of the Northern Virginia Consortium and the Consortium of Universities of the Washington Metropolitan Area, various corporate borrowers, and Friends of the Library.

The combined libraries contain 448,000 volumes, acquire approximately 20,000 new books each year, and receive more than 3,800 periodicals. Fenwick Library, the central collection on the Main Campus, contains more than 248,000 book volumes, 350,000 microforms, and subscribes to 3,100 periodicals. The Law Library at the Metro Campus includes more than 200,000 book volumes and subscribes to 700 legal and law-related journals.

Fenwick Library is a leader in the field of applying computerized automation to library functions and services. At the center of this effort is an automated library information system that provides computerized circulation, public catalog, and in-house processing services. In addition, the library provides microcomputer-based access to more than 300 data bases of interest to researchers in all fields. A complement to this service is the library’s active role in facilitating end-user access to this information by students and faculty—both through training and by providing a laboratory of microcomputer workstations.

Fenwick Library has been a selective depository for U.S. government documents since 1969. Additional government publications and other specialized collections are available in the microforms collection of the library (e.g., ERIC, Human Relations Area File, Library of English Literature, Library of American Civilization). Those items not available at the University may be borrowed through the library’s computerized interlibrary loan service. Special services for the handicapped include a TTY for hearing-impaired persons and a Kurzweil Reading Machine for the visually impaired.

Fenwick Library offers students a wide range of audiovisual services, including small-group viewing facilities for video cassettes, laser discs, 16 mm. films, slides, and filmstrips, and listening facilities for audiotapes and records. Osborne 1 microcomputers are available for loan to faculty, as well as assistance with film borrowing and rental arrangements. The Library Audiovisual Resource Center has a growing collection of media in most formats and is staffed during all regular library hours. Audiovisual equipment may be borrowed for use on campus from distribution sites in both Robinson and Thompson Halls. These offices also offer a variety of technical services, including audio and video recording and photographic slide production.

The Washington metropolitan area represents one of the premiere library and information resources in the nation, including the Library of Congress, the National Archives, the Smithsonian Institution, the Folger Shakespeare Library, Dumbarton Oaks, the National Library of Medicine, the National Agricultural Library, and the World Bank. There are also numerous university libraries and specialized collections. Fenwick Library is a member of the Consortium of Universities of the Washington Metropolitan Area, providing direct borrowing privileges at the other participating universities for faculty and degree-program graduate students. Fenwick Library also participates in a data base sharing program with the Fairfax County Public Library System and the MITRE Corporation.

The University Library also houses special collections and archives containing primary resource materials to be used by scholars in their research. More than 50 collections include these source materials for research:

The Federal Theatre Project Collection. Placed on permanent loan from the Library of Congress, this contains the major playscripts, radioscripts, sets, costume designs, and other creative materials produced by the Federal Theatre of the 1930s.

Northern Virginiana. This includes the papers of Congressman William Scott, historical collections from C. Harrison Mann, including rare historical maps, atlases, geographies, and law books relating to Virginia, and other papers of public officials.

Performing Arts Archives. Papers from the American Symphony Orchestra League and the Wolf Trap Foundation for the Performing Arts.

Photographic Collections. Prints and negatives, including those of Ollie Atkins, correspondent and photographer for the Saturday Evening Post and official White House Photographer from 1965 to 1974.

Rare Books. Includes first editions and rare historical materials.

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The George Mason University Archives. For further information about Fenwick Library, call 323-2616 or the main reference desk at 323-2392.

University Computing and Information Systems

University computing services are the responsibility of the Associate Senior Vice President for Computing and Information Systems (CIS).

Administrative Information Systems (AIS) operates an administrative computer center with Hewlett-Packard 3000 computers. Information Resource Management (IRM) supports staff computer training, maintains the George Mason local area network (Masonet) and microcomputers located in administrative offices, and develops statistical summaries for administrators.

Academic Computing Services (ACS) operates Control Data Corporation Cyber 170/730 and 180/830 mainframe computers and a Hewlett-Packard 2000 minicomputer. ACS also manages two microcomputer laboratories containing Apple, IBM, and Televideo personal computers. ACS maintains four public terminal clusters, two faculty terminal clusters, two microcomputer clusters, and a CAD/CAM graphics laboratory. Consultant support is available for students and faculty. Both AIS and ACS have administrative offices and computers in Thompson Hall.

ACS publishes the Academic Computing User Guide that describes academic computing facilities and support. New developments in academic computing support are announced in the ACS bimonthly publication, Academic Computing Services Newsletter. The Newsletter is available to faculty and staff by subscription and is posted in the Thompson computer center for students.

Computer systems at the University are connected by Masonet, the George Mason local area computer network. This state-of-the-art Sytek broadband communications network enables individuals across campus to access computers located in Thompson Hall. Faculty and students may also use ACS computers through telephone dialup.

Special purpose computer facilities exist for faculty research. The Computer and Information Sciences Department operates two Hewlett-Packard 1000 minicomputers and a Digital Equipment Corporation (DEC) PDP 11/44. The Engineering Department operates a DEC PDP 11/34 minicomputer and a microcomputer development system. Other University departments have microcomputers designated for specific purposes.

For further information concerning University computer facilities or capabilities call (703) 323-2941.

Electron Microscope

The Biology Department uses high-resolution transmission and scanning electron microscopes in the graduate biological ultrastructure course and for graduate and faculty research. Problems currently under investigation include studies of fine structure of marine bacteria and nerve, endocrine, excretory, vascular, and muscle cells in vertebrate and invertebrate animals.

Holbert L. Harris Theatre

The Holbert L. Harris Theatre, located in Robinson Hall, is George Mason's Main Campus performance facility for dance, music, and theatre. This 533-seat modified proscenium theatre houses dance events, music concerts, recitals, theatre productions, and major conference events.

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Educational Centers

The Center for Government, Society, and the Arts

The Center was established in 1980 to take advantage of the University's location and resources by developing programs based on the reciprocal relations among government, society, and the arts. Staffed by regular and visiting faculty from various disciplines, the Center has five major goals: (1) to serve as a focal point for government, society, and the arts; (2) to stimulate innovative research on public and social policy for the arts; (3) to help make the cultural resources of the university available to artists, art organizations, and the people of the Washington metropolitan area; (4) to enlist interest in the University's art programs; and (5) to develop new cooperative means of assisting artists and arts organizations throughout the Washington metropolitan area. The Institute on the Federal Theatre Project and New Deal Culture is part of the Center and makes use of the major archival collection of the Federal Theatre placed on deposit at George Mason by the Library of Congress in 1974.

Plan for Alternative General Education (PAGE)

Initially funded by the State of Virginia's Funds for Excellence in Higher Education, PAGE brings together faculty from every University department to design and review courses in this innovative general education program for freshmen and sophomores. The PAGE curriculum covers most or all general education requirements, except foreign languages, for all undergraduate majors. Courses are interdisciplinary and each is designed to promote critical thinking.

The Center for the Improvement of Productivity

Established in the Fall of 1983, the Center's primary mission is to assist both the public and private sectors in planning, implementing, and evaluating alternative strategies for productivity improvement. This goal is served through applied research and development contracts, training seminars, workshops and conferences, management briefings, and, eventually, graduate-level courses at the University. The Center draws primarily upon the GMU faculty as project staff members. Outside technical specialists and consultants are brought in when needed. Specific competencies are heavily represented in the disciplines associated with group behavior and dynamics, human factors research, socio-technical system design, and management development. Work of the staff is supplemented and supported by University specialists in computer technology, telecommunications, and graphics, as well as graduate students.

The Center for the Study of Market Processes

The Center for the Study of Market Processes, located in the Department of Economics, was established in 1981 to promote education and research in Austrian economics and related challenges to economic orthodoxy. Today, the Center directs the Austrian Economics Program, as well as a number of scholarly activities, including a weekly Austrian economics colloquium that allows students and faculty to discuss ideas on a more informal basis; a guest-lecture series that brings distinguished economists to campus; week-long educational conferences and one-day policy-oriented seminars; and a publications program that includes the Center's scholarly newsletter, Market Process. The Center also offers scholarships to assist students in the Austrian Economics Program.

The Center for the Study of Public Choice

The Center for the Study of Public Choice includes scholars (seven full-time faculty members in Economics, plus associated graduate students and visiting scholars), whose primary research interest is the interaction of two disciplines: economics and political science or, more broadly, the institutional structure of the political economy. Public Choice applies economic methodology of individual choice to an understanding of the institutions of government and politics. In addition to the seven full-time positions, the Center also provides a research base for visiting scholars from all over the world. These visiting scholars not only represent many different countries, but many different academic disciplines as well. Typically, there will be economists, philosophers, political scientists, and sociologists numbered among Center visitors. Among the Center's ongoing activities is a professional journal, Public Choice; a weekly seminar series; an annual Liberty Fund Series Conference; and an annual outreach program for young scholars.

George Mason Institute

The George Mason Institute (GMI) was established to develop a partnership in science and technology between industry and the public sector. The Institute was designed to develop the University as a center of excellence while contributing to the social, economic, and technological growth of industry and the community.

Science and technology involves the broadest possible definition, including physical sciences,
natural sciences, social sciences, and management sciences.

The University emphasizes the development of centers of excellence that are of maximum interest to industry and the government. Typical areas are computer science, computer and electronic engineering, decision science, environmental biology, finance, and economics.

The University provides a faculty liaison person as a point of contact for each GMI corporate member. The programs of the Institute emphasize instruction, research, professional exchange, and professional services. There is also an industrial liaison program.

The Northern Virginia Writing Project Northern Virginia Writing Project

Established in 1978 as an offshoot of the Bay Area Writing Project, the Northern Virginia Writing Project (NVWP) works cooperatively with George Mason University, Northern Virginia Community College, and the public and private schools of Northern Virginia to improve the quality of writing and writing instruction. During a five-week NVWP Summer Institute, 25 selected teachers of writing from the Northern Virginia area meet to examine problems and approaches involved in the teaching of writing. Upon successful completion of the Institute, the teachers become Teacher/Consultants of the NVWP and are prepared to serve as teacher/leaders in their own schools and as consultants for school district in-service programs.

The George Mason University Faculty Writing Project (FWP), a branch of the NVWP, works with University teachers from many disciplines to improve writing instruction for students across the curriculum. A five-week Summer Institute trains these faculty members as Teacher/Consultants who conduct workshops for colleagues. The FWP also publishes a newsletter of successful teaching practices for all George Mason faculty.

The Writing Research Center, the newest program of the NVWP, supports the work of teachers at all levels from throughout the state who study the writing practices of their students. The Center’s goals, the same as those of all other NVWP programs, are improved instruction and increased knowledge of the writing process.

Schools, colleges, and universities wishing to improve writing instruction through in-service workshops and conferences can arrange for the NVWP to design and coordinate special training programs for their faculties. The NVWP is directed by Donald R. Gallehr, Department of English.

The Center for Interactive Educational Technology

The Center for Interactive Educational Technology, housed in the Education Department, will feature a blend of the old and the new in instructional resources. The Center will have contemporary educational technology—two microcomputer laboratories and a center for the study of videodiscs and robotics. Students will be able to evaluate current instructional software or develop their own for particular subjects or classes. An audiovisual production laboratory will be available to those interested in more traditional approaches, as well as a K-12 curriculum center which will house both print and nonprint materials. The Center for Interactive Educational Technology will provide an excellent vehicle for student and faculty instruction and research.

The Educational Child/Youth Study Center

The Center offers diagnostic and tutorial services to students in public and private schools in Northern Virginia and offers career counseling to adolescents and adults in the area. It serves as a training facility for graduate students in Guidance and Counseling, Reading, and Special Education.

Center for Bilingual/Multicultural Teacher Preparation

This center offers a program which prepares bilingual teachers and English as a second language for service in multicultural and linguistically diverse classroom settings. Interested students should contact the Bilingual/Multicultural Center in the Education Department.

The Psychological Clinic

This clinic permits graduate psychology students to gain practical experience in the assessment of emotional, behavioral, and learning disorders in children and adolescents, and in the assessment of emotional and vocational problems of adults. Interviewing and testing are done by graduate students under the supervision of a staff clinical or counseling psychologist.

Federal Facilities.

Many federal laboratories and related facilities—such as the National Institutes of Health, the National Bureau of Standards, the Naval Research

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Laboratories, the NASA-Goddard Space Flight Center, and the Smithsonian Institution—enhance the educational environment for graduate students.

Metro Campus Professional and Conference Center

The University's Professional Center is located in Arlington at the Metro Campus, 3401 North Fairfax Drive, near the Virginia Square station of the Metro Orange Line. On the third floor of the Metro Campus, the Professional Center offers a broad selection of undergraduate and graduate courses.

Most graduate courses offered at the Professional Center are prerequisites for advanced graduate degrees in Business Administration and Public Administration, but each semester a variety of undergraduate courses are also offered. In addition, several Master's programs, including those in economics and human resource development, will be offered through the Professional Center in the Fall 1985 semester. Professional Center courses are scheduled in three-hour megablocks from 9 a.m. to 9 p.m. weekdays.

In addition to classrooms, the third floor of the Campus incorporates the University's Conference Center. A large area, seating 300, is used for University and community programs and for business and professional conferences.

The University Information Center on the Kirkwood Street side of the building provides information concerning all University programs and activities, including those at the Fairfax campus.

Schedules of offerings at the Professional and Conference Center are available at the Information Center, which also stocks University catalogs and other brochures. The Information Center telephone number is (703) 841-2604 and the mailing address is 3401 North Fairfax Drive, Arlington, Virginia 22201.

George Mason University Press

Under the guidance and administration of the Graduate School, the George Mason University Press came into existence in April 1983, by the signing of a memorandum of agreement with Associated University Presses. The GMU Press makes a specific contribution in fulfilling the overall mission of the University. That mission is to create and disseminate knowledge through teaching, research, and publishing. Whether in the form of books, monographs, research reports, conference proceedings, or symposia, a university press publishes works of scholarship judged worthwhile by other scholars and approved by a publications committee of the university faculty. George Mason University Press solicits manuscripts in all areas of general scholarship and seeks to promote communication between its faculty and scholars at other universities.
University Offices and Information

Affirmative Action

The primary objective of the office of Equal Employment Opportunity/Affirmative Action is to ensure compliance throughout the University with the institution's policy of nondiscrimination in employment on the basis of race, color, religion, national origin, sex, or age (except when sex or age is a bona fide occupational qualification); to foster and monitor affirmative action in employment on behalf of target groups; to investigate and make recommendations for resolution of grievances in which discrimination on the basis of membership in a target group is alleged. The office's overall objective is total equal employment opportunity for all present and potential George Mason University employees.

The office takes affirmative steps to increase the representation of all qualified minority groups in order to promote a more diverse and ethnically heterogeneous faculty and staff. Their office is located in 205 Finley (323-2519).

Employees who feel that they have been discriminated against should submit the matter to the Affirmative Action/Equal Employment Officer for investigation and possible resolution.

Minority Student Services

Minority Student Services is an administrative office that provides coordination for the University, with respect to its planning and programming, for ethnic minority students. The office coordinates those student services that are actually housed within their respective administrative units and assists the general University by providing continuity to services for minority students. Assisting students to understand their academic needs and then to find the appropriate way to meet them, is an important function of the office. Minority Student Services is located in Room 352 of the Student Union Building (323–2383).

Consortium Membership

George Mason University is the host institution of the Consortium for Continuing Higher Education in Northern Virginia. The other members are: Marymount College of Virginia, Northern Virginia Community College, the University of Virginia, Strayer College, and Virginia Polytechnic Institute and State University. The Consortium's primary goal is to foster interinstitutional cooperation while broadening the base of learning opportunities for adult students. Specific information is available in the Guide to Higher Education for Adults in Northern Virginia, distributed by the office of the Consortium Administrator, Division of Continuing Education, George Mason University, 4400 University Drive, Fairfax, Virginia 22030.

Office of Alumni Relations

George Mason University Alumni Association

The Office of Alumni Relations has the primary responsibility for initiating and coordinating alumni activities and programs in conjunction with the GMU Alumni Association.

The office, located at 4520 Roberts Road at the Main Campus, is open Monday through Friday from 8:30 a.m. until 5 p.m. The director encourages inquiries on all aspects of alumni relations. The office is interested in serving the needs of the alumni and invites alumni participation in programs supporting the GMU community.

The Office of Alumni Relations maintains address and biographical information on approximately 18,000 graduates. In addition, it assists in the publication of a quarterly University/Alumni magazine, which focuses on alumni achievement; academic programs; social opportunities; and special on-campus events and Alumni Association activities such as reunions, homecomings, awards banquets, and receptions. The office also coordinates the efforts of those alumni who volunteer to assist University offices: Admissions, Career Services, Public Relations, and Development.

Many alumni invest time, effort, and money in the University. The Alumni Association provides a variety of opportunities for service and support by alumni who want to assist George Mason University in becoming a stronger and more dynamic institution. The Alumni Association is organized under a Board of Directors, which includes representation from various chapters, academic areas, and special-interest groups. Some members of the Board are elected as at–large delegates. The Board concentrates on developing a stronger relationship between the University and the alumni body. This relationship is manifested through alumni/student scholarships and library funds, along with other benefits to alumni, the local community, and the University.

Both the staff of the Office of Alumni Relations and the volunteers from the Alumni Association participate in the advancement program of GMU through the University Development Office.
Alumni Association Officers for the period 1984 to 1986:
President: Jay R. Goldman, J.D., Law, '80
President-Elect: Ned C. Storey, B.S., Business Administration, '80
Vice President: V. Lee Strang, Jr., B.S., Government Pol., '83
Secretary: Carol Nicholson, B.S., Business Administration, '79
Treasurer: Charles H. Nance, J.D., Law, '82

Public Relations Services

Public Relations Services, located in Room 214 of the Finley Building, handles press and publicity for the University and produces a quarterly university magazine featuring articles about the University and its people. This is distributed to students, faculty, staff, alumni, and the community. The office also publishes The George Mason Gazette, an internal biweekly newsletter covering items of general interest to University faculty and staff, and maintains an electronic version of the Gazette on computer. Frankly Speaking, a weekly public service radio show, is also produced by this office.

Design and Publications

Design and Publications is responsible for the layout, design, and printing of University publications. The department consults daily with University faculty and staff on producing the visual image for the University, which is displayed through brochures, catalogs, class schedules, posters, newsletters, and other printed items. Guidelines for the visual image are contained in the Visual Standards Manual.

Motor Vehicles Policy

The privilege of operating and parking a motor-driven vehicle at George Mason University is extended to all students, subject to the following procedures:

Vehicles must be registered with the Traffic and Parking Office. At the time of registration operators must certify that (a) vehicles have a valid state registration and valid insurance from a recognized insurance company, evidencing coverage for public liability in conformance with the laws of the Commonwealth of Virginia; (b) they have a valid state driver’s license; and (c) they understand that they are governed by University Motor Vehicle and Traffic Rules and Regulations, a copy of which is furnished at the time of registration of the vehicle. Vehicular Registration Decals may be purchased for the full Academic Year or by the semester/summer session.

The Traffic and Parking Office is located at the rear of the West Building, in T-102.

Fees are as follows:
$30 Full Academic Year, September 1 through August 31 (10 for a second vehicle).
$20 Semester, Fall/Spring ($10 for a second vehicle)
$10 Summer Session ($5 for a second vehicle)
$10 Motorbikes, Full Year
$ 5 Motorbikes, Summer Session

Registered vehicles must display in full view the University’s vehicular registration decal, affixed immediately upon issue as per instructions on reverse side of decal.

Regulations

Please see the back of the catalog for University regulations (“General Regulations”).
Student Affairs
Student Activities

Student participation helps shape the character and the quality of the students and the University. Thus, George Mason encourages people to express their talents and interests through participation in student government, student publications, and through membership in academic, social, cultural, religious, and athletic organizations.

While involvement in such activities is a desirable adjunct to classroom learning, participation must be complemented by academic progress. For this reason, only students in good academic standing are eligible to hold elective or appointive office in any organization or activity associated with the University, to participate in any athletic or other activity representing the University on either an intercollegiate or club level or to serve as a working staff member of any student organization. It is the individual student's responsibility to notify an organization when becoming ineligible.

Student Unions

Most nonacademic activities and services at the University take place or are housed in Student Union I or Student Union II on the Main Campus. The coordinators of these services are located in Student Union I. They include the Offices of the Vice President for Student Affairs, the Associate Vice President for Student Services, the Director of Student Unions, the Adviser for Students with Disabilities, and the Director of Minority Student Services; the Offices of Student Health Services, Housing Services, Career Services, Cooperative Education, Veterans Affairs, Financial Aid, the Counseling Center, the Campus Ministry, and the Academic Advising Center. The Offices of Student Government, Student Organizations, the Student Publications, and the Honor Committee are also located in Student Union I.

Recreational facilities and lounge areas occupy a portion of the Unions. In addition to an arts and crafts center, there are game, television, and music rooms. Banking and dry-cleaning services are available on the second floor of Student Union I. The bookstore is located in Student Union II.

Contract food services are available on all of the University's campuses. On the Main Campus, the lower level of Student Union I houses a cafeteria, and a rathskeller. Student Union II has a large cash cafeteria and a separate cafeteria for students on the meal plan. Vending machines are also located in various buildings. The Food Service Manager on the Main Campus can provide information concerning catering.

The Student Unions also have a variety of meeting facilities. Students may schedule meetings or conferences in the Student Union (or throughout the University) by contacting the Scheduling Clerk in Room 315 of Student Union II, as explained in the following section.

Reserving University Facilities

Individuals, groups of students, and organizations may use the Student Union and other University facilities for nonacademic events. University groups may reserve most facilities free of charge except for some support costs for special events. All reservations for the Student Union or for other University facilities must be made at least two weeks prior to an event with the Scheduling Clerk in Room 315 of Student Union II (323-2164). Approval is given according to the procedures outlined in the George Mason University Administrative Procedures Manual.

Athletic Activities

The intercollegiate athletic program of 19 men's and women's sports at George Mason University offers student athletes competition with universities and colleges in the Washington, D.C. area, the State of Virginia, and throughout the United States.

The men's and women's programs are members of the National Collegiate Athletic Association Division I

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and the Eastern College Athletic Conference (Southern Division). All student athletes must be in good academic standing and must be making satisfactory progress toward a degree at George Mason University. Satisfactory progress is defined as earning 24 credit hours toward a particular degree from the beginning of a sport season to the beginning of the subsequent sport season.

Intercollegiate competition for men includes baseball, basketball, cross-country, golf, soccer, tennis, indoor and outdoor track and field, volleyball, and wrestling.

In basketball, the Patriots men's team is a member of the ECAC South, along with William & Mary, Richmond, Navy, James Madison, American University, University of North Carolina (Wilmington), and East Carolina. Additional outside competition for all sports is furnished by members of the Atlantic Coast Conference and other Division I schools throughout the United States.

The intercollegiate athletic program for women is a rapidly growing segment of the University. Competitive sports are offered in basketball, cross-country, indoor and outdoor track and field, tennis, soccer, volleyball, and softball.

Plans include expansion and upgrading of both men's and women's sports. Athletic scholarships and financial aid (based on need) are available to both male and female student athletes.

More than 300 student athletes carry the banner of George Mason on the courts and playing fields throughout the United States. Scholarship support for the University's student athletes is generated by the Patriot Club and private fund-raising. The significant growth of the athletic program is in keeping with the rapid expansion of the entire University community.

Performing Arts Activities

George Mason offers students the opportunity to participate in many arts events throughout the school year. The George Mason University Dance Company presents two annual concerts and all students are encouraged to audition. Guest choreographers and performers are also an integral part of the dance program.

Theatre events include four major productions, as well as several student-directed, one-act and experimental plays. Students may also attend playwriting classes and work with theatre majors on presentations of their own works. Auditions for theatre events are open to all George Mason students and are held each semester. Students interested in technical theatre can work in a variety of production crews, including light and sound, costumes, and publicity. Information concerning auditions, crew work, and performance dates may be obtained from the Department of Performing Arts (425-3900).

Students interested in music may audition to perform in the following: University Chorale, Gloriana Singers, Symphonic Chorus, Chamber Orchestra, Symphonic Winds, Jazz Ensemble, and various chamber ensembles. All members of the University community are invited to attend concerts and recitals given by the Department of Performing Arts.

Forensics Team

George Mason's nationally ranked Forensics Team provides George Mason students with the opportunity to develop their communication skills, ranging from persuasive and informative speaking to prose and drama interpretation. For the past nine years, George Mason has been named the "First Place Team on the East Coast."

The Forensics Team has also placed in the list of the "Top Ten Teams in the Nation" for the past nine consecutive years. Only one other university in the country has matched George Mason's string of consecutive national victories. At the National Championships since 1976, George Mason has had 38 national champions in various events.

The George Mason Forensics Team has set a national record by winning more than 600 awards in the 1983-84 season. During the past nine years, the Forensics Team has won a total of more than 4,000 awards in intercollegiate competition.

Academic credit is available for participation on the Forensics Team. Interested students should contact Dr. Bruce B. Manchester, Director of Forensics, in the Department of Communication.

Debate Team

George Mason's nationally prominent Debate Team competes in over 25 intercollegiate debate tournaments each year with universities from throughout the country. The Debate Team provides George Mason students, regardless of previous experience, with the opportunity to develop speaking, analytical thinking, writing and research
skills that prepare them for a variety of professional pursuits. The majority of GMU Debate Alumni are either practicing law or finishing law school.

The Debate Team has enjoyed considerable success over the past few years, including winning the National Championship in Junior Varsity Debate in four out of seven years. In invitational tournaments, the GMU Debaters consistently win top awards and have “closed out,” winning both First and Second Place, a number of tournaments over the past seven years.

Academic credit is available for participation on the Debate Team and membership is open to any fulltime undergraduate student. Interested students are encouraged to contact Dr. Warren Decker, Director of Debate, Department of Communication.

Student Organizations

Approximately 115 on-campus student organizations provide opportunities for students to exercise and develop their talents and complement the University’s curricular programs. The organizations span a wide range of interests, including politics, forensics, drama, music, journalism, science, service, recreation, business, social life, religion, and fellowship. Membership in student organizations is open to any registered George Mason University student and can open vistas to new friendships, informal contact with faculty and staff, learning opportunities, and leadership experience.

All recognized student organizations are members of the Student Government’s Inter–Club Council (ICC). Council membership facilitates coordinated development of campus activities and interaction with other student organizations. It also provides a University mailing address, access to file and storage space, duplicating services, and a channel of communication with the University administration regarding support services for student organizations.

George Mason now includes six fraternities, five national sororities, and one local sorority. They contribute to campus life by sponsoring numerous social and service activities throughout the year. These organizations encourage their members to achieve high academic standards while participating in social and service activities within and around the University community. To obtain additional information on fraternities or sororities at George Mason, contact either the Inter–Fraternity Council or the National Panhellenic Council. Both can be reached through the Student Activities office, 305 Student Union 1 (323–2574).

The Student Activities office also maintains updated information on names and phone numbers of contact persons in each organization. The Student Organization Manual, a “how-to” resource handbook for student leaders can be found there. The office staff also consults with students or student organizations that are planning programs for students; assists new clubs in attracting members and receiving recognition; and offers leadership training through workshops, retreats, and credit course formats to organization members and to students not affiliated with a club.

WGMU Radio is a student-run radio station, broadcasting to 15,000 members of the University community. The station is committed to educational radio, and offers opportunities for all interested students, with or without experience in radio. For more information, contact Cynthia Lont, Faculty Adviser (323–3578, Thompson Hall, 111B), or the Station Manager in Thompson 216.

Broadside is the University’s student-run newspaper, publishing weekly. The paper needs help in news writing, sports reporting, feature writing, editing, layout, and many other areas. Contact journalism faculty member Scoobie Ryan (Thompson Hall, 109A) or the Broadside office in the Student Union.

http://catalog.gmu.edu
Student Services

Student Health Service

Personnel in the Student Health Service treat minor illnesses, administer first aid, and dispense nonprescription medications. They also provide referral services to outside health resources, offer information and counseling on matters of hygiene, and assist in the administration of a program of health and accident insurance and a student dental plan. Pregnancy tests, throat cultures, and mono spot tests are performed for a minimal fee. Abortion counseling and referrals are also offered.

During the academic year, the health service emphasizes preventive health care. Programs in 1983–84 included blood pressure checks, Pap testing and Cardio–Pulmonary Resuscitation.

Staffing consists of a Nurse/Coordinator, two part-time nurses, and a consulting physician. The Student Health Service is located on the Main Campus in Student Union I, Room 355 (323–2584).

Health Insurance and Dental Plan

All students of George Mason University are eligible, on a voluntary basis, to enroll in the University-endorse Accident and Sickness Health Insurance Plan and the University-sponsored dental plan made available through DENTICARE of Virginia.

The health insurance policy includes provisions for major medical coverage, out-patient laboratory fees and x-ray coverage, as well as the usual provisions for hospital room and board and surgical expenses. At minimal cost, this policy covers the insured student 12 months per year, 24 hours per day, worldwide, at the University or elsewhere.

For a minimal fee per year, the dental plan provides x-rays, teeth cleaning, and office visits at no charge and various dental procedures such as fillings, crown and bridgework, and root canal therapy at reduced costs.

Health insurance brochures, enrollment applications, and claim forms, as well as dental plan information, may be obtained at the Student Health Service, Student Union I, Room 355 (323–2584).

Services to Disabled Persons

A wide range of services and assistance is available to students with disabilities. Students may contact the Adviser to Students with Disabilities at 323–2523 (Voice/TTY) for more information.

Housing

The University currently offers on-campus housing for 1,150 students. With the completion of seven new dormitory–style facilities the number of on-campus spaces will increase to 1,650.

The two new residence halls house 500 residents in double occupancy rooms. Between every two rooms is a private bath that serves up to four people. The rooms are provided with mirrored wardrobes, chests of drawers, desks with study carrels, study chairs, beds, carpeted floors and draperies. Each floor has a study lounge. The first floor level includes a main lounge, two meeting rooms, laundry and vending facilities, and a hall office.

The student apartment complex consists of nine three-story buildings that contain 121 apartments. It provides housing for 500 residents. The apartments are divided into one-, two-, and three-bedroom units that accommodate two, four, or six students, respectively. Each apartment has its own entrance from the outside, and includes a kitchenette, a bathroom, and a carpeted living room, in addition to the bedroom(s). Utilities, except telephone service, are included in the rent.

The Patriot Village Complex consists of 15 buildings housing 150 residents. Each building has five bedrooms accommodating two students per room. Bedrooms are provided with single beds, desks, study chairs, and sliding door closets. All rooms are carpeted and draperies are provided. Each building is provided with individually controlled heat and air conditioning. The buildings also have two bathrooms, individual study and lounge areas, and laundry facilities.

An additional 500-bed housing complex is currently under construction, with the estimated date of completion January 1986.

Complete information about the University's on-campus housing is available from the Director of Housing and Resident Life, George Mason University, 4400 University Drive, Fairfax, Virginia 22030. (323-2354/5).

Off Campus. For assistance with off-campus housing, students may contact the Housing office.

Counseling Center

The Counseling Center provides services that enable students to successfully achieve their educational goals. Coping skills, self-assessment and decision-
making skills, learning and study skills are provided to students through individual counseling and workshops. Counseling Center staff are available to give personal attention to all University students who are having difficulty in school or who would like to improve their performance.

The Center is staffed by qualified professional counselors and psychologists. Services are available at no charge to all University students. Center offices are located at 364 Student Union I, and are open Monday through Friday from 8:30 a.m. to 5 p.m. Evening hours are available on Tuesday and Wednesday until 8 p.m. For information about services or to make an appointment call 323–2165.

**Individual Counseling.** Services include counseling for personal adjustment and emotional concerns, managing personal crises, educational decision making, reading and study skills improvement, and concerns about relationships. Interest, personality, and intelligence tests are offered as a means of increasing self-understanding. Consultation with faculty, staff, and students is also available to individuals or organizations requesting services.

**Group Counseling.** The Group Program offered by the Counseling Center provides skills to support and enhance the student’s educational progress. Workshops are available in the following skill areas:

1. Learning Skills
   - Academic Success
   - Speech Anxiety
   - Study Skills Improvement

2. Self-Assessment Skills for Educational Decision Making
   - Choosing/Changing Majors
   - Career Development for Black Students

3. Personal Development Skills
   - Assertiveness Training
   - Personal Growth
   - Relationship
   - Stress Management
   - Self-Esteem

Brochures listing these services are available each semester in the Counseling Center and on bulletin boards throughout the campus. Descriptions of services are published in the class schedule and student newspaper.

**Learning Skills.** The Counseling Center provides a wide variety of services through its Learning Skills program to students seeking academic success. Services include learning style assessment and study skill improvement. Tutorial assistance is also available to aid students who have difficulty in a particular subject area. Professional staff and trained peer counselors offer both individual and group study skills help on the following topics: Study Methods and Strategies, Scheduling and Time Management, Exam Strategies, Note-taking and Text Marking, Motivation and Concentration Improvement, Goal Setting, Reducing Exam Anxiety, Reducing Math Anxiety, Increasing Vocabulary, and Writing a Research Paper. Located in Room 350, Student Union I (323–2018). For tutorial assistance call 323–2018.

**Re–Entry Student Program.** The Re–Entry Student Program offers groups, workshops, presentations, and peer counseling especially designed for the student returning to higher education. Most activities take place at the Re–Entry Student Exchange, a drop-in service and place to exchange information, concerns, and support. Located in Room 236, Student Union I (323–2940).

**Black Peer Counseling.** Black undergraduate students provide information and peer support to other black students and offer services to the broader University community. The program includes a drop-in service, structured workshops, information exchange, referral services, and academic and social skill development services. Located in Room 235, Student Union I (323–2131).

**Training.** The Counseling Center provides training and supervision to undergraduate and graduate students who are interested in serving as peer counselors in the Counseling Center programs. Placements are also provided to graduate–level practicum students and doctoral interns. Practicum and intern students provide the full range of counseling services under the supervision of professional staff members.

Peer counselors serve in the following programs: (1) Learning Skills; (2) Re–Entry Student Counseling; and (3) Black Peer Counseling. Students are trained in helping skills, are taught the content material necessary for the service in which they work, and are provided with supervision to enhance the learning support process.

**Referral.** Referral information is available to students, faculty, and staff interested in seeking assistance from other mental health professionals and agencies.
Career Services

The Office of Career Services provides career counseling, career information, experiential learning, and job placement to students and alumni. The office, located in Room 348 in Student Union I, is open Monday through Friday from 8:30 a.m. until 5 p.m. and on Tuesday and Wednesday evenings. For information call 323-2476. The following major services are offered:

Career Counseling. Through individual counseling and workshops, students embark on a career decision-making process. This process encompasses students' needs, interests, values, abilities, and skills. The counseling explores a range of occupations before a student chooses a career plan. The plan is then implemented with a set goal and both are reevaluated periodically.

Career Seminars and Workshops. These include Career Indentification, Choosing/Changing Majors, Mid-Life Career Planning, Applying to Graduate/Professional School, Job Hunting Strategies, Resume Writing, and Interviewing Skills. Check the Career Services' brochure for the listing of workshop days and times. Evening programs are available.

Career Reference Library. This specialized library contains information on career fields and undergraduate majors, graduate and professional school catalogs, government employment information, and job directories. Along with many other self-directed activities, a computerized career guidance program is available to assist in career exploration.

Cooperative Education. Cooperative Education is a program that provides qualified students with professional-level, progressively responsible, paid work experience in positions related to their majors. Two calendar plans are available: the preferred traditional plan, in which students alternate periods of full-time work with periods of full-time study, and the parallel plan in which students attend school full-time and work part-time. Positions are open to both undergraduate and graduate students in all disciplines. Participation is recognized by the University through notation of the work assignments on academic transcripts. Orientation sessions are scheduled weekly to provide more complete information.

Internships. Career Services acts as a clearinghouse for information on internship opportunities. Internships can provide students with project-oriented experiences relevant to their academic and career interests. Students may be referred to internship options in specific academic departments or to general internship information in the Career Reference Library.

Part-Time/Summer Jobs. Job notices are posted on bulletin boards directly outside the office of Career Services. Students seeking career-related, part-time or summer employment may register in Room 348, Student Union I.

On-Campus Interviews. During the Fall and Spring semesters, employers conduct interviews on campus for full-time career positions with their organizations. Graduating students and alumni can participate by first attending an orientation session, completing a registration form, and submitting it with a copy of their resume to the Office of Career Services. A schedule of employers is available at the beginning of each semester.

Job Leads. Graduating students and alumni can register to receive weekly bulletins of full-time job vacancies. Job notices are also filed in the Career Reference Library and posted on a job bulletin board.

Credential File. Graduating students and alumni may establish credential files containing references, resumes, and course listings to be furnished to prospective employers and graduate schools at the request of the student.

Veterans Affairs

The Veterans Coordinator in the University's Office of Veterans Affairs assists veterans, service personnel, dependents, and survivors in obtaining authorized educational benefits. The office helps veterans adjust to University life. Located in Student Union I, the office is open Monday through Friday from 8:30 a.m. to 5 p.m., and two days a week until 7 p.m. during regular semesters. (Late days vary. Check with the office at 323-2381.)

Campus Ministry

The Campus Ministry Association is an ecumenical group of chaplains available on campus to assist students, faculty, and staff. Their ministry includes religious, educational, and social counseling, Bible study, social-action opportunities, educational programs, social activities, seminars, retreat weekends, and fellowship gatherings. The organization is sponsored by Catholic, Jewish, and Protestant groups.

The Campus Ministry offices are located in Student Union I, Main Floor, Rooms 206, 207, and 229 and
are open daily for discussion and assistance of any kind (323-2160). For more information, please contact Robert Thomason, United College Ministries (820-2144); Rev. David Blanton, Baptist (978-3583); Rev. David N. Jones, Episcopal (273-8056); Rev. Jim Curran or Sister Anne Mulvey, Roman Catholic (250-5024) (241-0874); Mindy Shapiro, Jewish (463-2016); or Terry Call, Mormon (451-6566).

Office of International Programs and Services

The overall goal of the Office of International Programs and Services is to provide an international dimension to the campus. The office is responsible for a number of activities and services that are provided to all segments of the population, including international students, American students, faculty, and staff. These services include:

1. Evaluating applications of prospective students with overseas credentials

2. Administering the George Mason University English Language Institute, which provides an intensive program for those students who need to improve their English language proficiency before they start academic work

3. Advising and counselling international students and scholars on such matters as admissions, transfer of credit, immigration issues, English proficiency, special orientation, housing, and personal as well as financial problems

4. Organizing activities for the international students and scholars to integrate them into the life and academic process of the Institute and the surrounding community

5. Presenting a broad range of intercultural events on campus, such as International Week, United Nations Day, Ethnic Days, Great Decisions, International Coffee Hours, film and lecture series

6. Providing advice to American students and faculty members who wish to broaden their knowledge of other cultures through research, study, and travel abroad

7. Maintaining relations with the U. S. Immigration and Naturalization Service, with embassies and with the State Department, as well as with governmental agencies dealing with international student exchange programs

8. Assisting in the establishment of exchange programs with overseas universities for students and faculty members

9. Facilitating the establishment of short-term and long-term nondegree training programs for overseas students with the appropriate departments

10. Assisting and encouraging special faculty interest groups such as the Canadian Interest Group and the International Development Group

11. Encouraging and supporting the development of an international dimension to the teaching, research, and service functions of the faculty.

English Language Institute

International students who wish to enroll in the English Language Institute, either full-time or part-time, must have completed the equivalent of a U.S. high school education (12 years of school) or be at least 17 years old at the time of enrollment. Students should send an official, certified and translated copy of high school and/or university transcripts and a notarized statement of financial support along with the completed application form and deposit. Students applying for admission to the English Language Institute do not need to take the Test of English as a Foreign Language (TOEFL) but are encouraged to do so if they plan to apply for admission to George Mason University or other universities soon after attending the English Language Institute. Some exceptionally advanced students may be allowed to take one or two academic courses while they are attending the institute. Students who are accepted are sent a formal letter of acceptance and a Certificate of Eligibility (Form 1-20) for a student visa if one is required. Government-sponsored students will be issued an IAP-66 form. Admission to courses in the English Language Institute does not imply automatic eligibility for admission to any program or course of study at George Mason University.

Information may be requested by writing or calling: English Language Institute, George Mason University, 4400 University Drive, Fairfax, Virginia 22030, U.S.A. (703) 323-2001.
Student Regulations

Conduct

The University respects and protects the individual dignity, integrity, and reputation of its students. Students are required to comply with those conventions and regulations of University life that are necessary to maintain order, protect individuals and property, and fulfill the purposes and responsibilities of a University.

Students enrolling in the University assume an obligation to conduct themselves in a manner compatible with the University's function as an educational institution. The Code of Virginia (Section 23-9:2) confers upon the University the responsibility for maintaining order within the University and the right to exclude those who are disruptive.

The Office of the Associate Vice President for Student Services is administratively responsible for supervising student conduct on campus. A system of courts administers nonacademic discipline. In addition to these courts, the student Honor Committee, described below, is responsible for adjudicating violations of the Honor Code that relate to academic matters. Questions regarding student conduct should be directed to the Office of the Associate Vice President for Student Services, located in Room 310 of the Student Union (323-2522).

Honor System and Code

George Mason University shares in the tradition of an Honor System that has existed in Virginia since 1842. The Honor Code is an integral part of University life. In the spirit of the code, a student's word is a declaration of good faith acceptable as truth in all academic matters. Any violation of a student's word is an offense against the Honor Code. Therefore, lying, cheating, plagiarism, and stealing constitute Honor Code violations. To maintain an academic community according to these standards, students and faculty must report alleged violations of the Honor Code to the Honor Committee.

The Honor Committee is independent of the Student Government and the University administration. It is made up of students elected by the student body and has the primary duty of espousing the values of the Honor Code. Its other function is to sit as a hearing committee on all alleged violations of the code.

At the beginning of each semester faculty members have the responsibility of explaining to their classes their own as well as the departmental policy regarding the Honor Code. The departments have designated liaisons to the Honor Committee who are available to answer most questions.

On their application for admission, students sign a statement that they will conform to and uphold the Honor Code. Questions regarding the Honor Code should be referred to the Honor Committee office in Student Union I.

The Honor Code appears in the Reference Section at the back of this catalog.
Tuition and Fees

To undertake any form of academic study with George Mason University, an individual must be registered as a student and must pay the prescribed charges. Registration is not allowed if there are outstanding financial obligations.

The in-state tuition rate applies only to students formally classified by the University as Virginia students. New students are required to complete the Virginia Domicile Classification Form (available in the Office of Admissions) and submit it with the Enrollment Request Form. Returning students previously classified as out-of-state should also complete the form if they wish to request a change of classification.

Tuition and fees for early-registered students are due and payable at the Cashier’s office on or before August 6, 1985, and December 12, 1985. Failure to receive a bill does not waive the requirement for payment when due.

All other students must pay during the registration process, including those students registering during the ADD period. Failure to make payment at the Cashier’s office on the day of registration, or adding a course during the ADD period, results in a late charge of $10. Students who register and then cancel/withdraw prior to the beginning of classes or during the first week of classes are charged a $20 administrative fee.

<table>
<thead>
<tr>
<th></th>
<th>In-State Students</th>
<th>Out-of-State Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Fee</td>
<td>$15</td>
<td>$15</td>
</tr>
<tr>
<td>Tuition and Fees,</td>
<td>$828&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1,620&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>full-time (12 through 17 semester hours) per semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition and Fees,</td>
<td>67</td>
<td>130</td>
</tr>
<tr>
<td>part-time (11 semester hours or less) per semester, per hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory</td>
<td>5&lt;sup&gt;b&lt;/sup&gt;</td>
<td>5&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Breakage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduation Fee</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Special Registration Fee</td>
<td>15&lt;sup&gt;c&lt;/sup&gt;</td>
<td>15&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Private Instruction</td>
<td>d</td>
<td>d</td>
</tr>
<tr>
<td>(music)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>For each additional hour over 17, add $67 for in-state and $130 for out-of-state.

<sup>b</sup>Chemistry only. Same laboratory card may be used for both semesters.

<sup>c</sup>See Application for Degree.

<sup>d</sup>$140 for 14 one-half hour lessons; $280 for 14 one-hour lessons. Fee is nonrefundable after 60 calendar days. Refund prior to completion of 30 days is $100 ($200 if taking one-hour lessons); between 31 and 60 days, a refund is $60 ($120 if taking one-hour lessons). Students are billed for private music instruction after the semester begins.
How To Figure Semester Tuition and Fees Costs

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$69</td>
<td>$135</td>
</tr>
<tr>
<td>2</td>
<td>134</td>
<td>260</td>
</tr>
<tr>
<td>3</td>
<td>201</td>
<td>390</td>
</tr>
<tr>
<td>4</td>
<td>268</td>
<td>520</td>
</tr>
<tr>
<td>5</td>
<td>335</td>
<td>650</td>
</tr>
<tr>
<td>6</td>
<td>402</td>
<td>780</td>
</tr>
<tr>
<td>7</td>
<td>469</td>
<td>910</td>
</tr>
<tr>
<td>8</td>
<td>536</td>
<td>1,040</td>
</tr>
<tr>
<td>9</td>
<td>603</td>
<td>1,170</td>
</tr>
<tr>
<td>10</td>
<td>670</td>
<td>1,300</td>
</tr>
<tr>
<td>II</td>
<td>737</td>
<td>1,430</td>
</tr>
<tr>
<td>12-17</td>
<td>804</td>
<td>1,560</td>
</tr>
</tbody>
</table>

For each additional hour over 17, add $67 for in-state and $130 for out-of-state.

Likewise, failure to make rental or board payment on or before the due date results in a late charge of $10.

Due Dates for Deferred Payments (Tuition and Fees and Rental or Board). First semester: Second and third payments due September 10 and October 10, 1985.

Second semester: Second and third payments due February 6 and March 6, 1986. Payments must be received in the Cashier’s office on or before the due date.

Checks

Checks in payment of tuition, fees, fines, or other obligations to the University should be made payable to George Mason University. Second-party checks are not acceptable.

A check returned to the University by a bank results in a $10 penalty fee for the payor. Further, students who fail to make good such checks within five calendar days following notification by the business office are placed on financial suspension without further notice.

Failure to Meet Financial Obligations

Students failing to meet a financial obligation to the University are placed on financial suspension. In addition, failure to meet financial obligations to the University may result in placement of the delinquent account with a collection agency, withholding from subsequent tax returns, and other collection procedures as mandated by the Commonwealth. The student is responsible for any additional costs incurred in the collection of delinquent accounts.

Fines owed to libraries of institutions and participating public libraries of the Consortium for Continuing Higher Education in Northern Virginia similarly affect students’ status.

Reinstatement Fee. Students placed on financial suspension because of outstanding obligations in excess of $50 are not permitted to register in subsequent semesters until all outstanding obligations—including late charges plus a $25 reinstatement fee—have been paid.

Financial Suspension

All academic credit is withheld for students on financial suspension. This means that no transcripts of record are issued, no diplomas are released, and no registrations for a subsequent semester or term.

Deferred Payment Plan

A deferred payment plan is available for students whose tuition and fees for the semester exceed $325. There is a $10 administrative fee for this service. Students must pay at least one-third or $325 (whichever is greater) of the tuition and fees as the initial payment, with the remaining tuition and fees payable in two equal payments. Students using the deferred payment plan must come to the Cashier’s office to make the initial payment and sign a deferred payment contract. Bills for installment payments are not prepared. Students are responsible for ensuring payment of installments on or before the due dates published. Contracts are not mailed to students.

A deferred payment plan is also available for students who live in on-campus housing or use a meal plan. There is a $10 administrative fee for this service. Students must pay 50 percent of the rental and/or board charge as the initial payment, with the remaining amount payable in two equal installments.

Students using the deferred payment plan must come to the Cashier’s office to make the initial payment and sign a deferred payment contract. Bills for installment payments are not prepared. Students are responsible for ensuring payment of installments on or before due dates. Contracts are not mailed to students.

Failure to make tuition and fees payment on or before the due date results in a late charge of $10.
are permitted until outstanding obligations, including the reinstatement fee (if necessary), have been paid in full. In those instances where the outstanding financial obligation that caused the financial suspension is in excess of $50 dollars, a reinstatement fee of $25 is also imposed.

Refunds

If students cancel registration before the beginning of the semester or withdraw during the first week of classes, their tuition and fees, less an administrative charge of $20, are refunded. Assessed penalties are nonrefundable.

Tuition and fees are refunded on a graduated scale for subsequent voluntary drops and withdrawals during the second and third weeks of classes. The calculation of the amount of refund is based on the date of the drop or withdrawal form as certified by the Registrar. Hours dropped after the third week of classes must be paid for in full. The refund scale is shown below and is posted on the bulletin board at the Cashier’s office. It is the student’s responsibility to be familiar with the refund scale; also, the refund process is initiated by the student who submits a request to the Cashier’s office.

Refund Scale (Per Hour)

<table>
<thead>
<tr>
<th>Week</th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1 (100%)</td>
<td>$63</td>
<td>$122</td>
</tr>
<tr>
<td>Week 2 (66.7%)</td>
<td>$42</td>
<td>$81</td>
</tr>
<tr>
<td>Week 3 (33.3%)</td>
<td>$21</td>
<td>$40</td>
</tr>
</tbody>
</table>

Off-Campus Courses

Students enrolling in off-campus courses are assessed tuition and fees at the same rates as those established for on-campus courses.

Other Required Fees

Deposits. By the end of the second week of classes, students enrolled in a chemistry laboratory course must purchase from the Cashier one laboratory card priced at $5, which covers breakage or loss of equipment. As such loss occurs, the card is “punched” for the cost of the item in question. Unused portions of the card, which have been validated by the Chemistry Department, are redeemed upon presentation to the Cashier no later than May 30, 1986.

Transcript Fee. A fee of $2 is charged for the first copy of each transcript of record requested by students, and $1 for each additional copy ordered at the same time. Payment must accompany the request.

Motor Vehicle Registration Fees. Students who park their vehicles on University property must register them with the Traffic and Parking Office and pay a $30 fee for a parking decal. (See Motor Vehicles Policy.)

Credits Earned Elsewhere

A few George Mason University degree programs include academic credits which students must earn at other institutions. Students enrolling for academic credits at other institutions assume all financial responsibility for these arrangements.

Eligibility for In-State Tuition

To be eligible for in-state tuition charges, a person must have been domiciled in Virginia for a period of at least one year prior to the semester for which a reduced rate is sought. A person becomes domiciled in Virginia when legally capable of establishing a domicile and present in Virginia with the unqualified intention of remaining in the state permanently.

Domicile, however, is primarily a question of intent and the burden of proof of domicile is upon the student seeking the benefit of reduced tuition.

State Domicile Legislation

Domicile legislation appears in a Reference Section at the back of this catalog.

Penalties

A student who provides false information or refuses or conceals information for the purpose of achieving in-state status, or who fails to notify the University of a change of facts which might affect reclassification from in-state to out-of-state status, shall be required to pay retroactively any tuition fees that would normally have been charged and shall be subject to appropriate disciplinary action.
Financial Assistance

Office of Financial Aid

The Office of Financial Aid provides a variety of services to help students finance their education. These services include financial counseling, referral and information resources, and financial assistance. Student financial assistance consists of grants, loans, and employment. Awards are based on financial need. Located in the Student Union Building, Room 354, the office is open Monday through Friday from 9 a.m. until 5 p.m., and Tuesday and Wednesday until 7 p.m.

To apply for financial aid, each year new and currently enrolled students must obtain a copy of the George Mason University Financial Aid Application and return the completed form to the Financial Aid office. In addition, students must complete a Financial Aid Form and forward it to the College Scholarship Service in Princeton, New Jersey, four weeks prior to the application deadline. The application deadlines for consideration of federal and most of the state funds are as follows:

1986–87 Academic Year  
Freshmen: March 1, 1986  
Returning Students: May 1, 1986  
Summer 1986: April 1, 1986

Applications received after the deadline are evaluated according to the availability of funds.

The University administers federal, state, and other aid programs as outlined below.

Federal Programs

The National Direct Student Loan Program. Long-term, 5 percent interest loans from the federally-sponsered National Direct Student Loan Program are available to qualified students. Repayment begins six months after graduation and may be deferred for students entering graduate school, the Peace Corps, Vista, or military service, and three years for those temporarily disabled. Students must be enrolled at least half-time in order to qualify. Half-time is defined as six credit hours for both undergraduate and graduate students.

Supplemental Educational Opportunity Grant. A limited number of direct grants are available to undergraduate students who are at least half-time, who show financial need, and who require such assistance to attend college.

The College Work–Study Program. Funds to provide part-time work opportunities to help meet college expenses are available to students enrolled at least half-time.

The Pell Grant. This need–based program makes funds available to students attending eligible post–high school institutions at least half–time. Students who have received a first bachelor's degree are not eligible to apply for Pell Grants. Students may apply with the Financial Aid Form or to Pell directly.

Federal Nursing Program. Loans from the Federal Nursing Loan Program are available to nursing students who show exceptional financial need.

Guaranteed Student Loan Program. Students with family incomes of $30,000 or less may borrow directly from lenders in order to finance educational expenses. Students with family incomes above $30,000 must demonstrate need in order to qualify. While most of these loans are made by commercial lenders, some states are also lenders. The state lending institution for Virginia residents is the Virginia Education Loan Authority. The loan may amount to as much as $2,500 per year up to a maximum of $12,500 for an undergraduate student. The government pays the interest until the repayment period begins, six months after the student leaves school. Applications for the Guaranteed Student Loan are made directly to the lending agency, and may be made by students who are enrolled at least half-time.

PLUS Loan Program. PLUS is an additional form of financial aid to be used in conjunction with the Guaranteed Student Loan (GSL) program. PLUS loans may also be available to those students who, for certain reasons, are ineligible for the GSL program. This program can assist middle-income families and others who are not able to meet the costs of education through grants, scholarships, GSLs, and other financial aid programs. All parents of dependent undergraduates and graduate students are eligible to apply. There is no income ceiling for the program, therefore, anyone may participate. Specific and detailed information may be obtained by contacting the Financial Aid office.

Virginia Programs for State Residents

Virginia Loans. The state provides funds to be used for long-term, low-interest loans for eligible full-time Virginia residents.

Virginia Scholarships. These scholarships are for full-time Virginia residents who demonstrate financial eligibility and who have established a record of academic and personal achievement.

http://catalog.gmu.edu
The Virginia College Scholarship Assistance Program (CSAP). This program uses both federal and state funds to provide aid to needy students. Full-time undergraduate students who are legal residents of Virginia may apply for CSAP on the Financial Aid Form (FAF).

State Nursing Scholarships. The Bureau of Public Health Nursing provides limited scholarships to Virginia residents. These scholarships are based on need, and applications are made directly to the Bureau of Public Health Nursing and are available to graduates and undergraduates. The application deadline for students previously enrolled in a nursing program is March 1, and for new students entering a nursing program the deadline is June 1. Applications are available in the Financial Aid office.

Emergency Loan Program

Mary E. Ferguson Emergency Loan Program. Currently enrolled students may borrow funds for legitimate emergencies excluding tuition, fees, books, and supplies. Emergency loans must be repaid within 45 days; overdue payment results in a late charge of $5 for each 45 days past due. Failure to repay the loan within 45 days, without requesting an extension for a reasonable excuse, will result in financial suspension. Students financially suspended for nonpayment of an emergency loan are ineligible for any future emergency loans.

Army ROTC Scholarships

The U.S. Army Reserve Officers Training Corps (ROTC) offers scholarships for one, two, and three years. Applicants for the two- and three-year programs need not be enrolled in the ROTC Program prior to receipt of the scholarship. Scholarships cover tuition, fees, texts, in-class materials, and travel pay. Additionally, the student receives an allowance of $100 per month for up to 10 months of each school year. George Mason University students may participate in the Army ROTC Program offered on campus by enrolling in the Military Science (MLSC) courses. For more information, contact the Army ROTC Instructor at George Mason or call 625-4087.

Veterans Affairs

Veterans Educational Benefits

Students eligible for Veterans Educational Benefits while attending the University must contact the Office of Veterans Affairs. The following actions are required:

1. Veterans who have never received benefits must apply on Form 22-1990. The application should be turned in to the Veterans Affairs office on campus with a certified copy of the student's DD-214. Active duty personnel must use Form 22-1990a.

2. Students who have received benefits from another school or who are changing either their type of program or course objectives must fill out form 22-1995—Request for Change of Program or Place of Training.

3. Students must request the veterans' counselor to send an enrollment certificate to the Veterans Administration Regional Office each school year (each semester, if the students are under half-time, on active duty, or in Continuing Education). Students must apply separately for a summer session. Students in Continuing Education will only be certified for two semesters.

4. Students themselves are responsible for notifying the Veterans Affairs office on campus of any change in status. Such changes include:
   a. adding or dropping courses;
   b. change in marital status;
   c. addition of a child;
   d. change of address (notify VARO immediately);
   e. withdrawal from school (notify immediately).

   Forms for making these changes are available at the Office of Veterans Affairs in Room 354 of Student Union I.

5. VA payments are paid on the following basis:

<table>
<thead>
<tr>
<th>Full time</th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 hours</td>
<td>9 or more</td>
<td>6, 7, 8 hours</td>
</tr>
<tr>
<td>3/4 time</td>
<td>9-11 hours</td>
<td>6</td>
</tr>
<tr>
<td>1/2 time</td>
<td>6-8 hours</td>
<td>4, 5 hours</td>
</tr>
<tr>
<td>less than 1/2</td>
<td>4-5 hours</td>
<td>3 hours</td>
</tr>
<tr>
<td>more than 1/4</td>
<td>less than 4 hours</td>
<td>below 3 hours</td>
</tr>
</tbody>
</table>

   Students who are on active duty and those taking fewer than six undergraduate or four graduate hours are paid either tuition and fees or the rate set for the training time, whichever is less. Books and supplies are not included. Benefits are not payable for ENGL 101 or 102 when a no-credit grade is received unless the veteran student can supply mitigating circumstances and prove attendance. The Veterans Administration will not pay for an audit course.

Change in Course Hours. The VA does not permit a drop/add period to exceed 30 days. If a course is
dropped more than 30 days after the first day of registration, the VA may require the student to repay all benefits received for that course during the semester. Exceptions are permitted when mitigating circumstances for the drop exist. Details are available at the Office of Veterans Affairs.

**Virginia War Orphans Education Program.** The Virginia War Orphans Program provides educational assistance to children of qualified veterans. To be eligible an applicant must meet the following requirements:

1. The applicant must be between the ages of 16 and 25.

2. The applicant's parent must have served in the armed forces of the United States and must: (a) be totally disabled due to an injury or disease incurred in a time of armed conflict; or (b) died as a result of injury or disease incurred in a time of armed conflict; or (c) listed as a prisoner of war or missing in action.

3. The applicant’s parent must have been a resident of the Commonwealth of Virginia at the time of entry into active military duty, or must have been a resident of the state for at least 10 consecutive years immediately prior to the date of application.

4. The applicant must provide written verification of acceptance as a student in a state-supported post-secondary school.

Eligible individuals are entitled to a maximum of 48 months of tuition-free education at a state-supported educational institution. For more information contact the Office of Veterans Affairs.

**Tutorial Services for Veterans.** The VA will pay $84 per month, not to exceed $1,008 per year, for needed tutorial services.

**Foundations and Associations**

**George Mason University Foundation, Inc.**

John T. Hazel, Jr., President
Elizabeth C. Dahlin, Director and Assistant Secretary
Otis D. Coston, Jr., Treasurer

The George Mason University Foundation, Inc., is an autonomous organization designed to enrich programs of the University. Private funds augment programs provided by state funds. Contributions to the Foundation are used to enhance the library, build student scholarships, and for community cultural and intellectual programs at the University. The Foundation qualifies under Internal Revenue Code 501(c)(3) as a nonprofit corporation.

**Patriot Club**

Associate Director of Development for Athletics
Alan K. Srebnick, Executive Director

The Patriot Club is formed for educational, charitable, and social purposes. All contributions to the club are deposited in the George Mason University Foundation for financial support of student athletic scholarships, helping to make George Mason University athletic teams competitive in intercollegiate competition. Activities of this athletic booster organization are administered in accordance with the latest National Collegiate Athletic Association regulations, policies, and procedures.

**Departmental Scholarships**

**Applied Music Scholarships.** A limited number of applied music scholarships are available to incoming freshmen at George Mason University. Application should be made to the Department of Performing Arts.

**Student Education Association Endowment Scholarships Fund.** This fund provides grants to a limited number of eligible George Mason University students of demonstrated scholastic achievement, during their student teaching semester.

**Awards**

George Mason University recognizes students for excellence and grants them awards that are given by various administrative offices and academic departments. The Student Activities office (323-2574) coordinates the Annual Student Awards Ceremony and maintains the most comprehensive awards listing.
Undergraduate Policies and Procedures
Admission Policies

The University expects applicants for undergraduate admission to be in the upper 50 percent of their class. They must also demonstrate considerable facility in using the English language and an understanding of basic mathematical processes.

An applicant must submit a complete record from an accredited secondary or preparatory school, with graduation based on no fewer than 15 units (see outline below). Satisfactory scores are required on the Scholastic Aptitude Test given by the College Entrance Examination Board or the ACT Assessment given by the American College Testing Program.

Freshman applicants are also encouraged to take the English, Science, and Mathematics (Level 1 or 2) Achievement Tests.

To ensure that applicants with unusual qualifications are not denied admission, the above criteria are applied flexibly. Applicants with unusual qualifications should describe them in the narrative section of the application for admission. Personal interviews and recommendations are not required unless requested.

Freshman Requirements

An applicant for admission to any undergraduate degree program must submit scores earned on the SAT or ACT examination and present 15 units of high school credit, usually from the disciplines listed below. In addition, an applicant for admission to the Computer Science, Engineering, or Mathematics program must submit one additional credit each in mathematics and laboratory science, and a total of 16 units.

- English (4)
- Mathematics (3) *
  (selected from Algebra I, Algebra II, Geometry, Trigonometry, probability and elementary calculus.)
- In addition, for admission to the Computer Science program, a student must present a mathematics SAT score of at least 600, combined SAT scores of 1050, and a high school GPA of 3.0 or more. These requirements may be reduced slightly on evidence of substantial extra high school preparation such as a total of 19 or 20 academic units, with additional courses in science, mathematics, or computing.
- Foreign Language (2) **
  (These units should be in the same foreign language.)
- Social Studies (1)
- Laboratory science - biology, chemistry, earth science (ESCP), or physics (1) ***
- Electives (4)

Because certain subjects are more useful to the engineering student, their inclusion in the high school programs of applicants is strongly recommended. These subjects include: additional mathematics, American and modern European history, English and American literature, physics, chemistry, biology, geography, foreign languages, and mechanical or engineering drawing.

Transfer Requirements

The University accepts qualified students by transfer from other colleges. An applicant for admission who has attended an institution of collegiate rank for any period of time should request that the registrar of each institution attended send two official transcripts of record, including a statement of academic standing, to the Office of Admissions. A complete secondary school record is ordinarily required. In certain cases, however, college transcripts showing transferable work comparable to the basic degree requirements of the intended major may be accepted in lieu of high school transcripts, SAT, or ACT scores. Students planning to transfer into computer science should consult the catalog section entitled _Admission to Computer Science_, under Computer Science, Engineering, and Math applicants:

- * must present one additional unit of mathematics from courses listed
- ** may substitute additional mathematics or laboratory science in lieu of a foreign language
- *** must submit one additional unit of laboratory science (chemistry and physics are recommended).
and Information Sciences. Students transferring from vocational programs or nonaccredited institutions are normally expected to meet the University’s requirements governing admission of freshmen.

Application for admission may be considered if the transfer student is not presently on social or academic probation; has a general average of at least C at the institution from which he is transferring; and has not been suspended, dropped, or dismissed from another institution.

To be competitive for admission to the Computer Science, Engineering, or Mathematics programs, a transfer applicant should present a cumulative GPA of 2.5 (on a 4 point scale) or better.

Transfer students should note the requirements shown under the heading, “Credits Earned at Other Colleges.”

Admission of International Students

The University accepts applications for undergraduate admission from international students. They should apply directly to the Undergraduate Admissions office. Such students must meet each of the following conditions:

1. Students must comply with all the requirements and regulations of the University, the school, and the department.

2. With the application for admission, students must present documents certifying their previous educational training and achievements; such documents should show completion of the equivalent of a U.S. high school diploma. Non-English documents must be presented in original form, together with certified translations.

3. Students must have completed the Test of English as a Foreign Language (TOEFL) and normally attained a satisfactory level of English proficiency on both the total and subscores. Official test scores must be sent directly from the Educational Testing Service. TOEFL examinations are given monthly at the University. Information concerning the time and place of the TOEFL can be obtained from the University or from:

4. Students requesting nonimmigrant visas must provide a statement of financial support.

5. The I-20 form is available to those who, after acceptance, require F-1 student visas. Students sponsored by their government are required to enter the United States on J–1 visas. The Form IAP–66 is automatically provided by the University.

6. Students admitted on F–1 or J–1 visas to study at the University must register for at least the number of courses each semester (excluding summer sessions) that will qualify them as full–time students (12 credits for undergraduates).

7. Students must meet and conform to all current regulations of the U.S. Department of Justice, Immigration and Naturalization Service.

8. Health insurance is mandatory for students on nonimmigrant visas. Students who do not enroll in the Office of International Programs’ insurance program must show proof of comparable coverage.

9. Students with F–1 or J–1 visas must initially attend the educational institution that issued the Certificate of Eligibility (Form I–20 or IAP–66). Transfer from one U.S. educational institution to another must be authorized by the U.S. Immigration and Naturalization Service. Forms are available from the international student adviser.

10. Questions concerning U.S. Immigration and Naturalization Service regulations should be directed to the international student adviser.

Summer Session Enrollment

Enrollment in the Summer Session does not constitute undergraduate admission to a regular (Fall or Spring) semester.

Extended Studies Enrollment

Extended Studies Enrollment allows qualified students who may not meet admissions criteria, or for whom these criteria are inappropriate, to enroll in any on– or off–campus course(s) without seeking admission to the University. Extended Studies enrollees may apply for admission at any time. See the section entitled “Division of Continuing Education” for further explanation.

Graduate Academic Policies and Procedures

Academic policies and procedures applicable to graduate students appear in a separate Graduate Catalog.
Procedures

Knowledge of University Policies

It is each student's responsibility to know the rules, regulations, requirements, and academic policies of the University. A student in doubt concerning an academic matter should consult a faculty adviser or dean.

Applying for Admission

Application for undergraduate admission should be made to the Office of Admissions, on forms provided upon request. A nonrefundable and nontransferable fee of $15 must be attached when the forms are submitted.

Application Deadlines

Undergraduate applications for Fall admission should be submitted no later than March 1 for freshman applicants and April 15 for transfers. Admission decisions are usually made after the first-semester grades of the senior year and all appropriate test results have been received by the Office of Admissions. Admission is contingent upon satisfactory completion of requirements and graduation from high school.

Test Requirements

Freshman candidates for admission are required to take the SAT or the ACT. Official test scores should be sent directly from the appropriate testing service.

Transfer candidates for admission are required to submit the score earned on the Test of Standard Written English (TSWE). The TSWE has been part of the SAT since 1976. A personal copy of the SAT score report, including the TSWE, may be submitted.

Applicants who have not taken the TSWE should arrange to take the free, 45-minute exam on the GMU campus as early as possible. Additional information is available through the GMU testing service (323-2526).

Notice of Acceptance

The University complies with the College Board candidate reply date of May 1, but encourages students to confirm their intention to enroll by returning the confirmation card before that date. Prompt confirmation of the offer of admission qualifies students for early advising and course selection, registration, housing, and other services. The order in which confirmation cards are received in the office determines priority for advising and course selection. Candidates approved for admission must confirm their intention to enroll. Failure to comply adversely affects reserved space.

Right to Withdraw Offer of Admission

The University reserves the right to withdraw offers of admission if applicants fail to satisfy all
requirements prior to the closing of Spring or Fall registration.

Admissions Committee

An Admissions Committee reviews undergraduate admission decisions and appeals.

Other Stipulations

The Office of Admissions or the Admissions Committee may make other stipulations or recommendations regarding the admission of an individual.

Academic Testing

Testing Center

One of the services offered to Northern Virginia citizens is a variety of standardized tests. The range of tests includes Test of English as a Foreign Language (TOEFL) and the Medical College and Law School Admissions Tests. Check with the Office of Admissions at (703) 323-2109.

As a means of assessing the academic preparation of its students, the University regularly requires the submission of certain test information.

Students may make arrangements with Academic Testing for taking College Level Examination Program (CLEP) tests and the Test of Standard Written English (TSWE) and may obtain application for the Test of English as a Foreign Language (TOEFL), the Graduate Record Examination (GRE), Law School Admission Test (LSAT), Graduate Management Admission Test (GMAT), Medical College Admission Test (MCAT), Dental Admission Test (DAT), Veterinary Aptitude Test (VAT), and the Miller Analogies Test (MAT).

Test of Standard Written English (TSWE), Diagnostic Essay and Composition Tutorial Center

Scores from the TSWE (a part of the SAT) are normally submitted as part of each student's admission application, to indicate probable success in writing at the university level. However, in some cases students may have taken a form of the SAT that omitted the TSWE. In those cases, students are required to submit scores from the TSWE as soon as possible after admission to the University and prior to registration. (This requirement does not affect Extended Studies enrollees unless they seek admission to the University or enrollment in ENGL 101.) Students may take the TSWE through the Office of Academic Testing.

Students who score below 36 on the TSWE are required to write a diagnostic essay administered by the Office of Academic Testing. They must also enroll, before registering for other classes, in the Composition Tutorial Center program. Those who take the TSWE at George Mason University will write the diagnostic essay immediately thereafter. Those who have taken the TSWE elsewhere must arrange to take it before their first registration. Dates of administration are available from the Office of Academic Testing.

Students who do well on the diagnostic essay will be exempted (during the first week of tutorial sessions) from the tutorial program. Those whose performance confirms probable difficulty with college writing assignments must attend the Composition Tutorial Center two hours a week for a semester or more, until certification is earned. This requirement applies to all undergraduates—freshman and transfer students—whether or not they have completed other composition requirements.

Directed by the Department of English and staffed by specially trained writing specialists, the Composition Tutorial Center helps students having a variety of problems. Some suffer from writing anxiety or writer's block. Others need help with standard English, spelling, or editing rules. Still others have the special writing problems of non-native speakers or dyslexic learners. Students referred to the Center must schedule their writing workshops by the end of the first two weeks of classes in their first semester and complete the program within their first 30 hours of course work.

Advanced Placement Program with Credit

First-semester freshmen who have completed advanced-level courses in secondary schools and have passed College Board Placement Examinations with scores of 5, 4, or 3, may enroll for higher-level courses at the discretion of the department concerned. They may be granted a maximum of 30 semester hours credit (without grades) upon recommendation of the department concerned and with the approval of the appropriate dean. Advanced credit earned in this manner by entering freshmen will be counted toward or will fulfill any pertinent University or departmental graduation requirement(s).
Proficiency, Advanced Placement Examinations, and Credit by Examination

Proficiency examinations are offered in a number of courses normally taken during the first two years. Each January and August, the Department of Biology administers an examination in BIOL 124-125, Human Anatomy and Physiology, to candidates presenting some evidence of similar training. Application and authorization forms must be obtained from the Department of Nursing. A copy of a transcript indicating past course work equivalent to BIOL 124-125 must accompany the form requesting credit by examination. This form should be submitted to the Department of Biology at least one week before the announced examination date. Four credits are awarded for a grade of C or above. Examinations are not repeatable.

Examinations in English, government, geography, mathematics, and music are usually announced by the appropriate departments. A satisfactory score on an examination affords a student credit for the course in question.

On the basis of examinations presenting evidence of qualification, regularly enrolled students may be granted up to 30 semester hours of undergraduate credit for courses in the University curriculum. The only exceptions to this regulation are registered nurses enrolled in the nursing B.S.N. program (see "Department of Nursing" for details). Credit is recorded for grades of C or above, but does not affect the student's grade point average computation.

Students may not earn credit by examination in courses in which they are enrolled beyond the time allotted for adding courses in that semester or in courses already audited or failed at the University. Transfer students may not earn by examination part of the 30 hours that must be completed at George Mason University to earn a degree.

These examinations conform to University policies, evaluate the competence of students and afford a reliable basis for assigning students to more advanced courses. Credit by Examination forms are available in the offices of the academic deans.

Foreign Language Placement, Testing, and Credit by Examination

A placement test is mandatory for all students who have studied a foreign language for two or more years in high school and who wish (1) to continue study of the same foreign language at the University, or (2) wish to fulfill the foreign language area requirement by examination and earn credit in the process. This test may be taken only once in each language. The testing dates are listed in the Academic Calendar. It is the student’s responsibility to apply for and to take the test before initial enrollment. Interested students should contact the Department of Foreign Languages and Literatures. Students who have taken the CEEB achievement test in a foreign language must present their score to the Department of Foreign Languages and Literatures when applying to take the placement test. Students who elect to enroll in a lower-level course after being given placement may not submit the lower-level course for degree credit. Students who have completed advanced-level courses in high school and achieved Advanced Placement Test scores of 5, 4, or 3 may enroll in higher-level courses for which the department finds them to be qualified. Credit will be awarded upon recommendation of the department and with approval of the appropriate dean. Students who have acquired a knowledge of a language in any other way (i.e., if they are native speakers), may not take the test. However, they may see the test supervisor about waiving the language requirement.

On the basis of examinations administered by the department, students may be granted credit for undergraduate courses in foreign languages offered at the University. Credit by examination will not be awarded in Conversation and/or Composition courses.

Transfer students receiving credit for college-level foreign language study completed in other colleges must consult the department to determine their correct placement.

All students are urged to start or to continue their foreign language studies in their initial year. It is particularly important to complete elementary and intermediate courses in immediate succession.

College Level Examination Program (CLEP)

The University currently does not recognize credits earned by CLEP General Examinations. As part of the Credit by Examination process, certain departments may utilize CLEP Subject Examination scores for total or partial credit in certain courses. Consult the individual department. The Testing Service is a certified CLEP Administration Center. Interested students should consult the Testing Service for further details.
National Teacher Examinations

Persons seeking initial certification as teachers in Virginia are required to submit scores of the National Teacher Examination. Academic Testing can provide information and applications for taking this examination.

Transfer Credit

A student transferring into the University may not assume that credit will be given for work at other institutions until an officially signed statement has been received from the college in which the student intends to major. It is the responsibility of the student to see that the Office of Admissions receives official transcripts of all work taken elsewhere.

In general, credits are accepted from institutions accredited by the appropriate regional association provided that the credits carry a grade of C or better and are of the quality of courses offered at George Mason University. Generally, no more than half of the total required semester hours in a baccalaureate program may be transferred from junior or community colleges. A University transfer manual and a VCCS/GMU transfer guide facilitate the orderly transfer of credits for students enrolled in a unit of the Virginia Community College System (VCCS) and, more particularly, at Northern Virginia Community College. A maximum of six semester hours may be transferred from correspondence courses sponsored by regionally accredited institutions. The VCCS/GMU transfer guide is available from the VCCS Counseling Offices or the GMU office of Admissions.

Credit Earned at Nonaccredited Colleges

Transfer credits from nonaccredited colleges are tentatively evaluated upon admission. Transcript information is used for purposes of advanced placement, and transfer credit is recommended after the performance of the student at George Mason has been established. Transfer credit is not granted for study in noncollegiate institutions, except in the Bachelor of Individualized Study (B.I.S.) Degree Program.

Credit to be Earned at Other Institutions

A student who applies for admission to the University to profit from its educational programs would not normally be expected to seek simultaneous credit enrollment at another collegiate institution. In those unique situations when a student seeks to enroll in credit courses at another collegiate institution concurrently, the student must obtain advance written approval from the appropriate George Mason dean in order to take a course elsewhere (including the Northern Virginia Consortium) for credit toward a degree at George Mason. This process permits a student to enroll elsewhere in a suitable course unavailable at George Mason. Catalog numbers and descriptions of courses to be taken elsewhere must be submitted with the request for approval.

Study Abroad

The University recognizes the educational value of travel and study abroad and encourages students to broaden and enrich their education through approved programs of study abroad.

The University advises students to participate in accredited programs offering diversified cultural and social experiences. The University participates in the International Student Exchange Program (ISEP), which coordinates the exchange of students between universities around the world. The student pays tuition and living costs at the home institution; the exchange partner does the same.

Students interested in studying abroad should contact the Office of International Programs and Services (OIPS), where a library on opportunities for study abroad is housed. Before departing, students must have programs approved by OIPS, by the department chair supervising the major field, and by the appropriate dean. They must also attend an orientation program organized by OIPS.

The Reserve Officers Training Corps (ROTC)

Army ROTC

The U.S. Army Reserve Officers Training Corps (ROTC) provides college-trained officers for the Active Army, the Army National Guard and the U.S. Army Reserve. The ROTC program is designed to develop managerial ability, leadership skills, and self-confidence. Students receive commissions as second lieutenants after their completion of ROTC and the normal college requirements.

The ROTC program consists of two components: a core curriculum and professional military education. The core curriculum involves classroom instruction and practical exercises in leadership and general military subjects and skills. Professional military education is provided by any curriculum leading to a
baccalaureate degree that includes academic courses in human behavior, written communications skills, military history, national security policy, and management.

George Mason University students may participate in the Army ROTC program offered on campus by enrolling in Military Science (MLSC) courses. Scholarships available through the Department of the Army cover tuition, fees, texts, in-class materials, and travel pay. Advanced Phase cadets and all scholarship cadets receive a nontaxable subsistence allowance of $100 per month for up to 10 months of each school year. Uniforms, textbooks, and all required equipment for the MLSC courses are provided by the U.S. Army.

For more information, contact the Army ROTC instructor at George Mason University in Rooms 107 and 107A of the Field House Module.

Air Force ROTC

Air Force ROTC (AFROTC) is available to George Mason students through an agreement with the University of Maryland at College Park. AFROTC courses are scheduled so that students from the University may complete all AFROTC requirements during one morning per week at the College Park campus. In addition, students are eligible to compete for all AFROTC scholarships and for pilot and navigator training programs. The seven-, six-, five-, and four-semester scholarships pay for tuition at the University of Maryland and George Mason University, the cost of required books, and a $100 per month subsidy.

After graduation from the University and the completion of the AFROTC curriculum at the University of Maryland, students are commissioned second lieutenants in the Air Force. Students interested in AFROTC may contact AFROTC; Cole Field House, Second Floor, University of Maryland, College Park, MD 20742. (301) 454-3242.

ROTC Courses

Although ROTC courses are offered at the University, military science credit is not transferable to the University.

Registration

Academic Load

Although many students work in order to meet living expenses, employment must not take priority over academic responsibilities. Students employed more than 20 hours a week are strongly urged not to attempt a full-time academic load. Students employed more than 40 hours a week should attempt no more than six credit hours per semester. Students failing to observe these guidelines may expect no special consideration for academic problems arising from the pressures of employment. Although 12 semester hours per semester represents a minimum full-time load, students wishing to graduate in a four-year period will need to carry an average of at least 15 semester hours per semester. A load in excess of 17 hours must be approved by the student’s academic dean.

For planning purposes applicants for admission are asked to indicate their preference for full- or part-time status and for day or evening classes; but they may freely choose between evening and day sections of courses, and change their full- or part-time status.

Catalogs of Other Institutions

The Office of the Registrar maintains a reference collection of undergraduate catalogs of other institutions; the Office of Career Services makes accessible a similar collection of graduate and professional school catalogs.

Schedule of Classes

A Schedule of Classes is available before registration for each semester. The number and variety of courses are increased as needed. Courses listed in the Schedule of Classes will be withdrawn if there is insufficient enrollment. The University reserves the right to change the class schedule and adjust individual section enrollments as necessary.

Academic Advising Policy

Each undergraduate student is encouraged to meet with an academic adviser periodically to discuss academic programs, educational goals, and career plans. With the adviser’s help, each degree student should plan an academic program to meet the general degree requirements and the specific requirements within the student’s major field. During their freshman and sophomore years, students in the Plan for Alternative General Education (PAGE) should plan their schedules through PAGE advisers. Every department coordinates advising of its PAGE students through this office (222 Thompson Hall). Responsibility for reading the catalog and knowing
and fulfilling the requirements of a specific baccalaureate degree rests with the student. Students who have not yet decided on a major or who are considering a change of major are advised to consult with their academic advisors.

Since individual departments establish their own advising processes, students should check with their departments for the appropriate procedures. Students who have not yet decided on a major or who are considering a change of major are advised to consult with their advisors concerning course registration.

Adviser's Permission to Register

Freshmen, entering transfer students, students on academic probation, and students returning from academic suspension are required to obtain an adviser's signature for registration. Students in the departments of Biology, Chemistry, Education, Health and Physical Education, Nursing, Foreign Languages, Engineering, and Physics must obtain an adviser's signature before every registration. A Course Request Form, included in the Schedule of Classes for each registration period, is used for this purpose. All students are encouraged to consult with their advisors concerning course registration.

Academic Advising Center

Students who have not yet decided on a major or who are considering a change of major are advised to consult with an academic advisor at the Academic Advising Center, located in Room 348 of Student Union I. For freshmen who have not declared a major (undeclared), advising is required for the first two semesters of enrollment. Staff members in the Center are usually available for individual advising Monday through Friday, 8:30 a.m. until 5 p.m., and some evenings.

Students are encouraged to walk in or call the Center for information about general education requirements, programs, policies, and procedures. They may request help in the selection of a major or the best use of electives. The Center also provides information for students who are interested in law, medical, dental, veterinary, and divinity schools.

Early Registration

Early registration for the next semester is conducted commencing about mid-semester by priority groups. Registration for the Summer Session begins during the Spring break and is conducted on a first-come, first-served basis.

Registration Procedure

The Schedule of Classes, distributed by the Registrar's office prior to early registration, contains written instructions for registration. Students are responsible for registering properly. They should confirm the correctness of their enrollments and report any apparent error immediately to the Office of the Registrar. Students must be present at the first meeting of every laboratory course (lecture and laboratory) to claim their registration. If a student cannot attend the first meeting, he must notify the department beforehand if he intends to continue in that section. Otherwise, his name will be stricken from that class roll.

Students' registration will not be canceled for failure to attend lecture courses—they will be responsible for full tuition payment and grades received for all courses in which they are registered unless (1) they are canceled for nonpayment for courses in which they registered early; (2) they are canceled administratively by the University staff due to suspension or dismissal; (3) the section in which they are registered is canceled; (4) they do not attend the first meeting (lecture or lab) of a laboratory course.

Student Information

Before or during each registration period, students are asked to provide directory and other types of information used in preparing a student education record and numerous statistical reports. Such information is collected and disseminated in compliance with the Family Educational Rights and Privacy Act of 1974, as amended, which provides that the University maintain the confidentiality of student education records and establish the right of students to inspect and challenge the data maintained in those records. Personally identifiable data from a student's education record may be released only to persons described in the Act, including "school officials with a legitimate educational interest."

The University may release directory information to any outside party at its discretion except when a student requests in writing that some or all directory information be withheld.

Category I of directory information includes: student's date of attendance, major(s); full- or part-time status; awards received.

Category II of directory information includes: student's address; telephone number(s); date and place of birth; participation in recognized activities and sports; weight and height (normally given only for athletics); most recent previous institution attended; other similar information.
A student who wishes to withhold directory information from the public should request such withholding in writing to the Registrar at the time of registration for a semester or summer session. Since such withholding may prohibit the Registrar from providing confirmation of enrollment to prospective employers or even residence address to the student's own family, the student who is considering such a request should consult the Registrar. Withholding directory information will also prevent the posting of confirmation of registration in student locators.

Students may inspect their education records and obtain more information about the Privacy Act at the Office of the Registrar and may obtain copies of most parts of their records for a nominal fee. Those desiring to do so should schedule an appointment with the Registrar.

**Student Identity Card**

A student is issued an identity card for official University identification each semester and summer that the student registers. Cards may be picked up beginning the week before classes start or received by mail for students who have not picked up their cards by the end of the first week of classes. Cards must be presented to obtain a library card for borrowing library materials, and may be required for admission to University events or for using University facilities after normal operating hours. Cards are not transferable and expire at the end of the semester or summer for which they are issued.

**Change of Status and Address**

Each student is required to notify the Office of the Registrar of any change of local home address and telephone number, change of permanent address, or change of legal name. When a student's legal name is changed, the Office of the Registrar reserves the right to require a certified copy of documents authorizing the change. Such documents are kept in the student's permanent file.

**Canceling Registration/Withdrawal**

Students who cannot attend classes during the semester for which they have early-registered should cancel registration by written notice to the Office of the Registrar prior to the early registration deadline for payment. Students who register and then cancel/withdraw after the deadline, but prior to the beginning of classes or during the first week of classes, are charged a $20 administrative fee. Students who withdraw on or after the first day of class must complete a withdrawal form at the Office of the Registrar; refunds of tuition on and after the first day of classes are made according to a schedule posted at the Cashier's office and published in this catalog. Withdrawal after the last day for dropping a course shown in the Academic Calendar requires approval by the student's academic dean and is permitted only for nonacademic reasons that prevent course completion.

**Continuous Registration**

Undergraduate students who fail to attend two consecutive semesters must reapply to the Office of Admissions. Summer Session does not count as a semester.

**Changing Registration (Drop/Add)**

Once registered, students may change their registration (drop/add) only by using a Schedule Change Request Form, available in departmental offices and at the registration site. Registration changes should be completed on or before the deadlines shown below and in the Academic Calendar. Sections closed at the end of registration will not reopen without departmental approval. Permission to enter a closed section must be obtained in writing from the academic department offering the course on a Closed Section Permit and submitted with the Schedule Change Request Form. When completed, the Schedule Change Request Form must be delivered in person to the registration site. Schedule changes are made only on the Schedule Adjustment Days shown in the Schedule of Classes or after classes begin.

After the termination dates listed in the Academic Calendar, add actions require approval by the chair of the academic department offering the course; and late drop approval is granted only for nonacademic reasons by the student's academic dean. Dropping all courses constitutes withdrawal from a semester (see procedure below).

The last day for adding a 14-week course that meets more than once a week is one calendar week after and including the first day of classes. For a course that meets once a week, the add period is two weeks.

The last day for dropping a 14-week course is three calendar weeks after and including the first day of classes.
Withdrawal from a Semester

Upon approval by the student's academic dean, a student may withdraw from a semester after the end of the drop period without academic penalty, but only for nonacademic reasons preventing completion of the courses. A student who withdraws from a semester after the drop period without the dean's approval receives Fs in all courses. Withdrawal forms are available at the Office of the Registrar.

Upon withdrawal after the end of the drop period the following notation is made on the student's permanent record: "Withdrawn voluntarily for nonacademic reasons on #MA(date) in the #MA week of a #MA-week semester." A list of the student's courses follows, together with W grades.

Auditing a Course

Auditing a course requires the permission of the chair of the department in which the course is offered. Audit forms are available at the Office of the Registrar. A previously audited course may be taken for credit at a later date. A student may also audit a course previously taken and passed. A student may not change from credit to audit status after the drop period. The usual tuition and fees apply to audit status.

Repeating a Course

Courses passed with a grade of C or better by undergraduates may not be repeated (except for audit). When a course is repeated, the following conditions apply: (1) All hours attempted count toward probation, suspension, or dismissal. (2) The transcript shows both the original and repeat grades. (3) Only one grade per course may be presented on the degree application.

Special Types of Enrollment

Extended Studies Enrollment

The Extended Studies Enrollment procedure allows qualified persons who are not admitted students to apply to enroll in on- and off-campus course(s).

Approved Extended Studies enrollees register on a space-available basis according to an assigned priority date and time as determined at the time of counseling and course approval in the Division of Continuing Education. See the section entitled "Division of Continuing Education" for more information on Extended Studies Enrollment.

Guest Matriculant Enrollment

Persons enrolled in undergraduate degree programs at other accredited institutions who wish to take undergraduate courses at the University for transfer to their home institution, enroll through the Division of Continuing Education. Such students should submit evidence of permission to enroll from the appropriate dean or registrar of their home institution to a counselor in the Division.

Guest matriculants who are enrolled in graduate programs at other accredited institutions may contact the Graduate School to make arrangements for taking courses.

Senior Citizens Enrollment

Under terms of the Senior Citizens Higher Education Act of 1974, as amended and as applicable to the University, eligible Virginia residents over 60 years of age with taxable income less than $7,500 are entitled to enroll, on a space-available basis without payment of tuition and fees, in courses for academic credit. There is no income condition on audit or other noncredit enrollments under this act. Tuition and fees, however, are charged for noncredit courses designed exclusively for senior citizens' groups. Interested persons should contact the Division of Continuing Education.

Graduate Course Enrollment by Undergraduates

Undergraduates may enroll in graduate courses only if they have exhausted all upper-level undergraduate courses relevant to their educational objective and can demonstrate a level of maturity required for graduate-level courses. Undergraduates must have completed all requirements for the graduate course in which they wish to enroll. Undergraduates in these circumstances may, with the written permission of the course instructor and the chair of the department offering the course, register for some graduate courses (those numbered 500-599) and apply the credit earned toward an undergraduate degree.

Students may seek to take graduate courses for reserve graduate credit, earned credit held in reserve to apply later toward a graduate degree. Approval to register is normally given only to George Mason seniors who are within 15 hours of completion of undergraduate study. Approval for reserve graduate credit does not imply approval for admission into a
graduate program at the University or that credit so earned will be accepted at another graduate school. (See the Graduate School catalog for details.)

**Attendance Policies**

Students are expected to attend the class periods of the courses for which they register. Although absence alone is not reason for lowering a grade, students are not relieved of the obligation to fulfill course assignments, including those that can only be fulfilled in class. In particular, a student who misses an exam without an excuse may have the course grade lowered. Students who fail to participate (by virtue of extensive absences) in a course in which participation is a factor in evaluation may have the grade lowered.

**Final Examinations Policies**

Final examinations are normally given at the end of all undergraduate courses. In predominantly laboratory courses, examinations may be given in the last regularly scheduled laboratory period. Scheduled final examinations should not exceed two hours and 45 minutes. Except for take-home examinations, changes in location or time of in-class final examinations must be approved by the appropriate department chair and appropriate dean. A professor who is considering the assignment of a take-home examination should inform the students at the beginning of the semester. Such examinations should be distributed by the beginning of the last week of classes so that students can coordinate them with preparation for other examinations. Students should not be required to submit examinations prior to the date of the regularly scheduled examination for a class. Final reexaminations are not permitted.

**Absence from Final Examinations and Special Examinations**

Absence from final examination will not be excused except for sickness on the day of the examination or for other cause approved by the student’s academic dean. If such absence is unexcused or the examination (with Dean’s approval) is not taken within 10 days, the course grade is F. A student whose absence from an examination is excused may take a special examination within the 10-day period on a date to be arranged between the student and the instructor.

**Grading Policies**

University course work is measured in terms of quantity and quality. A semester hour normally represents one hour per week of lecture recitation or not less than two hours per week of laboratory work throughout a semester. Using the semester hour as the unit of credit, the number of semester hours is a measure of quantity. The grade is a measure of quality.

**A-B-C-D-F.** The normal grading system for undergraduate credit is A, B, C (satisfactory), D (unsatisfactory, passing), and F (unsatisfactory, failing).

**A-B-C-No Credit.** A student successfully completing English Composition and Introduction to Literature (ENGL 101, 102) or Composition for Foreign Students (ENGL 100) is graded either A, B, or C; a student not attaining a level of at least C in these courses receives no credit (NC). **Until a minimum grade of C is attained,** these courses are not entered on a student’s permanent record, nor do they fulfill degree requirements.

**S-NC.** Undergraduates may take up to six credit hours to be graded S, NC. This option applies only to electives outside the major field. Students must obtain the instructor’s permission on a Credit Without Grade Form for this provision and submit the form to the Registrar by the end of the add period. An S grade reflects satisfactory (C or better) work. The S grade, but not the NC grade, appears on the transcript.

**IN (Incomplete).** A student who is passing a course may be unable to complete scheduled course work, for a cause beyond reasonable control. In such a case, the instructor assigns a temporary grade of Incomplete (IN). If a student fails to complete all requirements in time for the instructor to assign a regular grade by the last day of classes of the next semester (Spring incompleted must be changed by the last day of the Fall semester), the mark of IN is changed by the Registrar to F. It is the student’s responsibility to submit work to the instructor with sufficient time for evaluation.

While the mark of IN remains on the transcript, it is treated as an unsatisfactory grade in determining probation, suspension, or dismissal. Removal of INs from the transcript may result in retroactive elimination of probation, suspension, or dismissal.

**IP (In Progress).** When the work of BIS 490 or of a course which is graded A–B–C–NC or S–NC is not completed within one semester, a mark of In Progress (IP) is entered on the record. IP is not treated as an unsatisfactory grade. Except for BIS 490, if IP is not changed to a satisfactory grade by

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http://catalog.gmu.edu
the last day of classes of the next semester, the course marked IP is deleted from the record. An IP in BIS 490 not changed to a permanent grade within the same time limit is changed by the Registrar to F.

**AB and SP.** A student who has received an excuse from the appropriate dean to be absent from a final examination may receive a grade of AB. The AB automatically becomes F within ten days after the date of the regular examination if testing has not been completed. While the AB remains on the transcript, it is treated as an unsatisfactory grade in determining probation, suspension, or dismissal. The grade of SP is given by the appropriate dean to a student faced with delinquency because of very special circumstances, such as major illness.

**Grade Point Average**

A grade point average (GPA) appears only after graduation on transcripts of undergraduates. The GPA is computed on the basis of those normally-graded courses the student completed at the University which are included in the application for graduation. The average is so identified and the courses annotated.

Grade points for each semester hour are assigned on a scale of 4 for A, 3 for B, 2 for C, 1 for D, and zero for F. A grade point score is computed by multiplying the value of the letter grade by the number of credits for the course. As an example, a student receiving an A in a three-semester-hour course earns 12 grade points. Dividing the number of grade points on the application for graduation earned by the number of normally-graded semester hours gives the GPA.

**Classification of Students**

Admitted undergraduates are classified as: freshman, 0–23 semester hours completed; sophomore, 24–53 semester hours completed; junior, 54–83 semester hours completed; senior, 84 or more semester hours completed.

**Grade Reports**

Grade reports are sent to the student and to the adviser each semester and summer in which the student is registered, including semesters in which the student withdraws after the end of the drop period. The report includes all courses for that semester and the grades received, the cumulative hours of satisfactory grades, the cumulative hours of unsatisfactory grades, and the cumulative hours of credits completed successfully in courses graded under the S–NC option.

**Appeal of Grade**

Although it is generally acknowledged that the individual faculty member is the best judge of performance by students in a class, there may be instances in which a student feels a grade has been assigned unfairly. In such cases, the student should ask the instructor to reconsider the grade. If the student remains dissatisfied, the matter may be appealed to the departmental chair. Upon receiving an appeal, the chair should ask the student to return to the instructor for further consultation. If the instructor and student remain unable to reach a mutually satisfactory agreement and if the chair believes the student may have a legitimate complaint, the chair forms a committee of three faculty members who are peers of the instructor who assigned the grade. The instructor or the student may each challenge and have replaced one of the three members of the committee without giving a reason for the challenge. The committee meets separately with the instructor and with the student to explore the full particulars of the case. Every effort is made to avoid an adversary relationship. After the committee has reviewed the case thoroughly, it issues to the chair (with a copy to the faculty member) a written recommendation including the reasons for its findings. At this time, the faculty member has an opportunity to take the recommended action, if any. If the matter is not resolved at this point, the chair considers the committee recommendation and forwards a recommendation to the dean. If the dean decides that a change of grade is appropriate and the faculty member refuses to make the change, the dean may order the registrar to do so. Chairs do not accept grade appeals after the last day of classes of the next Fall or Spring semester following the academic period in which the grade is recorded.

**Pending Grade Appeal**

In select cases, a student may request a delay from the dean in imposing academic suspension because of a pending grade appeal which could change the student’s status. An approved delay would allow the student to register.

If the grade appeal is successful, the official transcript is corrected and the student continues in classes as a student in good academic standing. If the grade appeal is not successful, the student is required to stop attending all classes immediately. No record of registration for the academic period.
appears on a transcript and the student receives the appropriate refund available as of the date of decision.)

**Academic Standing**

**Honors—The Dean’s List**

An undergraduate who takes at least 12 credit hours in a semester, receives satisfactory grades in all courses, and receives a grade of A in more than two-thirds of the credit hours merits placement on the Dean’s List.

**Satisfactory Performance**

An undergraduate performs satisfactorily during any academic period (semester or summer session) in which the student receives satisfactory grades in more than two-thirds of the credit hours undertaken during the period.

**Academic Warning**

An undergraduate receives an academic warning at the end of any academic period in which the student fails to perform satisfactorily; i.e., fails to receive satisfactory grades in more than two-thirds of the credit hours undertaken during the period.

**Academic Probation**

An undergraduate who receives two warnings during any four consecutive academic periods of enrollment is on probation during the academic period of enrollment following the second warning. (Consecutive academic periods of enrollment are successive periods during which the student enrolled, regardless of whether there were intervening periods during which the student did not enroll.)

**Suspension**

A student receiving academic warnings in two immediately consecutive periods of enrollment is suspended. The two consecutive periods are extended to three if the student attempts less than 12 credit hours during either of those periods.

Suspension is included in a student’s permanent record. Course credits earned at other colleges during the period of suspension from the University are not accepted for the degree program.

A student’s first suspension will be for two academic periods, unless it is imposed at the end of the summer, in which case it will be for one semester. A second suspension will be for one calendar year, i.e., two regular semesters and a summer. A third suspension results in dismissal.

**Effect of Suspension on the Re-Enrolled Student**

A student re-enrolling after suspension is on probation for one academic period of enrollment. A warning received at the end of that period results in continuation of probation but not suspension.

**Dismissal**

A third suspension results in dismissal. An undergraduate is also dismissed upon accumulating 36 hours of unsatisfactory grades. Only unsatisfactory grades received after September 1979 are included in the accumulated hours for dismissal.

**Good Academic Standing**

A student is in good academic standing unless dismissed, suspended, or on probation.

For the purpose of determining the duration of probation and suspension, an academic period is defined as follows:

Each academic period (semester or summer session) begins on the fifteenth day following the last scheduled day of final examinations for the previous period. Each academic period ends on the fourteenth day after the last scheduled day of final examinations.

*Example:* Assume that the last scheduled day of final exams for a semester is Monday, December 23rd. That period then ends on Monday, January 6th. The next period begins on Tuesday, January 7th.

**Effect of Academic Standing on Student Activities**

Only students in good academic standing are eligible to hold elective or appointive office in any organization or activity associated with the University, or to participate in any athletic or other activity representing the University on either an intercollegiate or club level, or to serve as a working staff member of any student organization.
The Undergraduate Major

Academic Advising

Each undergraduate is urged to see an academic adviser periodically to discuss academic programs, educational goals and career plans. In consultation with the adviser, each degree student should plan an academic program to meet the general degree requirements and the specific requirements within a major field. Responsibility for reading the catalog and knowing and fulfilling the requirements of a specific baccalaureate degree rests with the student.

Individual departments establish their own advising processes; each student should check with the appropriate department. Students who have not yet decided on a major or who are considering a change of major are advised in the Academic Advising Center.

Selection of a Major

To plan a sound academic program, the undergraduate should select a major as soon as it is practical, but no later than four weeks before the end of the sophomore year. For declaration of a major, a student should confer with the appropriate department chair and/or faculty adviser and file the necessary form.

Change of Major

A student who wishes to make a change of major should see a faculty adviser or the Academic Advising Center. Departmental sections of this Catalog contain requirements for acceptance into the major programs. The student not meeting the requirements may appeal to the department chair for an exception.

Forms for changing a major are available in the Office of the Registrar.

Credit for More than One Undergraduate Major

A student who desires to graduate with a B.A. degree or a B.S. degree in two or more subjects having established degree programs must meet departmental requirements for the major in each field.

The applicant should present to the department chairs involved a detailed program showing the curriculum to be pursued. This program must be approved by department chairs involved and by the appropriate dean(s). Department chairs and dean(s) also must approve all changes.

A student may begin the program at any time that permits its completion prior to the contemplated graduation date.

The Baccalaureate Degree

Literacy Requirement

Literacy, the ability to read, write, and understand complex ideas in prose, is the cornerstone of a liberal education. Everyone involved in training university students should consider literacy of paramount importance. Because literacy is an essential part of university training, in some appropriate form a substantial amount of writing is required in all University programs.

The George Mason literacy requirement applies to all undergraduates, including transfers, who do not already hold baccalaureate degrees. It may be fulfilled in one of two ways: scoring at least 36 on the Test of Standard Written English or earning certification from the Composition Tutorial Center.

The English Composition Requirement

Because the ability to write well is so important to success in the University and professional careers, the University requires students to complete two semesters of English composition. Students must enroll in ENGL 101 (or 100) upon admission, unless they have received credit through transfer or proficiency examination. The remaining University composition requirement may be satisfied by English 102 or 302,* or an equivalent transfer course. Students must attain a minimum grade of C in composition courses to fulfill University degree requirements.

Students enrolled in the Plan for Alternative General Education (PAGE) complete the English composition requirement by completing their PAGE program.

*Note that in the College of Arts and Sciences, ENGL 302 is required, and that for the Bachelor of Science in Nursing, ENGL 102 is required.

Core Requirements

Each undergraduate degree program requires a substantial core from the arts and sciences (24 semester hours). Six semester hours must be in English composition (see English Composition
course work (numbered 300 or above) toward graduation requirements.

It is expected that the student’s final one-fourth of college study will be completed at the University. However, a student of junior standing who has completed 24 semester hours of advanced-level courses, including 12 upper-level semester hours in the major, may apply to the appropriate dean for permission to complete the remaining degree requirements elsewhere. Such applications must follow the procedures outlined in the section “Credit to Be Earned at Other Colleges” and permission is granted only in special circumstances, such as moving from the area or enrolling in an accredited professional school.

A student who gains early admission to an accredited professional school may be granted a George Mason bachelor’s degree while enrolled in a professional school if certain conditions are met. In this context, a professional school is defined as a school of dentistry, law, medicine, optometry, osteopathy, or veterinary medicine. Before leaving the University, a student must obtain certification signed by the department chair and the appropriate dean that the residence requirement and all general education and major requirements for the degree have been met. The student also must secure from the dean prior approval of those professional school courses which are to be applied only as elective credits to the total semester hour requirement for the bachelor’s degree.

**Academic Requirements**

To qualify for a degree, a student must have been admitted and must have fulfilled all stated requirements for the specific degree. An undergraduate may present all courses in which satisfactory grades have been received and up to 12 hours of courses in which D grades have been received. However, a student may not use a grade of D in BIS 490 and may not use more than six hours of D grades in the major or in the B.I.S. core of study.

The 12 hours of D grades may be exceeded by an undergraduate provided that all hours of D were earned prior to Fall 1979 and that the student achieves a cumulative GPA of 2.00 at or after the beginning of Fall 1979.

For the purpose of computing the cumulative GPA, all course work attempted at the University must be included except as provided under “Semester Excluded from GPA” in the 1978-79 catalog. An
undergraduate may petition to exclude from the calculations of the GPA only a semester that occurred prior to Fall 1979.

A Graduation Appeals Committee in each college or school considers written appeals from students failing to meet degree or certain area requirements.

Application for Degree

Students who expect to complete graduation degree requirements must secure an Application for Degree form from the Registrar's office, complete it and return it to the Office of the Registrar by the date designated on the Academic Calendar. A graduation fee is payable at the time of submission; payment is required each time a new application is submitted.

A person undertaking academic study with the University including supervised research must be registered as a student and pay the prescribed charges.

Any student not in attendance at the University who is preparing a thesis under the active supervision of a faculty member, or who wishes to return to receive a degree or take an examination, pays a $15 registration fee for that semester and is exempt from all other tuition and fees.

Second Bachelor's Degree

A second bachelor's degree may be earned, either concurrently or sequentially, by completing all requirements for that degree and by presenting on the degree application an additional 30 semester hours of credit earned at the University not presented toward the first degree.

Graduation with Distinction

A student graduates with distinction from the University when at least 60 semester hours earned at the University are applied toward graduation; all grades applied toward graduation are satisfactory; more than two-thirds of the normally-graded semester hours earned at the University toward graduation are graded A; and the student is evaluated by the major department to be outstanding based upon a record of grades and two letters of recommendation from faculty members.

A B.I.S. student presents a petition for graduation with distinction to the BIS Advisory Committee for evaluation rather than to the department of the faculty adviser.

The Registrar compiles, by department, percentages of students graduating with distinction since Fall semester 1979.

Graduation with Distinction and with Recognition

A student graduates with distinction and with recognition of a distinguished senior project if, in addition to meeting the criteria for graduation with distinction, the student completes a research project or other substantial piece of creative work directed by a faculty member and judged by the student's department to be of distinguished quality. The departmental faculty establishes criteria by which a student graduating with distinction may also attempt to receive this recognition.

A B.I.S. student attempting this recognition is evaluated by the department of the permanent adviser.

The registrar compiles, by department, percentages of students graduating with distinction and recognition since Fall semester 1979.

Comprehensive Examinations

Undergraduates who have passed with distinction a voluntary departmental comprehensive examination may have the following notation placed in the remarks section of the transcript: "Voluntary comprehensive examination in (area) passed with distinction, (date)."

Commencement

Commencement exercises provide an opportunity for students and their families to share in the experience of the conferral of academic degrees. This ceremony represents the culmination of a phase in the formal education of the individual. Degree candidates who do not desire to participate in the formal graduation ceremonies should notify the Office of the Registrar at least six weeks in advance.
College of Arts and Sciences
The College of Arts and Sciences is the largest and most diverse academic unit within the University. Its programs reflect the traditions of the liberal arts and sciences and the contemporary innovation of flexible interdisciplinary offerings. The undergraduate is taught by a faculty that has achieved a record of academic excellence through national training. Faculty members strive to prepare the undergraduate for the complexities and changes of modern society.

The disciplines within the College's 20 departments represent the core curricula of a modern University. They are designed to be flexible and they cover a wide range of subject matter. Through its programs, the College exposes students to principles of sound reasoning and judgment, while providing the skills for understanding and using information. The College strives to give students some of the knowledge needed in today's world and to develop within them the lifelong process of self-education.

The College offers ample opportunities for double majors that can be tailored to student needs, combining intellectual pursuits with preparation for employment. Faculty advisory committees assist undergraduates who are interested in careers in such fields as medicine, dentistry, veterinary medicine, law, and the ministry.

University Requirements

Students should consult the Baccalaureate Degree and the Graduation sections of Undergraduate Policies and Procedures for information concerning literacy requirement, English composition requirement, catalog requirements, residence requirements, and academic requirements.

Administration

F. Donald Eckelmann, Dean
William P. Snively, Associate Dean
Elaine C. Joyce, Assistant Dean
Randolph H. Lytton, Assistant Dean
Bachelor of Arts Degree Requirements

The general education portion of the Bachelor of Arts degree offers insights into a broad range of human thought and activity, enabling persons to fill various roles in our society effectively. It provides a foundation for continued learning and personal development.

Students at George Mason meet their general education requirements either by completing the listed number of hours in the courses listed below or by completing the interdisciplinary courses of the PAGE program.

Through general education, students gain knowledge of the basic disciplines, skill in relating materials within them, and some understanding of human civilization as a whole. All courses fulfilling general education requirements are intended to combine these elements. Thus, in a single course students should gain basic knowledge of a particular discipline and skill in the methods that produced that knowledge, as well as an understanding of the discipline's common attitudes and its place within human thought and activity.

The courses are grouped below to allow the student to exercise certain options among disciplines using similar modes of thought.

Programs of Study

Semester Hours

1. Communication 21
   a. Written 6
      ENGL 101, 302. Students admitted prior to Fall 1983 may substitute ENGL 102 for 302.
      Non-native speakers of English with limited proficiency in the language may substitute ENGL 100 for ENGL 101.
      Students must attain a minimum grade of C in order to have ENGL 100, 101, 102, 302 fulfill degree requirements in these courses.
   b. Oral 3
      COMM 100, 101, 110, 120, or 130
   c. Foreign Language 0–12
      The student must demonstrate proficiency in one foreign language offered by the University through the intermediate level, either by examination or course work.

2. Analytical Reasoning 3
   Logic (PHIL 173 or 376) or mathematics.

3. Humanities 12
   a. Literature 6
      Any course in literature at the 200 level or above in English or Foreign Languages and Literatures.
   b. Fine Arts 3
      Art, dance, film, music, or theatre (lecture or studio)
   c. Philosophy or religion 3
      A logic course does not satisfy this requirement.

4. Social Science 12
   a. Economics, geography, government, history 6
   b. Anthropology, psychology, sociology 6

5. Natural Science 8
   A two-semester laboratory science sequence in astronomy, biology, chemistry, geology, or physics.

6. Non-Western Culture 6
   Six credits must be earned in courses devoted to non-Western culture. This requirement is waived for a student who has attended for more than four years an indigenous school in a non-Western country. The following courses, which are designated as meeting this requirement, may also be presented in partial fulfillment of requirements stated in sections I, III, and IV:
   ANTH 114, 201, 204, 206, 207, 208, 211, 313, 332
   ARTH 180, ARTH 280, ARTH 319, ARTH 320
   ENGL 432 (393), 433 (394), 434 (395)
   FREN 451
   GOVT 332, 333
   HIST 251, 252, 261, 262, 271, 281, 282, 328, 329, 353, 354, 356, 463, 464
   KORE 450, 451
   LAC 152, 153, 154
   MUSI 103
   RELI 211, 212, 213, 314, 315, 337, 490
   RUSS 353, 354
   THR 327, 356 (251), 357 (252)
   VIET 301, 302

7. Major 30–42
   See appropriate departmental sections of the catalog for required credits.

8. Total minimum semester hours 120
Bachelor of Science Degree Requirements

1. At least 12 semester hours of English and literature
   a. English Composition
      ENGL 101, 302. Students admitted prior to Fall 1983 may substitute ENGL 102 for 302. Non-native speakers of English with limited proficiency in the language may substitute ENGL 100 for 101. Students must attain a minimum grade of C in order to have ENGL 100, 101, 102, 302 fulfill requirements for these courses.
   b. Literature
      Any course in literature at the 200 level or above in English or in Foreign Languages and Literatures.

2. At least 12 semester hours of course work outside the area of specialization
   a. Twelve hours outside the fields of economics, geography, government, or history if the degree is in one of these fields; six of these hours must be chosen from these fields: astronomy, biology, chemistry, computer science, geology, mathematics, and physics.
   b. Twelve hours outside the natural sciences, engineering or mathematics fields if the degree is in those fields; six of these hours must be chosen from these fields: anthropology, economics, geography, government, history, linguistics, psychology, and sociology.
   c. Twelve hours outside the fields of anthropology, psychology, or social work if the degree is in one of these fields; six of these hours must be chosen from these fields: astronomy, biology, chemistry, computer science, geology, mathematics, and physics.

3. Fulfillment of requirements for the major as listed under the respective departments: Biology, Chemistry, Computer and Information Sciences, Economics, Electrical and Computer Engineering, Mathematical Sciences, Physics, Psychology, Public Administration, and Social Work.

4. Total minimum semester hours 120

Bachelor of Music Degree Requirements

1. General Education 32
   a. ENGL 101, 302. Students admitted prior to Fall 1983 may substitute ENGL 102 for 302. Non-native speakers of English with limited proficiency in the language may substitute ENGL 100 for 101. Students must attain a minimum grade of C in order to have ENGL 100, 101, 102, 302 fulfill degree requirements in these courses.
   b. Literature
      Any course in literature at the 200 level or above in English or in Foreign Languages and Literatures
   c. Natural Sciences/Mathematics/Computer Science
      Astronomy, biology, chemistry, computer science, geology, mathematics, physics.
   d. Social Sciences
      Anthropology, economics, geography, government, history, linguistics, psychology, sociology.
   e. Additional Non-Music Courses 8

2. Basic Musicianship 58

3. Music Concentration 18

4. Free Electives 22

5. Total minimum semester hours 130
   (For details, see the music section under Department of Performing Arts.)

Bachelor of Fine Arts Degree Requirements

1. General Education 32
   a. ENGL 101, 302. Students admitted prior to Fall 1983 may substitute ENGL 102 for 302. Non-native speakers of English with limited proficiency in the language may substitute ENGL 100 for 101. A student must attain a minimum grade of C in order to have ENGL 100, 101, 102, or 302 fulfill degree requirements in these courses.
   b. Literature (6). Any course in literature at
the 200 level or above in English or in Foreign Languages and Literatures.

2. Major Program
The Department of Performing Arts offers major programs under the Bachelor of Fine Arts Degrees through the Divisions of Dance and Theatre. The Dance Division offers a general modern dance major that allows for concentrated study in either performance, choreography, or teaching. The Theatre Division offers a major program with emphasis in Acting and Design/Theatre Technology. See the appropriate departmental sections of the catalog for details and the requirements of these major programs.

3. Free Electives

4. Total Minimum Semester Hours

PAGE

Students enrolled at George Mason University may fulfill their general education requirements through the alternative plan for general education (PAGE).

General Education Requirements/PAGE Equivalents
PAGE courses correspond to general education requirements as detailed. Note that most PAGE courses contribute to meeting more than one requirement.

1. Communication
   a. Semesters I, II, & III (equivalent to English 101 or 100) 3
   b. Semester IV (equivalent to English 302 or 102) 3
   c. Semesters I, II, III, & IV (equivalent to Communications 100, 110, 120, or 130) 3
   d. Foreign Language (PAGE does not satisfy this requirement.) 12

2. Analytical Reasoning
   PAGE 120, 125, or Mathematics substitution as approved (equivalent to Logic or Mathematics) 3

3. Humanities
   a. PAGE 150, 151, 122, 130 (equivalent to Literature I) 3
   b. PAGE 152, 153, 123, 131 (equivalent to Literature II) 3
   c. PAGE 150, 151, 152, 153, 122, 123 (equivalent to Fine Arts) 3
   d. PAGE 150, 151, 152, 153, 130, 131 (equivalent to Philosophy or Religion, except logic) 3

4. Social Science
   a. PAGE Semesters II & IV (equivalent to Economics, Geography, Government, or History) 6
   b. PAGE Semesters I & III (equivalent to Anthropology, Psychology, or Sociology) 6

5. Natural Science
   PAGE 125, 225, 227, 228, or Mathematics/Science sequence as approved (equivalent to two-semester science sequence) 8

6. Non-Western Culture
   a. PAGE 150, 151, 122, 123, 130, 131 (equivalent to Culture I) 3
   b. PAGE 250, 251, 230 (equivalent to Culture II) 3

PAGE Courses Total 45

PAGE Courses total 45 credit hours and fulfill all the general education requirements listed except foreign language.

*Dance majors must take Biology 124 and 125 to fulfill the Natural Science requirement.
American Studies

PAGE Curriculum Sequence

Year 1:
1st Semester | Credit | 2nd Semester | Credit |
--- | --- | --- | --- |
PAGE 120 | 4 | PAGE 123 | 3 |
PAGE 122 | 3 | PAGE 125 | 3 |
PAGE 130 | 3 | PAGE 131 | 3 |
PAGE 150 | 1 | PAGE 152 | 1 |
PAGE 151 | 1 | PAGE 153 | 1 |
Elective | 3-4 | Elective(s) | 3-6 |
| 15-16 | | 14-17 |

Year 2:
1st Semester | Credit | 2nd Semester | Credit |
--- | --- | --- | --- |
PAGE 225 | 3 | PAGE 228 | 4 |
PAGE 227 | 4 | PAGE 252 | 3 |
PAGE 230 | 3 | PAGE 253 | 3 |
PAGE 250 | 1 | Elective(s) | 6 |
PAGE 251 | 1 | | |
Elective | 3 | | |
| 15 | | 16 |

Physical Education Courses

Activity courses offered by the Department of Health and Physical Education, College of Professional Studies, cannot be counted within the hours for a degree in the College of Arts and Sciences.

Sample Schedules

The sample schedules in this catalog are illustrative schedules only. Courses need not be taken in the precise sequences or semesters indicated, except as prerequisites or other necessities prescribe.

Secondary Teacher Certification

Students who wish to become secondary school teachers should consult with the secondary education adviser in their department. The professional preparation component of the state-approved teacher education programs for secondary school teachers is offered in the Department of Education. Please refer to the catalog section under the Department of Education, Secondary School Education.

Faculty


Course Work

The American Studies Faculty offers all course work designated AMST in the Course Dictionary of this catalog and its supplements, including the following graduate courses offered in support of degree programs in The Graduate School: AMST 502 and 690.

Degree Requirements

American Studies. The interdisciplinary program in American Studies culminates in the conferral of the B.A. degree in American Studies and requires a minimum of 120 hours of course work. All students must satisfy requirements for the B.A. degree at the University and requirements for a major in American Studies. The major requires 42 hours in American Studies divided as follows:

1. American History
Six hours in HIST 121-122. This requirement should be fulfilled during the freshman and sophomore years as part of the social science general education requirements. It may also be fulfilled during the junior year.

2. Introductory Seminar
Three hours in AMST 302. It is strongly recommended that students take AMST 302 in the second semester of their sophomore year or in the first semester of their junior year.

3. Disciplinary Concentration
Nine hours in the courses of a single discipline. Three courses from any one of the following approved sets:

- a. Economics: ECON 310, 320, 365
- b. Art and Performing Arts: ARTH 370, 371 (170), 470; MUSI 105, 107, THR 352, 353

http://catalog.gmu.edu

g. Philosophy and Religion: PHIL 331; RELI 231, 331, 332, 333

h. Sociology: SOCI 152, 206, 301, 302, 304, 308, 332, 350, 373, 382, 401, 402.

4. Interdisciplinary Concentration
Nine hours in an interdisciplinary concentration defined by adviser and student or by the specific set of interdisciplinary concentrations the Program offers. Courses should be selected from those designated appropriate to the concentration in the courses AMST 310, 320, 330 and 340 or from courses so designated in the College disciplines. For 1983–1987 the Program offers specific interdisciplinary concentrations in Urban and Suburban Culture in America, the 1930s in America, Women in American Culture and Work and Leisure in America.

5. Senior Project
Three hours in AMST 410. A seminar in methodology and completion of a project in the field of the interdisciplinary concentration.

6. AMST Electives
Six additional hours from the following:
AMST 201, 202, 310, 320, 330, 403, 490, 502.

7. Special “Skills” Courses
Six hours from a. or b. below:
a. ANTH 201; COMM 460; CS 103 (261); DESC 202, 301; ECON 345; ENGL 489 (467); GOVT 309, 355, 401, 451, 452, INFS 201; SOCI 221, 410.
b. Two courses selected in consultation with the student’s adviser and approved by the Chair.

Sample Schedule for a Double Major in American Studies and History

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
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<td>COMM 100</td>
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<td>AMST 201</td>
<td>AMST 302</td>
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<td>HIST 328</td>
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<td>ENGL 302</td>
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<td>MUSI 105</td>
<td>AMST 340</td>
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<td></td>
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</tr>
</tbody>
</table>

American Studies in a Double Major. Many students elect to double major in American Studies and another discipline. Students majoring in anthropology, economics, English, geography, government, history, philosophy, psychology, public administration or sociology can usually also fulfill the requirements for a second major in American Studies with the minimum 120 hours required for all College of Arts and Sciences degrees. Students wishing to design a double major should discuss their plans with the chairperson of American Studies. A sample schedule follows.

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Area Studies

During the 1970s, George Mason University offered two area studies degrees: the Bachelor of Arts (B.A.) degree with a major in European studies, and the Bachelor of Arts (B.A.) degree with a major in Latin American studies. Subsequent curriculum reviews led to a change in this pattern. One degree rather than two is now offered—the Bachelor of Arts (B.A.) degree with a major in area studies.

The student selecting this program is able to pursue a bachelor’s degree in area studies by focusing on European Studies, Latin American Studies, or Russian Studies. European Studies is supervised by a faculty chaired by Dr. Amelia Rutledge of the Department of English; Latin American Studies by a faculty chaired by Dr. Danusia Meson-Sosnowski of the Department of Foreign Languages and Literatures; and Russian Studies by a faculty chaired by Dr. Leo Hecht of the Department of Foreign Languages and Literatures.

European Studies

Faculty


Course Work

The European Studies Faculty offers all course work designated EUST in the Course Dictionary of this catalog.

B.A. Degree Requirements with a Major in Area Studies

European Studies. The student must present a minimum of 120 semester hours of course work for graduation, including satisfaction of general requirements for the B.A. degree and completion of 45 semester hours of course work in European studies as follows:

1. Twelve hours in interdisciplinary seminars: EUST 300, 350, 400, 450
2. Three hours of European geography: GEOG 320
3. Thirty hours in an area of concentration consisting of two related disciplines, selected from the following list. At least nine of the hours in each discipline must be earned at the 300 level or above.
   a. Language (English, French, German, or Spanish) and the fine arts
   b. Language and history
   c. Language and government
   d. Language and philosophy
   e. History and the fine arts
   f. History and philosophy
   g. History and government
   h. Government and philosophy

Approved Courses

Department of Economics: ECON 380, 390, 481

Department of English: ENGL 203, 204, 251, 252, 320, 332, (300), 335 (351), 336 (352), 400 (342), 401 (345), 402 (354), 404 (357), 406 (361), 407 (362), 421, 431, 436 (377), 437 (378), 440 (353), 443 (356), 445 (374), 448 (375), 449 (376), 450 (370), 453 (371), 456 (373), 462 (356), 471 (341), 472 (346), 474 (355), 494 (313), 495 (373), 551, 592 (392)

Department of Art: ARTH 200, 210, 320, 360, 362, 315, 332, 340, 341, 342, 344, 345, 420

Department of Performing Arts: DANC 101; MUSI 101, 102, 201, 202, 252, 325 (offered in English), 329 (offered in English), 353, 354, 361, 404 (357), 406 (361), 407 (362), 421, 431, 436 (377), 437 (378), 440 (353), 443 (356), 445 (374), 448 (375), 449 (376), 450 (370), 453 (371), 456 (373), 462 (356), 471 (341), 472 (346), 474 (355), 494 (313), 495 (373), 551, 592 (392)

FRLN 431 (offered in English)

GERM 101, 102, 201, 202, 325 (offered in English), 305, 310 (252), 325 (offered in English), 340, 350, 360, 370, 440, 451, 451, 480 (380)

* A maximum of six hours earned in musical ensemble and/or private music instruction may be applied to the European Studies program. Private music instruction is applicable to the European Studies program when the student presents evidence to the chair of the European Studies Faculty showing that the repertoire studied was predominantly European. Consult Course Dictionary under MUSI for areas of private instruction available.

http://catalog.gmu.edu
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
<th>Course Code</th>
<th>Course Title</th>
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**Eighth Semester**

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<td>GOVT 430</td>
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<td>FREN 441</td>
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<td>Electives (300 +)</td>
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**Sample Schedule for a B.A. in Area Studies**

**European Studies (Concentration: Fine and History)**

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<td>HIST 101</td>
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<td>MUSI 101</td>
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<td>ARTH 342 (355)</td>
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<td>GEOG 320</td>
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<td>Fifth</td>
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<td>ARTH 342 (355)</td>
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**Latin American Studies**

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<tr>
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<th>Name</th>
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<tbody>
<tr>
<td>R. Ailinger</td>
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<td>Y. Knowles</td>
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<tr>
<td>J. Soder</td>
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B.A. Degree Requirements with a Major in Area Studies

Latin American Studies. A student must present a minimum of 120 semester hours of course work for graduation, including satisfaction of general requirements for the B.A. degree. In addition, the student must present 36 semester hours of course work divided to include: (1) Eighteen semester hours upper division courses (300–400 level) in a core discipline—any discipline—in which a major is possible, except other interdisciplinary studies majors; (2) Eighteen semester hours of Latin American–oriented courses other than in the core discipline, including the interdisciplinary seminar on contemporary Latin America (LAS 491).

A list of courses meeting the second requirement is provided below. Proficiency in Spanish or Portuguese must be demonstrated either by examination or by completion of the requisite 202 foreign language courses. Students are encouraged to take the following six hours of language study: SPAN 302 and 366.

Latin American Studies Courses (LAS)

489 Independent Study (1–6:0:0). Prereq junior standing, permission of the department chair, and permission of the instructor. Intensive study of a period problem or project related to Latin American Studies proposed by an individual student to be conducted in close consultation with a LAS faculty member. May be repeated for a total of six credits.

490 Internship (2–6:0:0). Required of senior LAS majors or permission of the instructor. Interrelationship of economic, political, social, and cultural factors in explaining current Latin American reality. Topic announced. May be repeated for credit provided that course subtitle is different.

491 Contemporary Latin America (3). Required of senior majors in LAS. Open to others by permission. A study of the interrelationship of economic, political, social, and cultural factors in explaining current Latin American reality.

Latin American–Oriented Courses

The following courses may be presented to meet the second requirement listed above. Students are advised to consult the Course Dictionary in this catalog for prerequisites for these courses.

Department of Economics: ECON 360, 361

Department of Performing Arts: MUSI 106

Department of Foreign Languages and Literatures: PORT 202;

Department of History: HIST 271, 272, 345, 363, 420, 443, 470, 475, 478,
LAC 151

Department of Philosophy and Religion: PHI 301, 302, 303, 334

Department of Public Affairs: GEOG 102, 316 (201);
GOVT 132, 331, 336, 340, 430

Department of Sociology: ANTH 202;
SOCI 308, 332, 420

Sample Schedule for a B.A. in Area Studies Latin American Studies

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Literature</td>
</tr>
<tr>
<td>PORT or SPAN 101</td>
<td>PORT or SPAN 102</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Logic or math</td>
</tr>
<tr>
<td></td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>ENGL 302</td>
</tr>
<tr>
<td>PORT or SPAN 201</td>
<td>PORT or SPAN 202</td>
</tr>
<tr>
<td>MUSI 106*</td>
<td>HIST 272*</td>
</tr>
<tr>
<td>Core discipline</td>
<td>GEOG 316</td>
</tr>
<tr>
<td>prereq.</td>
<td>3</td>
</tr>
<tr>
<td>HIST 271*</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core discipline (300)</td>
<td>Core discipline (300)</td>
</tr>
<tr>
<td>Core discipline (300)</td>
<td>Core discipline (300)</td>
</tr>
<tr>
<td>Philosophy or</td>
<td>Anthro., psych., or</td>
</tr>
<tr>
<td>religion</td>
<td>soc.</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>Electives (300+)</td>
</tr>
<tr>
<td>(300+)</td>
<td>6</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
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</tr>
</tbody>
</table>

*Suggested courses. Students electing these courses will fulfill the requirement for 18 hours of Latin American–oriented courses, the general B.A. requirements for fine arts and social science, and partially fulfill the non-Western culture requirement.
Russian Studies

Faculty
A. Andrews (Public Affairs), L. Hecht (Foreign Languages and Literatures), Chair; R. Jensen (History), D. Lavoie (Economics), J. Levine (Foreign Languages and Literatures).

B.A. Degree Requirements with a Major in Area Studies

Russian Studies. Two principal directions are possible within this degree program: Area (Russian) Studies as one element of a double major, or Area (Russian) Studies as a single degree program. In the first option, students must fulfill all requirements of the Area (Russian) Studies program as noted below. Students must also fulfill requirements of the second major. Obvious combinations with Area (Russian) Studies may be geography, history, international studies, and economics. This program may be accomplished within a four-year period and is recommended for most students who intend to seek employment in government, industry, or journalism.

The second option is recommended primarily for students who intend to continue toward graduate work in Russian, who are interested in careers as translators, or who are studying for self-enrichment.

All degree students must present a minimum of 120 semester hours of course work for graduation, to include satisfaction of the general requirements for the B.A. degree, and the following:

a. Russian language through the intermediate level through course work or testing;

b. RUSS 380, 381;

c. Two additional upper-division courses taught in the Russian language, e.g., RUSS 303, 311, 401, 402, 410, and either 498 or 499;

d. RUSS 353, 354 (May be used to satisfy the Non-Western requirement);

e. HIST 328, 329 (May be used to satisfy the Non-Western requirement);

f. GEOG 330;

g. Two courses in Russian literature (may be used to satisfy the general requirement in literature for the B.A. degree).

Note: Arrangements will be made for qualified students who are financially able to spend six to eight weeks at Leningrad State University or the Pushkin Institutes for the Russian Language in Moscow in order to pursue accelerated course work in intermediate and advanced Russian. Credit will be given for these courses.

Courses

Department of Foreign Languages and Literatures: RUSS 101, 102, 109, 201, 202, 209 (Subject to Language Proficiency Examination) RUSS 252, 300, 303, 310 (254), 311, 325, 326, 327, 353, 354, 380, 381, 401, 402, 407, 410, 415, 498, 499

Department of History: HIST 328, 329

Department of Public Affairs: GEOG 330

Cognate Courses: ANTH 114; ARTH 360, 362; ECON 380; EDUC 435; ENGL 300, 377, 378, 391; EUST 300, 350, 400, 450; GEOG 103; GOVT 132; MKTG 307; THR 351, 352

Sample Schedule for a B.A. in Area Studies Russian Studies (Single major with a Concentration in Language and Literature)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>MUSI 103</td>
</tr>
<tr>
<td>RUSS 101</td>
<td>RUSS 102</td>
</tr>
<tr>
<td>COMM 100</td>
<td>PHIL 111</td>
</tr>
<tr>
<td>ARTH 120</td>
<td>PSYC 100</td>
</tr>
<tr>
<td>SOCI 101</td>
<td>MATH 106</td>
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<td>15</td>
<td>15</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUSS 201</td>
<td>BIOL 104</td>
</tr>
<tr>
<td>BIOL 103</td>
<td>RUSS 202</td>
</tr>
<tr>
<td>GEOG 330</td>
<td>RUSS 354</td>
</tr>
<tr>
<td>GOVT 132</td>
<td>ECON 104</td>
</tr>
<tr>
<td>RUSS 326</td>
<td>THR 160</td>
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<td></td>
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<tr>
<td>16</td>
<td>16</td>
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</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUSS 252</td>
<td>Elective</td>
</tr>
<tr>
<td>RUSS 353</td>
<td>RUSS 354</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>RUSS 381</td>
</tr>
<tr>
<td>HIST 328</td>
<td>HIST 329</td>
</tr>
<tr>
<td>RUSS 380</td>
<td>RUSS 311</td>
</tr>
<tr>
<td></td>
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<tr>
<td>15</td>
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</tbody>
</table>
### Art

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 270</td>
<td>RUSS 410</td>
<td>3</td>
</tr>
<tr>
<td>RUSS 303</td>
<td>RUSS 415</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>RUSS 499</td>
<td>3</td>
</tr>
<tr>
<td>RUSS 407</td>
<td>RUSS 300</td>
<td>3</td>
</tr>
<tr>
<td>RUSS 498</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

**Faculty**

- **Associate Professors**: Kravitz, Mattusch (Chair), Ward
- **Adjunct Associate Professor**: Sandell
- **Assistant Professors**: Clapsaddle, ffolliott, Hammond
- **Acting Assistant Professor**: Todd

**Lecturers**: Denker, Essley, Kendall, McCarty, Middour, Palewski, Sherman

**Course Work**

This department offers all course work designated ARTH and ARTS in the Course Dictionary of this catalog.

**Degree Requirements**

**B.A. Degree with a Major in Art.** The major program in art prepares students for graduate study in studio art or art history, as well as for research and professional work in art. Students may choose to concentrate in Art History or Art Studio.

- **Art History.** In addition to the general degree requirements for a B.A. degree, students concentrating in art history must complete a minimum of 3 hours of design or drawing; 39 semester hours of art history, including 6 hours at the 100 or 200 level, 24 hours at the 300 level and 6 hours at the 400 level or above. Up to three credits in AMST or EUST may be applied toward requirements for major with departmental approval. Students contemplating graduate study in art history should acquire a reading knowledge of French and/ or German.

Concentration in Art History (39 hours)
- Introductory Drawing or Design or Studio Fundamentals (3)
- Art History Electives at the 100 or 200 level (6)
- Art History Electives at the 300 level (24)
- Art History Electives at the 400 level or above (6)

Forty-five hours at the 300 level or above are required for graduation. These may be taken in any department.
### Sample Schedule for Concentration in Art History

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symbols &amp; Stories in Western Art</strong></td>
<td><strong>Survey of Western Art</strong></td>
</tr>
<tr>
<td><strong>HIST 101</strong></td>
<td><strong>Greek Art</strong></td>
</tr>
<tr>
<td><strong>ENGL 101</strong></td>
<td><strong>Mathematics or logic</strong></td>
</tr>
<tr>
<td><strong>Foreign language</strong></td>
<td><strong>Non-Western culture</strong></td>
</tr>
</tbody>
</table>

**Total Hours:** 15

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Roman Art</strong></td>
<td><strong>19th-Century Art</strong></td>
</tr>
<tr>
<td><strong>Literature</strong></td>
<td><strong>Art history elective</strong></td>
</tr>
<tr>
<td><strong>Non-Western culture</strong></td>
<td><strong>Foreign language</strong></td>
</tr>
</tbody>
</table>

**Total Hours:** 15

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medieval Art</strong></td>
<td><strong>High Ren. Art</strong></td>
</tr>
<tr>
<td><strong>Early Ren. Art</strong></td>
<td><strong>Baroque Art</strong></td>
</tr>
<tr>
<td><strong>Social science</strong></td>
<td><strong>ENGL 302</strong></td>
</tr>
<tr>
<td><strong>Drawing or design</strong></td>
<td><strong>Social science</strong></td>
</tr>
<tr>
<td><strong>Literature</strong></td>
<td><strong>Elective</strong></td>
</tr>
</tbody>
</table>

**Total Hours:** 16

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>20th-Century Art</strong></td>
<td><strong>400-level art history</strong></td>
</tr>
<tr>
<td><strong>400-level art history</strong></td>
<td><strong>PHIL 356</strong></td>
</tr>
<tr>
<td><strong>Elective</strong></td>
<td><strong>Electives</strong></td>
</tr>
<tr>
<td><strong>Oral communication</strong></td>
<td><strong>ARTS 100</strong></td>
</tr>
<tr>
<td><strong>Elective</strong></td>
<td><strong>ARTS 200</strong></td>
</tr>
</tbody>
</table>

**Total Hours:** 15

<table>
<thead>
<tr>
<th>Ninth Semester</th>
<th>Tenth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Printmaking I</strong></td>
<td><strong>Printmaking II</strong></td>
</tr>
<tr>
<td><strong>Painting I</strong></td>
<td><strong>Painting II</strong></td>
</tr>
<tr>
<td><strong>Natural science</strong></td>
<td><strong>Natural science</strong></td>
</tr>
<tr>
<td><strong>Social science</strong></td>
<td><strong>Social science</strong></td>
</tr>
<tr>
<td><strong>English 302</strong></td>
<td><strong>ARTS 300</strong></td>
</tr>
</tbody>
</table>

**Total Hours:** 15

### Courses in Support of Graduate Programs

Although a graduate degree program in ARTH is not currently available, there are courses in support of other graduate programs: ARTH 592, 593, 596, 599. Course descriptions appear in the Course Dictionary of this catalog.

### Art Studio

In addition to general requirements for a B.A. degree, students concentrating in Studio Art must complete Visual Thinking (3 hours); Studio Fundamentals I and II (6 hours); Survey of Western Art or two Art History courses at the 300 level; 21 hours of Studio Art courses at the 300 level; and 6 hours of Studio Art courses at the 400 level or above. Certain courses outside the Art Department may be presented for credit toward the ARTS major with departmental approval.

Concentration in Studio Art (42 hours required)

- **Visual Thinking** (3 hours)
- **Studio Fundamentals I and II** (6 hours)
- **Survey of Western Art or two Art History courses at the 300 level** (6 hours)
- **Studio Art electives at the 300 level** (21 hours)
- **Studio Art electives at the 400 level or above** (6 hours)

Forty-five hours at the 300 level or above are required for graduation. These may be taken in any department.

### Sample Schedule for Studio Art Concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Visual Thinking</strong></td>
<td><strong>Color</strong></td>
</tr>
<tr>
<td><strong>Studio Fundamentals I</strong></td>
<td><strong>Studio Fundamentals II</strong></td>
</tr>
<tr>
<td><strong>English 101</strong></td>
<td><strong>Non-Western culture</strong></td>
</tr>
<tr>
<td><strong>Foreign language</strong></td>
<td><strong>Foreign language</strong></td>
</tr>
<tr>
<td><strong>Social science</strong></td>
<td><strong>Social science</strong></td>
</tr>
</tbody>
</table>

**Total Hours:** 15

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drawing I</strong></td>
<td><strong>High Renaissance Art in Italy, France, Spain</strong></td>
</tr>
<tr>
<td><strong>Sculpture I</strong></td>
<td><strong>Drawing II</strong></td>
</tr>
<tr>
<td><strong>Literature</strong></td>
<td><strong>Sculpture II</strong></td>
</tr>
<tr>
<td><strong>Foreign language</strong></td>
<td><strong>Literature</strong></td>
</tr>
<tr>
<td><strong>Elective</strong></td>
<td><strong>Foreign language</strong></td>
</tr>
</tbody>
</table>

**Total Hours:** 15

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Printmaking I</strong></td>
<td><strong>Printmaking II</strong></td>
</tr>
<tr>
<td><strong>Painting I</strong></td>
<td><strong>Painting II</strong></td>
</tr>
<tr>
<td><strong>Natural science</strong></td>
<td><strong>Natural science</strong></td>
</tr>
<tr>
<td><strong>Social science</strong></td>
<td><strong>Social science</strong></td>
</tr>
<tr>
<td><strong>English 302</strong></td>
<td><strong>ARTS 300</strong></td>
</tr>
</tbody>
</table>

**Total Hours:** 15

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pinhole Photography</strong></td>
<td><strong>Color Slide</strong></td>
</tr>
<tr>
<td><strong>Studio or Art History electives</strong></td>
<td><strong>Photography</strong></td>
</tr>
<tr>
<td><strong>Mathematics or Logic</strong></td>
<td><strong>Graphic Design</strong></td>
</tr>
<tr>
<td><strong>Oral communication</strong></td>
<td><strong>ARTS 300</strong></td>
</tr>
<tr>
<td><strong>ARTS 400</strong></td>
<td><strong>ARTS 300</strong></td>
</tr>
</tbody>
</table>

**Total Hours:** 15

### Courses in Support of Graduate Programs

Although a graduate degree program in ARTS is not available through the Art Department, there are courses in support of graduate programs: ARTS 592, 593, 596, 601, 602, 605, and 606. Course descriptions appear in the Course Dictionary of this catalog.
Biology

Faculty

Professors: Emsley, Ernst, Johnston, Shaffer, Stanley, Taub, Tombes, Wall*

Associate Professors: Andrykovitch, Bradley, Brown, Hart, Joyce, Kaplan, Kelso, Lawrey, Rockwood (Chair), Royt, Sherald, J. Skog, Torzilli, Wilson

Assistant Professors: Adamkewicz, deFur, Jonas, Jones

Adjunct Professors: Banks, Bricker, Cook, Dombalagian, Drohan, Hupp, Kennedy, Laybourne, Litter, Norris, Ricca, L. Skog, Smith

Lecturers: Ascione, Bright, Chambers, Nieves, Patterson, Renfro, Simons, Storm, Strong, Toth-A llen, Yanosky

Course Work

This department offers all course work designated BIOL and MTCH in the Course Dictionary of this catalog.

Degree Requirements

B.A. Degree with a Major in Biology. In addition to the general requirements for this degree established by the College of Arts and Sciences, candidates must present 32 hours of biology. These must include BIOL 113, 114, 301, 307, and 311. In addition, candidates must complete CHEM 211–212 and one of the following combinations: MATH 113–114; 113–110; 110–113; or 110–111. Students expecting to enter graduate or professional school are strongly urged to complete MATH 113 and 114. Organic chemistry and PHYS 106, 107, or 341–342 are recommended.

B.S. Degree with a Major in Biology. In addition to the college requirements, candidates must present 44 hours of biology. These must include BIOL 113, 114, 301, 307, and 311. Candidates must also complete CHEM 211–212, 313–314, 315 and 318 or 320, PHYSICS 106, 107 or PHYSICS 341–342 and at least nine hours from among the following, including at least two math courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 110,111</td>
<td>6</td>
</tr>
<tr>
<td>MATH 113,114</td>
<td>8º</td>
</tr>
<tr>
<td>CS 103</td>
<td>3</td>
</tr>
<tr>
<td>CS 262</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 312</td>
<td>4º</td>
</tr>
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</table>

Sample Schedule for B.A. with Major in Biology

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Social Science or non-Western elective</td>
</tr>
<tr>
<td>MATH 110 or 113</td>
<td>MATH 111 or 114</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>CHEM 212</td>
</tr>
<tr>
<td>BIOL 113</td>
<td>BIOL 114</td>
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<tr>
<td>14–15</td>
<td>14–15</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Biology elective</td>
<td>Oral communication</td>
</tr>
<tr>
<td>Biology elective</td>
<td>Biology elective</td>
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<tr>
<td></td>
<td>BIOL 301</td>
</tr>
<tr>
<td></td>
<td>Humanities elective</td>
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<td>14</td>
<td>16</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 307 or 311</td>
<td>BIOL 307 or 311</td>
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<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>Social science or non-Western elective</td>
</tr>
<tr>
<td>Biology elective, 300 or 400 level</td>
<td>400 level</td>
</tr>
<tr>
<td></td>
<td>Biology elective, 300 or 400 level</td>
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<tr>
<td></td>
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<td>14</td>
<td>14</td>
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</tbody>
</table>

*BIOL 312 may also be used in partial fulfillment of the requirement for 44 hours in biology.

ºCourses particularly recommended to individuals planning to undertake graduate study in biology or seek admission to doctoral programs in the health sciences.

*Retired, October 1981.
<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social science or non-Western elective</td>
<td>Social science or non-Western elective</td>
</tr>
<tr>
<td>Social science or non-Western elective</td>
<td>Social science or non-Western elective</td>
</tr>
<tr>
<td>Humanities elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>3-4</td>
<td>3-4</td>
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<tr>
<td>3</td>
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<td>3-4</td>
<td>3-4</td>
</tr>
<tr>
<td>15-16</td>
<td>15-17</td>
</tr>
</tbody>
</table>

For students intending to pursue graduate study in biology the following are recommended:

CHEM 563, 564, 565, 566

Courses Approved for Undergraduate Biology Major
Credit: GEOL 202, 307, 309

Advising

All biology and medical technology majors must have an adviser's signature in order to register.

Transfer Students Residence Requirement

Students majoring in biology are required to complete 16 semester hours of credit for the major at the 300 and 400 level at the University.

PAGE Students

The general education and mathematics requirements for the B.A. and B.S. are satisfied by successful completion of the Program for Alternative General Education (PAGE). See the PAGE office (222 Thompson) for the sample schedules for majors in Biology.

Premedical, Predental, and Preveterinary Students

Students planning to enter medical, dental or veterinary schools may choose to major in biology. The specific requirements for admission to these schools vary considerably and often may be met by either a B.A. or a B.S. degree. Most programs, however, do require applicants to complete organic chemistry (CHEM 313-314, 315 and 318 or 320) and a year of physics (PHYS 341-342). A course in calculus is required by some and highly recommended by others. Some schools prefer students with more extensive backgrounds in biological or physical sciences, while others indicate that the undergraduate years are better devoted to humanistic pursuits that are unavailable in professional schools. Because these schools vary both in their philosophies and in their specific requirements, it is wise for the student to become aware of such information well in advance of applying for admission. The Department of Biology Health Sciences Adviser may be contacted for additional information.

Students transferring to an accredited medical, dental, or veterinary school should refer to the Residence Requirements section (undergraduate) of this catalog.

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1Foreign Language (German, Russian or French)
2BIOL 312
3CS 103, 262
Secondary Teacher Certification

Students who wish to become secondary school teachers of biology are required to earn the B.S. degree. The professional preparation component of the state-approved teacher education programs for secondary school teachers is offered in the Department of Education.

Please refer to the catalog section under the Department of Education, Certification for Secondary School Teachers. Students are required to consult with the Biology Department Secondary Education Adviser and the appropriate discipline adviser in the Department of Education. Grades of C or better in biology courses are required for students teaching in biology. Similarly, grades of C or better are required in all science courses for students teaching in general science.

Biology for Non-Majors

Students in the College of Arts and Sciences who are not majoring in science or mathematics, and students in the School of Business Administration who wish to fulfill their natural science requirement with a two-semester laboratory sequence in biology should enroll in BIOL 103, 104. Exceptions include candidates for the B.S. in Psychology, who must take BIOL 113, 114. Students in the College of Professional Studies normally fulfill their biology requirements as follows: Elementary Education majors: BIOL 151; Physical Education majors: BIOL 124–125; Health Education majors: BIOL 103, 104, 124–125, and 261; Nursing majors: BIOL 124–125, and 261.

Students who decide to major in biology after completing one or more of the above courses should consult the undergraduate coordinator of the Department of Biology when planning their academic program. The department offers a variety of general interest non-major courses for those seeking additional elective credit. Students who have completed one year of non-major biology also qualify for a number of advanced biology courses.

B.S. Degree with a Major in Medical Technology

This program requires the equivalent of three years of full-time preprofessional study at the college level preceding a senior year of professional education in an affiliated School of Medical Technology. All affiliated schools are accredited by the Committee on Allied Health and Education Accreditation of the American Medical Association (CAHEA).

Responsibility for applying to schools of medical technology and gaining admission rests with the students. However, guidance is provided by the Medical Technology Program Director in the Department of Biology. Admission to schools of medical technology is selective. Candidates should strive for strong academic standing. Students who fail to gain admission to a CAHEA-approved school will be unable to complete the degree program. Such students may transfer to a biology major without loss of credits.

Application to medical technology schools should be initiated about a year before the desired entrance date. This fact, coupled with the large number of required courses in the preprofessional curriculum, makes it imperative that students in the program consult regularly with their faculty advisers. All medical technology majors and prospective majors are urged to enroll in MTCH 200 as early as possible. This course provides information on the profession and on the educational demands placed on candidates.

Students should be aware that the senior year spent off campus requires the following special interpretation of University policies: Transfer students must present at least 16 hours of 300 or 400-level biology or chemistry taken at George Mason University. Students may present no more than six hours of D in the biology and chemistry courses required in the three years of preprofessional study. No unsatisfactory grades may be presented for courses in the senior year of professional study. Transfer students entering with more than 45 hours of transfer credit are often unable to complete the preprofessional phase of their program in the usual three years of full-time study.

Senior students are registered at the University through special procedures. For details consult the Program Director.

In addition to the college requirements for bachelor of science degrees and MTCH 200, candidates for the B.S. with a major in medical technology must present the following courses in their preprofessional programs:

1. Biology, a minimum of 20 hours, including BIOL 113, 114, 302, 361, and 452;

2. Chemistry, a minimum of 22 hours, including CHEM 211–212, 313, 314, 315, either 318 or 320, and 321;

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3. Mathematics, a minimum of six hours. (MATH 250 recommended, 101 and 106 not applicable.)

Students are encouraged to elect additional basic science courses during their preprofessional years. Recommended are: BIOL 311, CS 103, CHEM 563, 564, 565, 566, PHYS 106, 107, 380.

The professional study during the senior year requires 30 semester hours of course work, including MTCH 401, 402, 403, 404, 405, and 406. The distribution of credit hours in these courses varies with the school of medical technology. Thirty is the maximum number of hours of professional credit that may be applied toward the degree.

The Major in Medical Technology as a Second Bachelor's Degree

While the standard program for medical technologists is three years on campus followed by a fourth year at a clinical affiliate (3 + 1), many students elect to complete a bachelor's degree before entering the clinical program (4 + 1). Students who have completed a B.S. with a major in Biology or Chemistry at GMU and who then undertake a fifth year at a clinical affiliate may be readily eligible for a second bachelor's degree with a major in medical technology. Students wishing to receive the second degree must make application before entering their fifth year. For further information contact a medical technology adviser.

Sample Schedule for a B.S. with a Major in Medical Technology Preprofessional Phase

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<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
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<td>ENGL 101</td>
<td>MTCH 200</td>
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<tr>
<td></td>
<td>Nonscience elective*</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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<tbody>
<tr>
<td>CHEM 313 and 315</td>
<td>CHEM 314 and 318 or 320</td>
</tr>
<tr>
<td>BIOL 301</td>
<td>BIOL 302</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Nonscience elective*</td>
<td>Nonscience elective*</td>
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<td></td>
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<tbody>
<tr>
<td>CHEM 321</td>
<td>BIOL 452</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>Nonscience elective*</td>
</tr>
<tr>
<td>Science electives**</td>
<td>Science electives**</td>
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<td>16</td>
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</table>

Professional Phase. Twelve months clinical training at an affiliated school of medical technology.

*Anthropology, economics, geography, government, history, linguistics, psychology, or sociology.

**CS 103; BIOL 311, 380; CHEM 563, 564, 565, 566; PHYS 106, 107.
Chemistry

Faculty
Professors: Cozzens, Meites (Chair), Mushrush, Walter.

Associate Professors: Davies, Davis, Deanhardt, Roth, Slayden, Stalick.

Assistant Professors: Chen, Johnson, Weber.

Lecturers: Caulder, Greer, Hepner, Irving, Kianpour, Lakew, Odom, Ridley, Russ, Thompson, Trzaskoma.

Course Work
This department offers all course work designated CHEM in the Course Dictionary of this catalog.

Degree Requirements
B.A. Degree with a Major in Chemistry. This program, when coordinated with the necessary courses in education, meets requirements for state certification in chemistry for secondary teachers. It also meets requirements for entrance to medical and other professional schools (see below). In addition to general degree requirements, a minimum of 37 semester hours in chemistry is required for a Bachelor of Arts degree with a major in chemistry. These must include CHEM 211–212, 313–314, 315, 318, 320, 321, 331, 332, 336, and 337. Additional minimum requirements include MATH 113, 114, 213, and PHYS 341–342.

B.S. Degree with a Major in Chemistry. This program is accredited by the American Chemical Society; students completing the program are certified to the Society. Students planning professional careers in chemistry should choose the B.S. program.

Minimum course requirements are as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Requirement</th>
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<td>Mathematics</td>
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<td>Physics</td>
<td>8</td>
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<td>Other</td>
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<td>Total</td>
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Sample Schedule for B.A. in Chemistry

First Semester | Second Semester
--- | ---
MATH 113 | MATH 114
CHEM 211 | CHEM 212
ENGL 101 | Literature
Elective (e.g., BIOL 113) | Elective (e.g., BIOL 114)

Third Semester | Fourth Semester
--- | ---
CHEM 313 | CHEM 314
CHEM 315 | CHEM 318
MATH 213 | CHEM 320
Literature | ENGL 302
PHYS 341 | Elective

Fifth Semester | Sixth Semester
--- | ---
CHEM 321 | CHEM 332
CHEM 331 | CHEM 336
Electives | Foreign language
Foreign language | Electives

Seventh Semester | Eighth Semester
--- | ---
CHEM Elective | CHEM Elective
CHEM 337 | Foreign language
Electives | Electives
Foreign language | 14

121 hours total

Premedical, Predental, and Preveterinary Students.
Students planning medical, dental, or veterinary careers may meet the requirements of these professional schools by majoring in chemistry. Such students should choose the B.A. program and should consult with the premedical adviser for chemistry.

Requirements for Nursing Program. The laboratory science requirement for the B.A. and the chemistry requirement for nursing are satisfied by CHEM 103–104.

Requirement for a Major in Early or Middle Education. The laboratory science requirement for early or middle education majors can be satisfied by CHEM 106.
**Sample Schedule for B.S. in Chemistry**

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>MATH 113</td>
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<td>CHEM 212</td>
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<tr>
<td>CS 161</td>
<td>Literature</td>
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<td>Elective</td>
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<tr>
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<td>CHEM 314</td>
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<td>CHEM 315</td>
<td>CHEM 318</td>
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<td>CHEM Elective</td>
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<td>CHEM 331</td>
<td>ENGL 302</td>
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<td>CHEM 332</td>
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<td>CHEM 321</td>
<td>CHEM 336</td>
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<td>Electives</td>
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<tr>
<td>CHEM 441</td>
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<td>CHEM Elective</td>
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<td>2 or 3</td>
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<td>16 or 17</td>
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</table>

**Transfer Students.** For students majoring in chemistry, transfer credit ordinarily will not be allowed for courses in Organic Chemistry numbered below 300, i.e., those courses taught at the Freshman or Sophomore level. Credit for such courses may be obtained by passing an examination administered by the Department of Chemistry.

**Graduate Programs.** In conjunction with the Departments of Biology, Computer Engineering, and Geology, the Department of Chemistry offers interdisciplinary graduate programs leading to the degree of M.A.I.S. (Master of Arts in Interdisciplinary Studies). Information about these programs may be obtained from the Interdisciplinary Studies section of this catalog and from the Department of Chemistry.

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**Transfer Students.** Students planning to attend graduate school should consider taking the PHYS 250, 350, 351, 352, 353 sequence beginning in the second semester.

**Faculty**

**Professors:** Manchester, Taylor (Chair)

**Associate Professors:** Decker, Friedley

**Assistant Professors:** Broome, Lont, Murphy

**Lecturers:** Bartelt, Boileau, Harrison-Smith, Joffe, Rainey, Ryan, Schaefer, Seltzer

**Course Work**

This department offers all course work designated COMM in the Course Dictionary of this catalog.

**Degree Requirements**

**B.A. Degree with a Major in Speech Communication.** Study in communication prepares students for graduate study or entry-level positions in one of three areas of concentration:

1. Public communication
2. Interpersonal communication
3. Mass communication, including journalism.

In addition to the general requirements for the Bachelor of Arts, speech communication majors must complete 36 semester hours in communication. Required courses are as follows:

- COMM 300 Foundations of Public Communication (3 semester hours)
- COMM 301 Foundations of Interpersonal Communication (3)
- COMM 302 Foundations of Mass Communication (3)
- COMM 400 Introduction to Research in Communication (to be taken in Fall of junior year) (3)
- COMM 420 Senior Seminar in Theories of Communicative Interaction (to be taken in spring of senior year) (3)

To graduate, students must earn satisfactory grades (C or better) in each of these five required courses.

The remaining 21 hours of communication electives, 9 of which must be at the 300 or 400 level, should be selected in consultation with an adviser. These 21 hours of COMM electives may include no more than 9 hours total from among the following one credit courses: COMM 140, 141, 142, 143, 145, 148, 340, 341, 342, 343, 345, 346, 348, 349, 357, 450, 450, 451.

In addition, no more than 6 hours internship credit (COMM 450) may be applied toward COMM electives; not more than 9 hours credit in COMM 450.

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may be applied toward the 120 hours required for graduation.

Acceptance into major status in communication is competitive. To apply, students must have completed 27 hours toward the CAS general education requirements for the B.A. degree. Among the 27 hours must be ENGL 101, COMM 101, 110, 120, or 130, a literature course, and a course in logic, mathematics, or science. In addition, successful completion of one of the core courses (COMM 300, 301, or 302) is required (C or better). Not more than 10 hours upper-level communication courses taken prior to acceptance into the major will be counted toward the total 36 hours required communication courses. This restriction applies only to courses taken in Fall 1985 and subsequent semesters. Students interested in majoring in communication should declare themselves as pre-COMM majors and consult the Communication Department for details of the admission process.

To fulfill CAS general education requirements in speech communication, COMM majors must take COMM 101, 110, 120, or 130. COMM majors are urged to choose the following specific courses in fulfilling College of Arts and Sciences general education requirements:

Written and Oral Communication (21 semester hours)
(includes ENGL 101, 302, 12 hours of a foreign language, and either COMM 101, 110, 120 or 130)

Analytical Reasoning (3)
(Logic or Mathematics; MATH 250 recommended)

Humanities (12)
(6 hours literature at the 200 level or above)
(3 hours art, dance, music, or theatre)
(3 hours philosophy or religion: philosophy recommended)

Social Science (12)
(6 hours from economics, geography, government or history; ECON 103 and 104 recommended)
(6 hours from anthropology, psychology, and sociology; ANTH 114 and PSYC 100 recommended)

Natural Science (8)
(A two-semester lab sequence in astronomy, biology, chemistry, geology, or physics)

Non-Western Culture (6)
(6 credits chosen from the list found in CAS degree requirements in GMU catalog); ANTH 114 and HIST 328, 329, 354, or 356 recommended.

Additional elective courses in English, government, and history are strongly recommended.

COMM majors are urged to consult with an adviser in planning an appropriate schedule that will contribute to developing a strong cognate field or double major.

*Advanced placement is possible. Consult Department of Foreign Languages for test information.
Computer and Information Sciences

Faculty

Professors: Seidman, Sibley

Associate Professors: Baum, DeJong, Fife, Hamburger, Norris, Siff

Assistant Professors: Gerasch, Gonzalez, Koll, P. Wang, S. Wang

Acting Assistant Professor: Tuan

Course Work

This department offers all course work designated CS and INFS in the Course Dictionary of this catalog. Students with an interest in information systems should consult the requirements for the B.S. degree in Business Administration described elsewhere in this catalog.

Admission to Computer Science

Because of the demand for instruction in computer science and the difficulty of the subject matter, permission to major in computer science is granted only to a limited number of well-qualified students. Applicants are screened by a departmental committee that considers applications periodically throughout the year, and at least once a semester. The committee does not consider applications on demand, but at its own discretion. Incoming freshmen students who have been admitted to the major are permitted to enroll in CS 111 and following courses. Admission standards for incoming freshmen are detailed in the section Admission Policies.

Transfer Students and Change of Major. Students transferring from another institution and GMU students desiring to change their major to computer science must have completed at least one semester of Analytic Geometry and Calculus (MATH 113) with a minimum grade of B, and have an overall GPA of 2.5. A student who does not meet this requirement will be advised to enroll in MATH 113 or an appropriate calculus course and reapply for change of major toward the end of the semester. A demonstration of A or B work will be required before the committee approves the change of major.

International Students. In addition to the preceding requirements, students whose native language is not English must present TOEFL scores of at least 570 to be admitted to the major. Since proficiency in written and oral communication is such an integral part of computer science, students with observed difficulties in communication may be required by their classroom instructors to obtain remediation as a condition for continuing in the major.

Enrollment in computer science courses CS 111, 211, and 212 is reserved for majors in Computer Science, Mathematics, Information Systems or Computer and Electronics Engineering. Enrollment is open to other students only during late registration and on a space available basis.

B.S. Degree with a Major in Computer Science. In addition to the general degree requirements for a B.S. degree, the following courses are required: Computer Science: CS 111, 211, 212, 311, 365, 483, plus twelve additional hours of courses numbered above 300 for a total of 30 hours in computer science; Mathematics: MATH 113, 114, 213, 303, 305, 351, 446, for a total of 23 hours in mathematics; Engineering: ENGR 301, 441.

Students are also required to complete an additional 12 hours of computer-science related courses. These courses may be chosen from the following: INFS 311, 312; IRM 411; ENGR 285, 431, 442, 445, 446, 511, 512, 540; PHIL 371; any MATH course numbered above 300 except MATH 350, 371, 372; any computer science course numbered above 300.

Courses for Non–Majors

CS 103 (261), 161, 262 are designed primarily for students in the social and behavioral sciences or for others desiring an introduction to computer programming and do not count toward satisfying the requirements for a major in computer science.
Economics

Sample Schedule for B.S. in Computer Science

<table>
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<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>CS 111</td>
<td>CS 211</td>
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<td>ENGL 101</td>
<td>Literature</td>
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<td>MATH 113</td>
<td>MATH 114</td>
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<td>Electives</td>
<td>Electives (nonscience)</td>
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<td>CS 212</td>
<td>CS 311</td>
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<td>MATH 213</td>
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<td>Literature</td>
<td>MATH 303</td>
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<td>ENGR 301</td>
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<td>MATH 305</td>
<td>MATH 351</td>
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<tr>
<td>CS 365</td>
<td>Electives</td>
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<td>CS (above 300)</td>
<td>CS-related elective</td>
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<td>ENGR 441</td>
<td>Elective</td>
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<tr>
<td>CS 483</td>
<td>CS (above 300)</td>
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<tr>
<td>MATH 446</td>
<td>CS (above 300)</td>
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<tr>
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<td>Electives</td>
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<tr>
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Faculty

University Professors: Buchanan, Tullock

Professors: Bennett, Bloch, Coehlo, Phillips, Rowley, Snively, Tollison, Vaughn (Chair), W. Williams

Associate Professors: Chung, Crain, Holden, M. Johnson, Lee, Reid, Vanberg, Wiest

Assistant Professors: Alexeev, DiLorenzo, Grier, High, Lavoie, Levy

Acting Assistant Professor: Kirby

Adjunct Assistant Professors: Barsby, Bender, Brown, Dhanda, Dolan, Eargle, Ellsworth, Entin, Fink, Gaske, Hoffman, T. Johnson, Kilpatrick, Matthews, Mayberry, Norman, Rachlis, Uri

Course Work

This department offers all course work designated ECON in the Course Dictionary of this catalog.

Degree Requirements

B.A. Degree with a Major in Economics. Students majoring in economics must satisfy general requirements set for the B.A. degree at the University. In addition, 33 hours must be in economics, to include ECON 103, 104, 306 and 311. In addition, the following courses are required: DESC 200, DESC 202 and MATH 108.

Semester hours in economics may be earned in excess of 42, but the surplus hours must be listed as elective hours on the degree application form.

B.S. Degree with a Major in Economics. In addition to general requirements for a B.S. degree listed in the catalog, the B.S. with a major in economics requires 39 hours in economics, to include ECON 103, 104, 306, 311, and 345. In addition to 39 hours in economics, students must complete ACCT 201; DESC 200 and DESC 202; MATH 113, 114, and CS 103 (261) or IRM 201; and a two-semester sequence in a laboratory science.

Students who contemplate graduate study in economics are advised to complete at least one course in calculus beyond MATH 114.

Secondary Teacher Certification. Students who wish to become secondary school teachers should consult with the secondary education adviser in their department. The professional preparation

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component of the state-approved teacher education programs for secondary school teachers is offered in the Department of Education. Refer to catalog section under the Department of Education, Secondary School Education.

Sample Schedule for B.S. with Major in Economics

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<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ECON 103 or 104</td>
<td>ECON 104 or 103</td>
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<td>English composition</td>
<td>Literature</td>
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<tr>
<td>MATH 113</td>
<td>MATH 114</td>
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<tr>
<td>Science</td>
<td>Science</td>
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<td>ECON 311</td>
</tr>
<tr>
<td>Literature</td>
<td>English Composition</td>
</tr>
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<td>DESC 200</td>
<td>DESC 202</td>
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<tr>
<th>Fifth Semester</th>
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<tr>
<td>Economics elective</td>
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<tr>
<td>ECON 345</td>
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<td>CS 103 (261) or IRM 201</td>
<td>Electives</td>
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<td>Electives</td>
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Electrical and Computer Engineering

Faculty

Associate Professors: M. Black (Acting Chair), Ceperley, S.C. Chang, Krapka, Mouchahoir, Schaefer, Veronis

Assistant Professors: Baraniecki, El-Deib, Mulpuri

Lecturers: Athale, Chaing, S. Chang, Smith, Winslow

Course Work

This department offers all course work designated ENGR in the course dictionary of this catalog.

Degree Requirements

B.S. Degree in Computer and Electronics Engineering. This degree program in computer and electronics engineering is designed to prepare the graduate either for direct entry into a career in engineering at the B.S. level or for graduate study.

In addition to the general B.S. degree requirements, the computer and electronics engineering course requirements are outlined in the following program curriculum. Students may complete the requirements on a part-time or co-op basis. In either case, the program must be approved by an academic advisor. At least six hours of the humanities/social science electives must be in sociology, economics, psychology, anthropology, history, linguistics, geography or government. The remaining six may be in any of these areas plus religion, philosophy, fine arts, modern languages beyond the introductory skills courses, English (beyond the required courses) or regional cultures.

Engineering is a demanding curriculum that requires more total credit hours than most majors. Students should seriously consider an extra semester or two to accomplish any of the following objectives:

1. Lighten the course load (particularly for those with part-time employment);
2. Participate in cooperative education or work-study (with local industry);
3. Have a double major (with possibly Physics, Math or Computer Science).

The department also offers a master’s degree in Computer and Electronics Engineering (See Graduate Catalog).

Other Engineering Disciplines besides Electrical and Computer Engineering. Students interested in other engineering disciplines may complete the first two years of course work which are designed to meet...
most of the basic requirements of a standard engineering curriculum. Students completing the first two years of study may expect to complete a Bachelor of Science degree in any of the specialized areas offered at other schools of engineering.

**Advising.** All engineering students are required to see their major adviser prior to course registration each semester. Students interested in engineering who are not declared majors are also strongly urged to see an engineering adviser each semester.

**Sample Schedule for B.S. in Computer and Electronics Engineering**

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<tr>
<th>First Semester</th>
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<td>MATH 113</td>
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<td>ENGR 110</td>
<td>PHYS 250</td>
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<tr>
<td>ENGL 101</td>
<td>ENGR 107</td>
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<td>PHYS 351</td>
<td>PHYS 353</td>
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<td>MATH 304</td>
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<td>ENGR 285(^1)</td>
<td>ENGR 286</td>
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<td>ENGR SCI</td>
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**Fifth Semester**

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<td>ENGR 445</td>
<td>ENGR Advanced</td>
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<tr>
<td>ENGR 460</td>
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<td>ENGR Advanced lab(^2)</td>
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\(^1\)Engineering Science Electives: ENGR 206, 208, 209, 307, 308. Students interested in a discipline of engineering other than electrical or computer engineering may replace ENGR 285 with ENGR 209, and the literature course with ENGR 181 in the third semester. Similarly, in the fourth semester, they may replace ENGR 286 with ENGR 206, the literature course with an elective or ENGR 182.

\(^2\)Advanced lab courses include ENGR 429, 434, 435, 449, 461

\(^3\)Technical Electives (one such course may be from an approved list of physics, math or computer science courses). ENGR 422, 430, 441, 442, 446, 451, 452, 451, 451, 511, 512, 513, 516, 520, 521, 522, 528, 530, 535, 540, 541, 542, 563, 565, 571, 584, 586, 587, 590 (Approved Graduate Course for the Undergraduate Credit Form required to take 500-level courses).
English

Faculty

Professors: Baxter, L. Brown, S. Brown, J. Cohn (Chair), Garson, Gras, Kelley, Molin, Shreve, Williams

Associate Professors: Bergmann, Brunette, Comito, Foreman, Foster, Gallehr, Goodwin, Grossberg, Hammond, Kaplan, Karlsson, Keaney, Klappert, Kuebrich, Lewis, Nadeau, O’Connor, Owens, Palmeiri, Radner, Rutledge, Story, Thaiss, Tsukui, Yocom

Assistant Professors: Adamson, Bausch, Hodges, Holisky, Horwitz, Irvine, Masse, Melosh, Nadeau, Nelson, Sypher

Senior Lecturer: Jackson


Course Work

This department offers all course work designated ENGL in the Course Dictionary of this catalog.

Degree Requirements

B.A. Degree with a Major in English. The English department offers two major programs: the Literature Program and the Writing Program.

- The Literature Program. In addition to general requirements for a B.A. degree, students who wish to receive the traditional B.A. in English Literature must complete 30 hours of English course work beyond the 200 level with the following distribution:

1. ENGL 325, Dimensions of Literature, (may be taken concurrently with the second semester of sophomore literature)
2. Twelve semester hours of English courses at the 400 level
3. One major authors course (ENGL 471, 472, 473, 474, 477, 478)
4. Three semester hours in language/style/criticism (ENGL 481 (391), 485, 592, 397, 398, 489 (467), 511, 551, 556, and 557)
5. Nine semester hours in upper-level English courses of the student's choice.

- The Writing Program. For students who wish to prepare for a career in fictive or nonfictive writing, the English department offers a major program with special emphasis in writing. In addition to general requirements for a B.A. degree, students who wish to pursue this program must complete 30 hours of course work beyond sophomore English with at least 12 credits in the following courses: ENGL 309, 310, 397, 398, 458, 464, 489, 503, 504.

In choosing the additional hours in English required for the Literature or Writing Programs, each student, working with an adviser, should make a judicious selection of courses that foster a broad liberal education and prepare the student for graduate education or employment.

English in a Double Major. For students who wish a double major, the English department accepts certain interdisciplinary courses for credit toward the English major. Students wishing to design their own double majors are encouraged to discuss their plans with their English advisers and the chair of the Department of English.

The English Department offers a double English—Philosophy major in cooperation with the Department of Philosophy and Religion. Contact the English Department for details.

The Comparative Literature Option. The English Department, along with the department of Foreign Languages and Literatures, offers a B.A. in English or a modern language with a concentration in Comparative Literature. The requirements are:

1. CL 300, Introduction to Comparative Literature (3)
2. ENGL 494, Special Topics in Criticism (3)
3. Twelve semester hours in the literature of a modern language
4. Twelve semester hours in the literature of a second modern language. (Of the 24 hours in the two units, 12 hours must comprise a core (in genre, period, or movement) designed by the student and his or her adviser.)
5. CL 500, Theories of Comparative Literature (3).

For further information, contact the English Department or the Department of Foreign Languages and Literatures.
Graduation with Distinction and with Recognition

Candidates for graduation with Recognition in English must fulfill University requirements for graduation with Distinction and successfully complete the English Department's Honors Program. The principal component of the program is a series of Special Studies seminars ordinarily to be taken in sequence during the junior and senior years. In addition to these seminars, candidates must fulfill the writing requirement for Recognition in one of two ways:

1. By submitting the term papers from three Special Studies seminars to the English Honors Committee for evaluation. If these are each judged to be "of distinguished quality," the Committee will recommend for graduation with Recognition.

2. By completing (possibly in substitution for one of the four Special Studies seminars) an Honors Thesis, for which they would receive three units of independent study credit, judged to be "of distinguished quality." Although the Special Studies seminars are open to all English majors, admission is by permission of the Department. (Inquire at the English Department for application procedures.

Undergraduates in Graduate English Courses. The English department permits qualified undergraduates to enroll in its graduate courses numbered 500–599 either for undergraduate or for reserved graduate credit. The same quality of work is expected from undergraduates as from graduate students.

Related Courses. For Children's Literature (EDUC 305) see the Course Dictionary of this catalog. This course does not count for credit in English.

For Classicism and Romanticism (EUST 350) and The Twentieth Century in Europe (EUST 450) see European Studies Courses in the Course Dictionary of this catalog. Three credits of EUST 350 or EUST 450 may be counted toward the English major.

Secondary Teacher Certification. Students who wish to become secondary school teachers should consult with the secondary education adviser in their department. The professional preparation component of the state-approved teacher education programs for secondary school teachers is offered in the Department of Education. Please refer to the catalog section under the Department of Education, Secondary School Education.

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Sample Schedule for Undergraduate English Majors

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<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ENGL 101 3</td>
<td>ENGL 251 (or 203 or 205) 3</td>
</tr>
<tr>
<td>Natural science 4</td>
<td>Natural science 4</td>
</tr>
<tr>
<td>Economics, government, geography, or history 3</td>
<td>Economics, government, geography, or history 3</td>
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<tr>
<td>Foreign language 3</td>
<td>Foreign language 3</td>
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<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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<tbody>
<tr>
<td>ENGL 252 (or 204 or 206) 3</td>
<td>Advanced English course 3</td>
</tr>
<tr>
<td>Foreign language 3</td>
<td>Foreign language 3</td>
</tr>
<tr>
<td>Logic or mathematics 3</td>
<td>Non-Western culture 3</td>
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<tr>
<td>Non-Western culture, e.g., ANTH 114 3</td>
<td>(300 + level)</td>
</tr>
<tr>
<td>Oral communication or ENGL 325 3</td>
<td>Philosophy or religion</td>
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<tr>
<td>13</td>
<td>Electives 3</td>
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<tr>
<td>ENGL 302 3</td>
<td>Advanced English courses 6</td>
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<tr>
<td>Advanced English courses 6</td>
<td>Psychology or sociology 3</td>
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<tr>
<td>Psychology or sociology 3</td>
<td>Art, dance, film, or theatre 3</td>
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<tr>
<td>Elective (300 + level) 3</td>
<td>Elective 3</td>
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<td>16</td>
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<th>Seventh Semester</th>
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<td>Advanced English courses 6</td>
<td>Advanced English courses 9</td>
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<tr>
<td>Electives (300 + level) 10</td>
<td>Electives (300 + level) 6</td>
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</table>
Foreign Languages and Literatures

Faculty

Professors: Font, Francescato (Chair), Aguera, Elstun, Hecht, Willis

Associate Professors: Cordero, Goldin, Hazera, Hobson, LePage, Meyer, Tedder

Assistant Professors: Bufill, Chamberlain, Levine, Meson-Sosnowski, Wekerle

Lecturers: Barilla, Brinkley, Curry, Dandashi, Doherty, Farfan, Hoi, Renaud, Rojas, Seidman, Suslov, Vaught, Werres

Course Work

This department offers all course work designated ARAB, CHIN, CLAS, FREN, FRLN, GERM, GREE, ITAL, JAPA, KORE, LATN, PORT, RUSS, SPAN, and VIET in the Course Dictionary of this catalog.

General Aims and Guidelines. Courses in the Department of Foreign Languages and Literatures are designed to meet the needs of several categories of students. Majors are provided in French, German, and Spanish for those who wish to build a liberal education around the intensive study of a foreign language, literature, and culture as well as for those who plan to undertake graduate study in these fields or to become language teachers, professional translators, interpreters, or foreign correspondents. The department also cooperates in the offering of the major in Area Studies.

Elective courses are provided on several levels for those who wish to acquaint themselves with the language, culture, literature, and worlds of thought outside their own environment; for those majoring in disciplines that require the knowledge of one or more foreign languages; and for those who recognize that the knowledge of a foreign language or literature combined with other professional interests in business and industry will enhance employment opportunities and advancement.

The following courses are offered in English; the knowledge of a foreign language is not required: CLAS 250, 300; FREN 325, 329; FRLN 431, 450; GERM 301, 302, 305, 325*; JAPA 301, 302; KORE 450, 451; RUSS 300, 353, 354; SPAN 321, 322, 325*, 329; VIET 301, 302.

Courses That Fulfill General Requirements:
1. Language courses through the intermediate level fulfill the foreign language requirement.
2. All literature courses on the 200 level and above fulfill the general requirement in literature for baccalaureate degrees.
3. The following courses fulfill the non-Western culture requirement: FREN 451; KORE 450, 451; RUSS 353, 354; VIET 302, 302.

Secondary Teacher Certification

Students who wish to become secondary school teachers should consult with the secondary education adviser in their department. The professional preparation component of the state-approved teacher education programs for secondary school teachers is offered in the Department of Education. Please refer to the catalog section under the Department of Education, Secondary School Education.

Degree Requirements

B.A. Degree with a Major in French. In addition to meeting the general degree requirements for the B.A. degree as established by the College of Arts and Sciences, students must complete a minimum of 27 semester hours of work in French courses at the 300 level and above. Students are expected to complete a balanced program that includes courses in language, culture and civilization, and literature. The 27 hours required in the major must include the following:

1. One advanced language course (FREN 351, 353, 355, 356, or 461)
2. One course in French civilization (FREN 375 or 376)

*Courses numbered 325 with a variable content may be repeated once for credit.
3. One survey course in French literature (FREN 377 or 378)

4. Four courses at the 400 level or above.

No more than one course (3 credit hours) conducted in English may be taken for major credit in French.

Students are encouraged to take courses in other languages and literatures, and in related disciplines such as music, art, history, and philosophy. Those wishing to complete a double major in French and another subject are urged to work in consultation with advisers in both disciplines.

B.A. Degree with a Major in German. The major in German prepares students for teaching careers on the secondary school level, for graduate study in Germanic languages and literature, and for research and professional work in government and private enterprise.

In addition to meeting the general degree requirements for the Bachelor of Arts degree as established by the College of Arts and Sciences, students must complete 27 hours of work in German courses at the 300 level or above. No more than six hours of courses taught in English may be applied to the major; in addition to certain courses listed in the Course Dictionary under GERM, these may include EUST 350 and 450. Students are expected to complete a balanced program that includes courses in language, culture and civilization, and literature. The literature component must include GERM 340. Students are encouraged to include related courses in ENGL, HIST, and PHIL among their electives.

Students who want a double major in German and another subject should plan a program of study in consultation with advisers from both disciplines.

B.A. Degree with a Major in Spanish. The degree program in Spanish prepares the major to qualify for positions in government and industry, to undertake graduate study in Spanish, or to teach on the secondary level.

In addition to meeting the general degree requirements for the B.A. degree as established by the College of Arts and Sciences, students must complete 27 hours of work in Spanish courses at the 300 level or above for the Spanish major. Students are expected to complete a balanced program that includes courses in language, culture and civilization, and literature. The 27 hours required in the major must include the following:

1. One course in Hispanic civilization (SPAN 361 or 366)

2. Two advanced language courses—one at the 300 level and one at the 400 level (SPAN 301, 351, 352, 359, 451, 452)

3. Three literature courses (SPAN 311, 317, 318) Students contemplating the possibility of pursuing graduate studies in Hispanic literatures are encouraged to take at least two 400-level courses in literature. No more than six hours may be taken in courses conducted in English.
Geology

Faculty

Professors: Eckelmann, Mose (Chair)
Assistant Professors: Diecchio, Kimmel
Adjunct Professors: Dunn, Hartung

Course Work

This department offers all course work designated GEOL in the Course Dictionary of the catalog.

Degree Requirements

B.S. Degree with a Major in Geology. In addition to the general requirements for this degree established by the College of Arts and Sciences, candidates are required to submit at least 40 semester hours of geology, no more than 12 semester hours of which may be at the 100 level. Required geology courses are GEOL 101, 102, 108, 201, 202, 207, 301, 303, 407, plus two courses from the following group: GEOL 304, 305, 314 and 401.

Also required are one year of calculus (MATH 113–114), one year of chemistry (CHEM 211–212), and one year of physics (PHYS 341–342 or 250, 350). Geology majors are strongly encouraged to take a 6–8 week summer field–camp course approved by the field–camp adviser. One year of biology, one year of computer science and two years of French, German, or Russian are strongly recommended for geology majors who contemplate graduate study in geology.

Students must receive a C average or better in GEOL 101–102 in order to enroll in 200–400–level geology courses. Students with a B average or better in PAGE 227–228 can substitute the PAGE 227–228 course for GEOL 101–102. At least 45 hours of credit in all courses numbered 300 or above are required for a B.S. in geology. Students who have been continuously enrolled since their admission to the University have the option of graduating under the provisions of any catalog subsequent to their admission.

Persons with a B.S. degree in geology are eligible to obtain a Provisional Certificate (good for five years, renewable) may be obtained from the Geology chair.

Graduate Degree Program in Geology (MAIS) The Department of Geology offers courses leading to a Master of Interdisciplinary Science (MAIS) degree. The MAIS degree requirements include a total of 36 semester credits, at least 6 of which are in graduate–level geology, and 6 in thesis research. Of the remaining credits at least 6 must be in related course work in areas outside geology, and approved by the program adviser. Students design a course of study that combines geology with other areas related to geology. Students interested in the MAIS degree in organic geochemistry are particularly encouraged to apply. Additional information can be obtained from Dr. James Fonseca, Division of Continuing Education (703–323–2342).

Minimum course requirements are as follows:

Geology (40)
English 101, 302 (6)
Literature at 200–400 level (6)
Chemistry 211–212 (8)
Math 113–114 (8)
Physics 341–342 or 250, 350 (8)
Electives outside Natural Science and Math (6)
Special Electives (6) (must be from anthropology, economics, geography, government, history, linguistics, psychology, and sociology)
General Electives (32)
Total 120

Sample Schedule for B.S. in Geology

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<td>Literature</td>
<td>ENGL 302</td>
</tr>
<tr>
<td>CS 211</td>
<td>GEOL 310</td>
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Total 120
History

Seventh Semester | Eighth Semester
--- | ---
GEOL 305 | GEOL 401 | 4
GEOL 407 | GEOL 311 | 3
Electives | Electives | 9
--- | --- | ---
16 | 15

Faculty

**Professors:** Cassara, Pugh, Spence

**Associate Professors:** Censer, Deshmukh, Gleissner, Harsh (Chair), Henriques, Jensen, Lytton, Pacheco, Saeed, Soder, Walker

**Assistant Professors:** Cohen, D’Amico, Duara, Hawkes, Hoberman, Holsinger, Rosenzweig

**Lecturers:** Angel, Bailey, Butowsky, Cornell, Hood, Jessup, Kulik, LaMotta, Lardiero, Lykes, McMullen, Mintz, Parker, Sheldon, Snyder

Course Work

This department offers all course work designated HIST and LAC in the Course Dictionary of this catalog.

Degree Requirements

**B.A. Degree with a Major in History.** Candidates for a B.A. degree in history must meet (a.) the Bachelor of Arts Degree Requirements, (b.) the University Residence Requirements, and (c.) the History Major Requirements which follow. (See the appropriate section of the Catalog for a. and b.)

Major Requirements: 36 semester hours of history, with at least 21 hours of the total presented for the degree in the 300 and 400 series. Requirements for a degree in history include:

1. U.S. history at the 100, 300, and/or 400 levels (6 semester hours)

2. European history (including Russia) at the 100, 300, and/or 400 levels (6 semester hours)

3. Latin American, African, Asian, or Middle Eastern history at the 200, 300, and/or 400 levels (6 semester hours)

4. HIST 300 (3 semester hours)

5. HIST 499 (3 semester hours)

6. At least 12 hours of history electives at the 300 and/or 400 levels to complete the 21-hour upper-division history requirement.

Total 36 semester hours

No more than 42 hours may be counted toward completion of the program, but hours of history in
excess of that number may be presented as elective
hours to be counted toward graduation. Three hours
of the history major requirement may be satisfied by
either LAS 491, AMST 310, 320, 330, 340, or EUST
300 or 400 with permission of the department, when
the course curriculum includes a substantial amount
of history.

See B.A. degree requirements for those history
courses that can be used to fulfill the non-Western
Culture requirement.

**Secondary Teacher Certification.** Students who wish
to become secondary school teachers should consult
with the secondary education adviser in their
department. The professional preparation
component of the state-approved teacher education
programs for secondary school teachers is offered in
the Department of Education. Please refer to the
catalog section under the Department of Education,
Secondary School Education.

Sample Schedule for B.A. in History

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>HIST 101</td>
<td>HIST 102</td>
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<tr>
<td>Foreign language</td>
<td>Foreign language</td>
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<tr>
<td>English composition 101</td>
<td>Literature</td>
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<td>Social science (Group A or B)</td>
<td>Social science (Group A or B)</td>
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<td>Fine arts</td>
<td>Mathematics or logic</td>
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<td>HIST 121</td>
<td>HIST 122</td>
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<tr>
<td>Foreign language</td>
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<td>English 302</td>
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<tr>
<td>Literature</td>
<td>Natural science</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>Philosophy or religion</td>
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<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>HIST 300</td>
<td>History elective</td>
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<tr>
<td>History elective</td>
<td>History elective</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Social science (Group A or B)</td>
</tr>
<tr>
<td>Social science (Group A or B)</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
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| 3              | 3              |
|                | 3              |
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|                | 3              |
|                | 3              |
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|                | 3              |
|                | 3              |

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| 15             | 16             |

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<tbody>
<tr>
<td>Senior Seminar in History (or history elective)</td>
<td>Senior Seminar in History (or history elective)</td>
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<tr>
<td>History elective</td>
<td>History elective</td>
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<tr>
<td>Elective</td>
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<td>Elective</td>
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<td>Elective</td>
<td>Elective</td>
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| 3              | 3              |
|                | 3              |

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| 15             | 15             |
Mathematical Sciences

Faculty

Professors: Draper (on leave, 1984–85), Saperstone (Acting Chair), Smith (Mathematics Education)

Visiting Professor: Hershner

Associate Professors: Cabell, Fischer, Gabel, Kiley, Levy, Rice

Assistant Professors: Chen, Lawrence, Lim, Lin, O’Brien, Sarkaria, Shapiro, Svendsen, Thomas, Trenholme, Zoltek

Visiting Assistant Professor: Kaniewski

Acting Assistant Professor: Chen, M.S.

Lecturers: Andersen, Carrig, Donelson, Dykes, Falk, Fries, Gleit, Goldschen, Haberkorn, Haenisch, Hodson, Howey, Katzoff, Lanier, Lawson, Lieberman, Marin, May, Mayer, McAllister, Morse, Oliver, Paddock, Roginsky, Schroeder

Course Work

This department offers all course work designated MATH in the Course Dictionary of this catalog.

Degree Requirements

Because of the demand for programs within the department and the difficulty of the subject matter, permission to major in mathematics is granted only to a limited number of well-qualified candidates. Applicants are screened by an admissions committee of departmental faculty. To be considered, students should declare mathematics as a major. Students who are admitted to the program are permitted to enroll in MATH 115. Students denied admission to the programs are not granted preferential access to the courses restricted for majors. Such students may be reconsidered after satisfactory completion of MATH 113 or MATH 114.

The admissions committee considers applications periodically throughout the year, and at least once in both the Fall and Spring terms. The committee does not consider applications upon demand, but at its own discretion. This process applies to all students wishing to elect mathematics as their major.

The admissions committee finds the following information useful in evaluating applicants: Scholastic Aptitude Test scores, scores on the Level I or Level II Mathematics Achievement tests given by the College Entrance Examination Board, high school grades and senior class rank, and evidence of a command of written and spoken English from students whose native language is not English. The committee also considers the academic record of students who have taken courses at the University or elsewhere prior to electing mathematics as their major.

Enrollment in the mathematics course MATH 115 is reserved for majors in the department and open to non-majors only during late registration and on a space available basis.

B.A. Degree with a Major in Mathematics. In addition to general degree requirements for a B.A. degree, the following courses are required: MATH 115, 116, 200, 215, 303, 306, plus 15 additional hours numbered above 310 for a total of 37 semester hours in mathematics. Three semester hours in computer science are recommended.

Those students pursuing certification for secondary school teaching are advised to take MATH 200, 302, 303, and CS 103 (261) or 111.

B.S. Degree with a Major in Mathematics. In addition to general degree requirements for a B.S. degree, the following courses are required: MATH 115, 116, 200, 215, 303, 306, 315, 316, 321, 322, plus 12 additional hours numbered above 310 for a total of 46 semester hours in mathematics. CS 111 and 211 are also required.

The science requirements may be fulfilled by one of the following options:

1. PHYS 250, 350, 351, 352, 353
2. BIOL 113, 114 and CHEM 211–212
3. BIOL 113, 114 and GEOL 101, 102
4. CHEM 211–212 and GEOL 101, 102
5. Four semesters of chemistry, excluding CHEM 103–104, 106
6. Four semesters of biology, including BIOL 113, 114, and two courses numbered above 300
7. Four semesters of geology, excluding GEOL 103

The department recommends that a two-year proficiency in either French, German, or Russian be demonstrated.

The department offers the following options for those students who wish to major in mathematics: MATH 115, 116, 200, 303, 306, plus 12 additional hours numbered above 310 for a total of 37 semester hours in mathematics. Three semester hours in computer science are recommended.
MATH 113, 114, 213, 304 are not recommended for mathematics majors. MATH 108, 109, 110, 111, 250, 256, 350, 371, and 372 do not count toward satisfying the requirements for a major in mathematics. Students may not duplicate equivalent courses in the 113 and 115 sequence.

**For Non-Majors.** MATH courses 108, 109, 110, 111, CS 103 (261), and 262 are designed for the students in the social and behavioral sciences. Liberal arts majors are advised to take either MATH 106 or the sequence 110, 111, and possibly CS 103 (261). Students in the natural sciences who plan to do graduate work are advised to add to their basic calculus sequence from MATH 313, 314, 351, 352, 382, 441, 442, 446, 447. Students who have received credit for MATH 113 or 115 may not receive credit for MATH 108. Students who have received credit for MATH 250 or 256 may not receive credit for MATH 109. Students who have received credit for MATH 351 may not receive credit for MATH 250 or 256.

**Sample Schedule for B.A. in Mathematics**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ENGL 101</td>
<td>Literature</td>
</tr>
<tr>
<td>FRLN 101</td>
<td>MATH 116</td>
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<td>MATH 115</td>
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<tr>
<td>Natural science</td>
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<tbody>
<tr>
<td>Literature</td>
<td>MATH 303</td>
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<tr>
<td>FRLN 201</td>
<td>MATH 306</td>
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<tr>
<td>MATH 215</td>
<td>Economics,</td>
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<td>MATH 200</td>
<td>FRLN 202</td>
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<tbody>
<tr>
<td>Fine arts</td>
<td>Philosophy or</td>
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<tr>
<td>MATH (above 310)</td>
<td>MATH (above 310)</td>
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<td>Oral Communication</td>
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<td>Sociology,</td>
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<tr>
<td>or anthropology</td>
<td>or anthropology</td>
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<td></td>
<td>Elective</td>
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<tr>
<td>Computer science</td>
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<tr>
<td>Electives</td>
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<td>MATH (above 310)</td>
<td>MATH (above 310)</td>
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<td>9</td>
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**Sample Schedule for B.S. in Mathematics**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Natural science</td>
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<td>MATH 115</td>
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<td>ENGL 101</td>
<td>Literature</td>
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<td>CS 111</td>
<td>MATH 116</td>
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<th>Third Semester</th>
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<tbody>
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<td>Natural science</td>
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<td>MATH 215</td>
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<td>MATH 200</td>
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<tr>
<th>Fifth Semester</th>
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<tbody>
<tr>
<td>MATH 315</td>
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<td>MATH 321</td>
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<tr>
<td>Elective</td>
</tr>
<tr>
<td>Literature</td>
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<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<tbody>
<tr>
<td>MATH (above 310)</td>
<td>Computer science</td>
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<tr>
<td>Electives</td>
<td>Electives</td>
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<tr>
<td>MATH (above 310)</td>
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</tr>
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PAGE (Plan for Alternative General Education)

Faculty
Thaiss, Director; Barocas, Bergmann, Bergoffen, Black, P., Black, M., Bloch, Boneau, Brawley, Broome, Carroll, Censer, Clark, Cohn, W., Cohn, J., Comito, D’Amico, Davis, DeFur, DeNys, Deahrhardt, Deshmukh, diBona, Dienia, Dietz, Duara, Ehrlich, Eldeib, Feeg, ffolliott, Gabel, Gerber, Golump, Gonzalez, Greene, Hamburger, Hammond, Hayden, Hecht, Henriques, Hodges, Hollenbeck, Holman, Holsinger, Horwitz, Irvine, Jacob, Jenkins, Johnson, Jones, Kafatos, Kaplan, Keeny, Kelly, Kelso, Kimmel, Knight, Koller, Kravitz, Kuebrich, Lankford, Lawrey, Mandes, Masse, Mattusch, Melosh, Meson-Sosnowski, Metcalf, Molin, Moretz, Mose, Mushrush, Nadeau, Nelson, O’Conner, Olson, Polivka, Rader, Radner, Rosenzweig, Rosenblum, Rothbart, Ro, Ruth, Rutledge, Scimecca, Seidman, Shannon, Siff, Story, Sypher, White, Wiest, Williams, Wilson, Yocom, Zoltek.

The following PAGE faculty serve as Course Leaders of multi-disciplinary courses listed in the dictionary of this catalog:
Murray Black, PAGE 120; Lorna Irvine, PAGE 122; Pat Story, PAGE 123; Michael R. Gabel, Problem Solving Across the Curriculum, PAGE 125/225; John Radner, PAGE 130; Christopher Thaiss, PAGE 131; Debra Bergoffen, Deborah Kaplan, PAGE 150/152; William Cohn, PAGE 151/153; Donald P. Kelso, PAGE 227/228; Donald Holsinger, PAGE 230; Robert P. Clark, PAGE 251/252; Johannes D. Bergmann, PAGE 283; Marie Nelson, Writing Across the Curriculum.

Course Work
The PAGE faculty offers all course work designated "PAGE" in the Course Dictionary of this catalog.

Prerequisites
Only students enrolled in the PAGE program are eligible to take PAGE courses.

PAGE Program
The George Mason Plan for Alternative General Education is an integrated, sequential, general education program, introducing students to a wide range of concepts and subject matter in the humanities, social sciences, sciences, and mathematics, as well as developing and increasing literacy in writing and speaking and in the use of the computer. The PAGE program fulfills, in whole or in part, general education and graduation requirements for a bachelor’s degree at George Mason.

Students in PAGE will not only explore a range of diverse academic fields, such as computer science, history, mathematics, physics, biology, arts, literature, sociology, and political science, but will also learn how these disciplines influence and interact with each other. The program emphasizes both breadth of knowledge and the acquisition of skills and provides opportunities for students to integrate and apply both knowledge and skills in order to prepare themselves better for living and working in contemporary society. Augmenting the interdisciplinary thrust of the various courses in PAGE will be two weekly lecture series (one credit each) by PAGE faculty and guest lecturers during each of the first three semesters.

Academic Policies and Procedures Unique to PAGE

Students in PAGE are subject to University policy on admissions, transfers and failure as stated in this catalog. In addition, students in PAGE (a special curriculum within this University structure) are subject to certain academic policies and procedures that are unique to this sequential program:

Admission: New admission to the PAGE student body is limited to 300 full-time entering freshmen. Applicants may check the appropriate box on the George Mason University application form.

Majors: Specific requirements of the departments in regard to their majors are available in the PAGE office and in the offices of the deans.

Transfers: Within GMU—Because of the sequential and integrated nature of the program, PAGE courses do not correspond exactly to the general education courses in the traditional programs. A list of equivalencies (by semesters of PAGE completed) is available in the PAGE office and in the offices of the deans.

Outside GMU—The PAGE program meets the general education requirements at other universities. Students transferring after just one year or less, however, may have to take additional courses.

Failures:
1. PAGE students failing (grade of F) a total of five or more hours of course work in PAGE in a given semester will be dropped from the program.
2. PAGE students failing (grade of F) two to four hours of course work in a given semester will be placed on ‘‘Notice.’’
3. PAGE students placed on “Notice” in two successive semesters in attendance will be dropped from the program.

4. Academic counseling will be provided for all students failing courses in PAGE. Appeals to the policies stated above may then result.

5. General Education requirements for students failing in PAGE. Students dropped from the PAGE program for reasons of failure will have to meet the traditional general education requirements of the University.

6. Tutorial help for students placed on “Notice.” A system of voluntary noncredit tutorials for each of the PAGE courses (excluding the Strand Lectures) may be available to help students who have failed a course in PAGE develop the necessary skills for progressing in the program. Students earning a grade of D in a PAGE course may also enroll in these tutorials. The tutorials most likely will be arranged for the week preceding the beginning of classes each semester. There will be a fee for this service.

Performing Arts

Faculty
Professors: Burton, di Bonaventura, J. Smith
Associate Professors: Brawley, Hill, Kanyan (Chair), Murphey, G. Smith
Assistant Professors: Harrison, Houser, L. Miller, Powell
Lecturers: Batson, Flye, Mellis, B. Smith, van Camp
Artist-in-Residence: Arthur Peterson

Applied Music Faculty
Accompanying. Beverly Smith, Adjunct Assistant Professor. B.M., M.M., University of Illinois; coach and accompanist.

Bassoon. Truman Harris, Adjunct Associate Professor. B.A., North Texas State University; M.M., The Catholic University of America; bassoonist, National Symphony Orchestra.

Cello. Yvonne Caruthers, Adjunct Assistant Professor. B.M., Eastman School; cellist, National Symphony Orchestra.


Flute. Thomas Perazzoli, Adjunct Associate Professor. Philadelphia Musical Academy; flutist, National Symphony Orchestra.

Guitar (Classic). Jeffrey Meyerriecks, Adjunct Assistant Professor. B.M., North Carolina School of the Arts; concert tours in the United States, Europe, South America, and Caribbean; former guitarist, U.S. Navy Band of Washington, DC.

Larry Snitzler, Adjunct Associate Professor. Studied with Andres Segovia and Nadia Boulanger; international concert tours; free-lance music producer, National Public Radio.

Harp. Jeanne Chalifoux, Adjunct Assistant Professor. Artist Diploma, Curtis Institute of Music; former...

http://catalog.gmu.edu
harpist, National Gallery Orchestra and National Symphony Orchestra.

**Horn.** Edwin Thayer, Adjunct Associate Professor, B.M., M.M., University of Illinois; principal hornist, National Symphony Orchestra.

David Whaley, Adjunct Associate Professor. B.M.E., Drake University; M.M., D.M.A., University of Illinois; hornist, National Symphony Orchestra.

**Oboe.** Gene Montooth, Adjunct Associate Professor, B.M.E., Indiana University; principal oboist, Kennedy Center Opera House Orchestra, Filene Center (Wolf Trap) Orchestra, and National Gallery Orchestra.

**Organ.** Charles Whittaker, Adjunct Associate Professor. B.M., Westminster Choir College; organist, Fairfax United Methodist Church.

**Percussion.** Kenneth Harbison, Adjunct Assistant Professor. B.M., Eastman School; M.M., The Catholic University of America; percussionist, National Symphony Orchestra.

**Piano.** Thomas Brawley, Associate Professor. B.M., Greensboro College; M.M., Ph.D., Northwestern University.

Joanne Haroutounian, Adjunct Assistant Professor. B.A., Trenton State College; M.A., The American University.

Judith Harrison, Assistant Professor. B.M.E, Florida State University; M.A., University of North Carolina, Chapel Hill; Ed.D., University of North Carolina, Greensboro.

Yona Knorr, Adjunct Assistant Professor. Diploma, Rubin Academy of Music (Israel); M.M., University of Texas at Austin.

Elvin Schmitt, Adjunct Professor. Columbia University; Tobias Matthay Pianoforte School, London; Ecole Normale, Paris; Sorbonne, Paris; former soloist, U.S. and European orchestras; former head of piano departments, Drake and Syracuse universities.

Beverly Smith (see listing under Accompanying).

**Saxophone.** Richard Parrell, Adjunct Assistant Professor. B.A., B.M., George Mason University; M.M.E., North Texas State University; saxophonist, U.S. Army Band of Washington, DC.

**String bass.** Donald Havas, Adjunct Associate Professor. B.M., Oberlin Conservatory; M.M., University of Tulsa; string bassist, National Symphony Orchestra.

**Trombone.** Paul Schultz, Adjunct Assistant Professor. B.M., North Central College (Illinois); M.M., Northwestern University; trombonist, U.S. Army Band of Washington, DC.

**Trumpet.** David Flowers, Adjunct Associate Professor. B.M., M.M., University of Michigan; D.M.A., The Catholic University of America; trumpeter, National Symphony Orchestra.

Gilbert Mitchell, Adjunct Associate Professor. Ernest Williams School of Music; former principal trumpeter, New Orleans Symphony Orchestra; retired associate conductor, U.S. Army Band of Washington, DC.

**Viola.** Richard Parnas, Adjunct Associate Professor. Curtis Institute of Music; principal violist, National Symphony Orchestra.

Ramon Scavelli, Adjunct Associate Professor. Philadelphia Musical Academy; violist, National Symphony Orchestra.

**Violin.** Sam di Bonaventura, Professor. B.S., Juilliard School; B.M., M.M., Yale University; M.A., Harvard University; D.M.A., Peabody Conservatory of Music.

William Haroutounian, Adjunct Associate Professor. B.M., Curtis Institute of Music; M.M., The Catholic University of America; violinist, National Symphony Orchestra.

**Voice.** Rilla Mervine. Adjunct Associate Professor. A.A., North Dakota State School of Science; Certificate, Peabody Conservatory; soloist, U.S. orchestras, oratorio and choral societies, Phillips Collection, and National Gallery of Art.

James G. Smith, Professor. B.M., M.M., Peabody Conservatory; D.M.A., University of Illinois, Urbana-Champaign; former conductor, University of Illinois Chamber Choir; former director, Choral Activities, Eastman School.

Vera Tilson, Adjunct Associate Professor. Mannes College of Music; music director, Unitarian Church of Arlington; former music director and conductor, Arlington Metropolitan Chorus.

Gene Tucker, Adjunct Associate Professor. B.M., Eastman School; soloist, Marlboro Music Festival, U.S. orchestras, opera companies, oratorio and choral societies.
Jane White, Adjunct Associate Professor. B.M., Eastman School; M.A., The American University; soloist, Marlboro Bach Festival, Phillips Collection, and musical organizations in Washington, DC

Koto. Kyoko Okamoto, Adjunct Assistant Professor. Bachelor in Languages, Kyoto University of Foreign Studies; Toho Kinshu Kai (Koto School).


Conducting. Stephen Burton (see listing under Composition).

Judith Harrison (see listing under Piano).

Thomas Hill, Associate Professor. B.M., M.M., Boston University; D.M.A., The Catholic University of America.

Joseph Kanyan (see listing under Clarinet).

James G. Smith (see listing under Voice).

Course Work
This department offers all course work designated DANC, MUSI, and THR in the Course Dictionary of the catalog.

Secondary Teacher Certification. Students seeking certification to teach vocal/general or instrumental music on the elementary and secondary levels must earn the Bachelor of Music degree. For students who have earned a baccalaureate degree and who are seeking state certification to teach music, this recommendation is normally made contingent upon completion of the sequence of courses listed under "Bachelor of Music—Concentration in Music Education." It should be noted that the courses listed under "General Education" and "Additional Courses" in the Music Education Concentration are used to fulfill state certification requirements and the University's requirements.

Dance
The two dance degree programs prepare students for professional and creative opportunities in the dance field. The degrees in dance are:

1. Bachelor of Fine Arts—Dance
2. Bachelor of Arts with a Major in Theatre (Concentration in Dance)

The Bachelor of Fine Arts degree in Dance is specifically designed for students with a firm idea of their professional goals who wish to devote a significantly larger portion of their college career to a more intensive and comprehensive level of dance study. The B.F.A. degree offers a general modern dance major that allows for concentrated study in either performance, choreography or teaching. Technical training includes the areas of ballet, jazz and a strong emphasis on modern dance. Entrance into the B.F.A. program is by audition. Auditions occur twice a year, in July and January, and interested students must make arrangements in advance by contacting the Department of Performing Arts. Transfer students are also required to audition. While a student may be approved for the dance program, this does not mean the student has been admitted to the University. For admission to the University each student must contact and submit application to the office of Admissions.

The Bachelor of Arts degree with a major in theatre (concentration in dance) does not require an audition. The B.A. degree is a more general program of study allowing the student insights into a broad range of creative and educational experiences while pursuing a liberal arts degree.

B.F.A. Degree with a Major in Dance. Because of the professional nature of this degree, the program requires completion of 130 hours of course work. The B.F.A. is specifically a performance oriented program. It is designed to prepare students professionally as performers, choreographers and teachers as well as to prepare them for graduate study.

The requirements by area are:

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>1. General education</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>See requirements for B.F.A. degree elsewhere in catalog. Dance majors must take Biology 124 and 125 to fulfill the natural science requirement.</td>
<td></td>
</tr>
</tbody>
</table>

2. Major Program Dance Core: 73
Dance and related courses required of all dance majors:
- Dance Appreciation 3
- Modern Dance Technique (21 hours, must be Intermediate and above) 25
- Dance Improvisation 3
- Dance Composition I 3
- Dance Composition II 3
- Dance History I – Primitive through 18th Century 3
- Dance History II – 19th and 20th Century 3
- Rhythmic Analysis 3
- Dynamic Alignment 3
- Teaching, Principles of Modern Dance 3
- Dance Performance 6
- Costumes 3
- Lighting 3
- Acting I 3
- Music Appreciation 3
- Choreography 3

3. Dance Electives: Concentrations in choreography, teaching and performance 15

4. Free Electives 10

Total 130

B.A. Degree with a Major in Theatre (Concentration in Dance)

Introduction to Theatre Experience 2 (3 semester hours)
Acting I and II (6)
Introduction to Theatre Technology (3)
Theatre History (6)
Beginning Modern Dance (3)
Dance Improvisation (3)
Dance Composition I and II (6)
Dance History (3)
Dynamic Alignment (3)
Teaching Principles (3)
Dance Performance (3)

Total of 42 semester hours

Bachelor of Fine Arts—Dance Sample Schedule

First Semester
- English Composition 3
- Dance Appreciation 3
- Social science 3
- Acting I 3
- Modern Dance Technique 2
- Dance elective 2

Second Semester
- English Literature 3
- Dance Improvisation 3
- Social science 3
- Music Appreciation 3
- Modern Dance Technique 2
- Dance elective 2

Third Semester
- English Literature 3
- Modern Dance Technique 3
- Dance Composition I 3
- Human Anatomy 4
- Costumes 3

Fourth Semester
- English Composition 3
- Modern Dance Technique 3
- Dance Composition II 3
- Physiology 4
- Rhythmic Analysis 3

Fifth Semester
- Modern Dance Technique 3
- Dance History I 3
- Dynamic Alignment 3
- Dance Performance 3
- General Education elective 3
- Dance electives 2

Sixth Semester
- Modern Dance Technique 3
- Dance History II 3
- Teaching Principles 3
- General Education elective 3
- Lighting 3
- Dance electives 2

Seventh Semester
- Modern Dance Technique 3
- Performance 3
- Management 3
- Dance electives 6
- Free electives 3

Eighth Semester
- Modern Dance Technique 3
- Dance electives 6
- Free electives 8

Music

Requirements for the Major in Music (B.A., B.M.).
The two undergraduate degree programs prepare students for graduate work in music and music literature, for research and professional work in musical activities, and for state certification to teach vocal/general or instrumental music on the elementary and secondary levels. Entrance to all music degree programs is by audition. Arrangements must be made in advance for an audition by contacting the Department of Performing Arts before the scheduled audition date. Auditions are held in November, January, March, April, May,
June, July, and August (normally on the first Friday of each month except for January and August, when dates are scheduled during the University registration period). Competency placement tests are required of all transfer students who desire to present transfer credit in any of the following areas: Keyboard Harmony, Sight Singing, Ear Training, and Class Piano. (For dates, see the Academic Calendar in the front of this catalog.)

**B.A. Degree with a Major in Music.** In addition to general degree requirements for a Bachelor of Arts degree, music majors must complete a minimum of 42 hours in music. A total of 120 semester hours is required for the Bachelor of Arts degree with a major in music.

**Required (42 hours total):**
- Harmony I, II, III, IV (11)
- Keyboard Harmony (1)
- Sight Singing and Ear Training I, II (4)
- Historical, Theoretical, and Analytical Study of Music (9)
- Class Piano I, II (2)
- Major Instrument or Voice (Private Music Instruction) (8)
- Ensemble (7)

**B.M. Degree.** A total of 130 semester hours is required for the Bachelor of Music degree. A total of 139 semester hours is required for a concentration in Music Education. The requirements by area are as follows:

### General Education

See general education requirements for B.M. degree elsewhere in catalog.

### Basic Musicianship

<table>
<thead>
<tr>
<th>Harmony I, II, III, IV</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyboard Harmony</td>
<td>1</td>
</tr>
<tr>
<td>Sight Singing and Ear Training I, II</td>
<td>4</td>
</tr>
</tbody>
</table>

3Keyboard Majors must substitute MUSI 271 and 272 (Techniques of Accompanying) for Class Piano I and II.

2Voice majors must earn seven credits in University Chorale and/or Symphonic Chorus. Orchestral string majors must earn seven credits in Chamber Orchestra. Wind and percussion majors must earn seven credits in Chamber Orchestra and/or Symphonic Winds. Piano, organ, and guitar majors must earn at least four credits in large ensembles (University Chorale, Symphonic Chorus, Chamber Orchestra, Symphonic Winds).

### Concentrations in Music (Bachelor of Music)

**Concentration in Accompanying**

For admittance into the concentration in Accompanying, a student must be approved by an Accompanying Concentration Audition Committee.

The following required sequence of courses is in addition to those listed under "Basic Musicianship" (Bachelor of Music Degree).

- Concentration in Accompanying (total of 18 semester hours)
- Private Music Instruction (8)

<table>
<thead>
<tr>
<th>Survey of World Music</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Theoretical and Analytical Study of Music I, II, III, IV</td>
<td>12</td>
</tr>
<tr>
<td>Class Composition and Arranging</td>
<td>3</td>
</tr>
<tr>
<td>General Conducting</td>
<td>2</td>
</tr>
<tr>
<td>Class Piano I, II</td>
<td>2</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction) Ensemble</td>
<td>8</td>
</tr>
</tbody>
</table>

**Music Concentration**

<table>
<thead>
<tr>
<th>Free Electives</th>
<th>22</th>
</tr>
</thead>
</table>

**Total**

130

\[3\]Voice majors must earn eight credits in University Chorale and/or Symphonic Chorus. Orchestral string majors must earn eight credits in Chamber Orchestra. Wind and percussion majors must earn eight credits in Chamber Orchestra and/or Symphonic Winds. Piano, organ, and guitar majors must earn at least four credits in large ensembles (University Chorale, Symphonic Chorus, Chamber Orchestra, Symphonic Winds). (Voice, orchestral string, wind and percussion majors need earn only seven credits in the indicated ensembles if they are in the Music Education concentration.)

**4**To earn a Bachelor of Music degree, a music concentration must be selected from one of the following categories: Accompanying, Composition, Performance, Music History and Literature, or Music Education.

**1**Nine semester hours must be earned in foreign languages; one semester each is required of French, German, and Italian.

**2**The 12 credits listed under "Major Instrument or Voice" (Basic Musicianship) and the 8 credits listed under "Private Music Instruction" (Music Concentration in Accompanying) must be divided as follows: 8 credits in Undergraduate Private Music Instruction--Instrumental (piano or organ) and 12 credits at the 3-credit level in Undergraduate Private Music Instruction--Accompanying (piano).
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Recital (1)</td>
<td></td>
</tr>
<tr>
<td>Senior Recital (1)</td>
<td></td>
</tr>
<tr>
<td>Music Literature^{3} (3)</td>
<td></td>
</tr>
<tr>
<td>Voice (Class Voice and/or Undergraduate Private Music Instruction) (2)</td>
<td></td>
</tr>
<tr>
<td>Diction^{4} (1)</td>
<td></td>
</tr>
<tr>
<td>Chamber Ensembles (2)</td>
<td></td>
</tr>
</tbody>
</table>

**Concentration in Composition**

For admittance into the concentration in Composition, a student must submit a portfolio of compositions and be approved by a faculty committee.

The following required sequence of courses is in addition to those listed under “Basic Musicianship” (Bachelor of Music degree).

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration in Composition (total of 18 semester hours)</td>
<td></td>
</tr>
<tr>
<td>Private Music Instruction—Composition (8)</td>
<td></td>
</tr>
<tr>
<td>Composition Recital (1)</td>
<td></td>
</tr>
<tr>
<td>Techniques of Twentieth-Century Style Analysis (3)</td>
<td></td>
</tr>
<tr>
<td>Theory Elective (3)</td>
<td></td>
</tr>
<tr>
<td>Advanced Conducting (2)</td>
<td></td>
</tr>
<tr>
<td>Improvisation (1)</td>
<td></td>
</tr>
</tbody>
</table>

**Concentration in Performance**

For admittance into the concentration in Performance, a student must be approved by a Performance Concentration Audition Committee.

The following required sequence of courses is in addition to those listed under “Basic Musicianship” (Bachelor of Music degree).

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration in Keyboard Performance (total of 18 semester hours)</td>
<td></td>
</tr>
<tr>
<td>Major Instrument (Private Music Instruction) (8)</td>
<td></td>
</tr>
<tr>
<td>Junior Recital (1)</td>
<td></td>
</tr>
<tr>
<td>Senior Recital (1)</td>
<td></td>
</tr>
<tr>
<td>Keyboard Literature (3)</td>
<td></td>
</tr>
<tr>
<td>Keyboard Pedagogy (3)</td>
<td></td>
</tr>
<tr>
<td>Improvisation (1)</td>
<td></td>
</tr>
<tr>
<td>Music Elective (1)</td>
<td></td>
</tr>
</tbody>
</table>

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^{3}Vocal, opera or chamber music literature are recommended.

^{4}Undergraduate Private Music Instruction in voice may be substituted.

^{5}Nine semester hours must be earned in French, German, Italian, or any combination of these.

^{6}Twelve semester hours must be earned in German.

---

Concentration in Vocal Performance^{5} (total of 18 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Voice (Private Music Instruction) (8)</td>
<td></td>
</tr>
<tr>
<td>Junior Recital (1)</td>
<td></td>
</tr>
<tr>
<td>Senior Recital (1)</td>
<td></td>
</tr>
<tr>
<td>Choral Literature or Operatic Literature (3)</td>
<td></td>
</tr>
<tr>
<td>Advanced Conducting (2)</td>
<td></td>
</tr>
<tr>
<td>Improvisation (1)</td>
<td></td>
</tr>
<tr>
<td>Ensembles (2)</td>
<td></td>
</tr>
</tbody>
</table>

Concentration in Winds/Strings/Percussion Performance

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Instrument (Private Music Instruction) (8)</td>
<td></td>
</tr>
<tr>
<td>Junior Recital (1)</td>
<td></td>
</tr>
<tr>
<td>Senior Recital (1)</td>
<td></td>
</tr>
<tr>
<td>Orchestral Literature (3)</td>
<td></td>
</tr>
<tr>
<td>Advanced Conducting (2)</td>
<td></td>
</tr>
<tr>
<td>Improvisation (1)</td>
<td></td>
</tr>
<tr>
<td>Ensembles (2)</td>
<td></td>
</tr>
</tbody>
</table>

Concentration in Music History and Literature^{6}

For admittance into the concentration in Music History and Literature, a student must pass an aural music literature identification test, as well as demonstrate basic writing skills through an essay on an assigned topic.

The following required sequence of courses is in addition to those listed under “Basic Musicianship” (Bachelor of Music degree).

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration in Music History and Literature (total of 18 semester hours)</td>
<td></td>
</tr>
<tr>
<td>Music Literature (12)</td>
<td></td>
</tr>
<tr>
<td>Theory Elective (3)</td>
<td></td>
</tr>
<tr>
<td>Independent Study (3)</td>
<td></td>
</tr>
</tbody>
</table>

Concentration in Music Education

(Virginia Certification to Teach Music)\(^{1}\) A total of 139 semester hours is required for the Bachelor of Music with a concentration in Music Education.

For admittance into the concentration in Music Education, a student must satisfy the following requirements:

\(^{1}\)The Music Education degree program is certified by the Virginia State Department of Education and the National Council for the Accreditation of Teacher Education (NCATE). General education courses and additional courses are derived from state certification and NCATE requirements as outlined under the Department of Education. The National Teachers Examination and the related music examination must be taken before state certification can be granted.
1. Maintain an overall GPA of 2.8
2. Earn no grade lower than "C" in music courses needed for graduation
3. Maintain a satisfactory level of musical performance and interpersonal relationships as determined by a yearly screening procedure conducted by the music education faculty
4. Maintain a satisfactory level of oral communication in course work and/or as determined by a formal evaluation by the end of the sophomore year. Transfer students must satisfy the requirement before applying for admittance to the Teacher Education Program. Students who need strengthening may be required to take COMM 120 or COMM 210
5. Obtain a satisfactory recommendation from the full-time music faculty for the Teacher Education Screening Committee
6. Meet all requirements set by the Teacher Education Screening Committee.

**B.M. Degree with Concentration in Music Education.**

The requirements by area are:

<table>
<thead>
<tr>
<th>General Education²</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 and 302</td>
<td>6</td>
</tr>
<tr>
<td>Literature</td>
<td>6</td>
</tr>
<tr>
<td>Any course in literature at the 200 level or above in English or in Foreign Languages and Literatures.</td>
<td></td>
</tr>
<tr>
<td>HIST 121 or 122</td>
<td>3</td>
</tr>
<tr>
<td>Social and/or behavioral science</td>
<td>9</td>
</tr>
<tr>
<td>Laboratory science</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basic Musicianship</th>
<th>58</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmony I, II, III, IV</td>
<td>11</td>
</tr>
<tr>
<td>Keyboard Harmony</td>
<td>1</td>
</tr>
<tr>
<td>Sight Singing and Ear Training I, II</td>
<td>4</td>
</tr>
<tr>
<td>Survey of World Music</td>
<td>3</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music I, II, III, IV</td>
<td>12</td>
</tr>
<tr>
<td>Class Composition and Arranging I</td>
<td>3</td>
</tr>
<tr>
<td>General Conducting</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class Piano I, II³</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
<td>12</td>
</tr>
<tr>
<td>Ensemble⁴</td>
<td>7</td>
</tr>
<tr>
<td>Laboratory Ensemble</td>
<td>1</td>
</tr>
</tbody>
</table>

**Music Education Concentration**

<table>
<thead>
<tr>
<th>Laboratory Ensemble</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Instruments/Voice⁵</td>
<td>8</td>
</tr>
<tr>
<td>Advanced Conducting</td>
<td>2</td>
</tr>
<tr>
<td>Improvisation</td>
<td>1</td>
</tr>
<tr>
<td>Music Methods⁶</td>
<td>6</td>
</tr>
</tbody>
</table>

**Additional Courses**

| Mathematics⁷        | 3  |
| Mathematics or science⁷ | 3 |
| Human Development (EDUC 509 or 510) | 3 |
| Foundations of Elementary Education (EDUC 300) or Introduction to Secondary Education (EDUC 522) | 2 |
| Learning Theory (EDUC 524) | 2 |
| HEAL 110            | 3  |
| Modern Dance²       | 3  |
| Free elective       | 3  |

**Student Teaching⁷**

| TOTAL              | 139 |

²Keyboard majors must substitute MUSI 271 and 272 (Techniques of Accompanying) for Class Piano I and II.
³Voice majors in the Music Education concentration must earn seven credits in University Chorale and/or Symphonic Chorus. Orchestral string majors must earn seven credits in Chamber Orchestra. Wind and percussion majors must earn seven credits in Chamber Orchestra and/or Symphonic Winds. Piano, organ and guitar majors must earn at least four credits in large ensembles (University Chorale, Symphonic Chorus, Chamber Orchestra, Symphonic Winds).
⁴Instrumental Emphasis. The following secondary instrument/voice courses are required: Class Voice I and all of the following instrument classes: Class Guitar; Class Strings: Violin and Viola; Class Strings: Cello and String Bass; Class Woodwinds: Oboe and Bassoon; Class Brass; Class Percussion. Five of the seven required ensemble credits must be earned in Symphonic Winds and/or Chamber Orchestra for those students whose major instrument is not a band or orchestral instrument. Students whose major performance medium is something other than a band or orchestral instrument must earn a minimum of six additional credits of Private Music Instruction (or the equivalent) on such an instrument, the actual number to be determined by an audition committee.
⁵MUSI 461 and 463 or 464, and 466.
⁶May not be used to satisfy the 130 credit hours required for the Bachelor of Music degree.
**Vocal Emphasis.** One credit in each of the following courses is required: Class Woodwinds; Class Guitar; Class Percussion; Techniques of Accompanying. Keyboard majors must take Class Voice I and earn three credits of Undergraduate Private Music Instruction in voice. Voice majors must earn four credits of Undergraduate Private Music Instruction in piano. Guitar/percussion and other instrumental majors must take Class Voice I and earn one credit of Undergraduate Private Music Instruction in voice and two credits of Undergraduate Private Music Instruction in piano. Five of the seven required ensemble credits must be earned in University Chorale, Symphonic Chorus and/or Gloria Singer.

### Sample Schedule for B.A. with a Major in Music

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Social Science</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language 101</td>
<td>Foreign Language 102</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Harmony I</td>
<td>Harmony II</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Sight Singing and Ear Training I</td>
<td>Sight Singing and Ear Training II</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Class Piano I</td>
<td>Class Piano II</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>Major instrument or voice (Private Music Instruction)</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
<td>Ensemble</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>14</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature (English or Foreign Languages and Literatures)</td>
<td>Literature (English or Foreign Languages and Literatures)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language 201</td>
<td>Natural science</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Natural science</td>
<td>Survey of World Music</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Harmony III</td>
<td>Foreign Language 202</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>Harmony IV</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble</td>
<td>Ensemble</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>15</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 302</td>
<td>Social science</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics or logic</td>
<td>Fine arts elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>Historical, Theoretical, and Analytical Study of Music</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music</td>
<td>Major instrument or voice (Private Music Instruction)</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>Ensemble</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>14</strong></td>
<td><strong>14</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social science</td>
<td>Ensemble</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music</td>
<td>Major Instrument or voice (Private Music Instruction)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>Electives</td>
</tr>
<tr>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Ensemble</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>17</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

### Sample Schedule for Bachelor of Music

<table>
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- Literature (English or Foreign Languages and Literatures) 3
- Harmony III 3
- Major instrument or voice (Private Music Instruction) 1
- Ensemble 1
- Natural science / mathematics / computer science 3
- Free electives 6

### Fourth Semester
- Literature (English or Foreign Languages and Literatures) 3
- Harmony IV 2
- Keyboard Harmony 1
- Survey of World Music 3
- Major instrument or voice (Private Music Instruction) 1
- Ensemble 1
- Natural Science / mathematics / computer science 3
- Free elective 3

### Sample Schedule for Bachelor of Music with Concentration in Music Education (Virginia Certification to Teach Music)

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[http://catalog.gmu.edu](http://catalog.gmu.edu)
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Total 42 hours

B.F.A. Degree with a Major in Theatre. In addition to the general education requirements for the Bachelor of Arts degree, Theatre majors must complete a minimum of 42 hours in the major: 25 hours of core courses, and 17 hours of theatre electives. All majors are expected to participate in theatre or dance productions.

Required courses for the B.F.A. degree with a major in Theatre are:
- Introduction to the Theatre Experience (3)
- Acting I (3)
- Introduction to Theatre Technology (3)
- Introduction to Costume Technology (3)
- Survey of Theatre History I & II (6)
- Directing I (3)
- Practicum* (4)
- Theatre Electives (17)

Total 42 hours

B.F.A. Degree with a Major in Theatre. In addition to the general education requirements for the Bachelor of Fine Arts degree, Theatre majors must complete a minimum of 88 hours in the major: 25 hours of core courses, and 63 hours in an area of emphasis. Areas of emphasis are: 1. Acting, 2. Design/Theatre Technology.

Entry into the B.F.A. degree program with a major in Theatre is by audition or portfolio presentation only. See the Theatre Division Coordinator for details and a schedule of audition and presentation dates.

Theatre majors are expected to participate in GMU Theatre productions and will be required to demonstrate before a faculty jury proficiency in their area of emphasis prior to the confirmation of the B.F.A. degree.

Required courses for the B.F.A. degree with a Major in Theatre are:
- Introduction to the Theatre Experience (3)
- Acting I (3)

*Practicum—courses such as Play Production Practicum, Play Performance Practicum and Field Experience.
Introduction to Theatre Technology (3)  
Introduction to Costume Technology (3)  
Survey of Theatre History I & II (6)  
Directing I (3)  
Practicum* (4)  
Area of Emphasis requirements (63)  
Total 88 semester hours  

Area of Emphasis Requirements  
1. Acting  
Voice for the Theatre I & II (6)  
Movement for the Theatre I & II (6)  
Beginning Modern Dance (3)  
Acting II (3)  
Acting III (3)  
Makeup (3)  
Dance Improvisation (3)  
Acting Styles I & II (6)  
Acting Problems I & II (6)  
Theatre Electives (12)  
Performing Arts Electives** (12)  
Total 63 semester hours  

2. Design/Theatre Technology  
ARTS 120, 121, Introductory Drawing (6)  
Approved ARTS Courses*** (6)  
Scene Design (3)  
Stage Lighting Design (3)  
Costume Design (3)  
Design Studios**** (6)  
Design/Technical area electives (12)  
Theatre Electives (15)  
ARTS/Performing Arts Electives***** (9)  
Total 63 semester hours  

Sample Schedule for B.A. with a Major in Theatre  

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>Intro to Theatre</td>
<td>Intro to Costume Technology</td>
</tr>
<tr>
<td>Free electives</td>
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<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>3</td>
</tr>
<tr>
<td>Literature</td>
<td>15</td>
</tr>
<tr>
<td>Theatre Elective</td>
<td>3</td>
</tr>
<tr>
<td>Social science</td>
<td>3</td>
</tr>
<tr>
<td>Natural science</td>
<td>16</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>3</td>
</tr>
<tr>
<td>Theatre Elective</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
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<tr>
<td>Practicum</td>
<td>2</td>
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<tr>
<td>Electives</td>
<td>9</td>
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<tr>
<td>Theatre Elective</td>
<td>14</td>
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Sample Schedule B.F.A. with a Major in Theatre Design/Theatre Technology Emphasis  

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<thead>
<tr>
<th>First Semester</th>
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</tr>
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<tbody>
<tr>
<td>ENGL 101</td>
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</tr>
<tr>
<td>Natural science</td>
<td>4</td>
</tr>
<tr>
<td>ARTS 120</td>
<td>3</td>
</tr>
<tr>
<td>Intro to the Theatre Experience</td>
<td>3</td>
</tr>
<tr>
<td>Intro to Theatre Technology</td>
<td>3</td>
</tr>
<tr>
<td>ARTS elective</td>
<td>16</td>
</tr>
<tr>
<td>Natural science</td>
<td>16</td>
</tr>
<tr>
<td>Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>Acting I</td>
<td>3</td>
</tr>
<tr>
<td>Practicum</td>
<td>14</td>
</tr>
<tr>
<td>Electives</td>
<td>14</td>
</tr>
<tr>
<td>Theatre Elective</td>
<td>14</td>
</tr>
</tbody>
</table>

*Practicum courses such as Play Production Practicum, Play Performance Practicum or Field Experience  
**Performing Arts Electives—courses chosen from dance technique and/or music voice classes  
***Approved ARTS Courses—see adviser for list of approved courses  
****Design Studios—Chosen from Scene Design Studio, Lighting Design Studio or Costume Design Studio  
*****Arts Electives—courses chosen from the Department of Art or the Department of Performing Arts  

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Philosophy and Religion

Faculty

Professor: McFarlane

Associate Professors: Bergoffen (Chair), DeNys, Fletcher, Holman, McDermott, Yance

Assistant Professors: Hill, Jordan, Ro, Rothbart,

Lecturers: Gregory, Jackson, Mitsock

Course Work

This department offers all course work designated PHIL and RELI in the Course Dictionary of this catalog.

Degree Requirements

B.A. Degree with a Major in Philosophy. The degree program in philosophy is designed to meet the needs of students with various interests and career goals. Major concentrations are available for students who wish (a) to pursue graduate studies in philosophy; (b) to emphasize philosophy in acquiring a broad liberal arts education; (c) to prepare for certain professions, such as law, the ministry, government service; or (d) to complement other interests by taking a double major in philosophy and some related field of study.

The department offers a traditional philosophy major, a specially designed Philosophy–English major in cooperation with the English Department and a specially designed religion track within the philosophy major. Each of these programs leads to a B.A. in philosophy.

Traditional Philosophy Major. In addition to the general requirements for a Bachelor of Arts degree, philosophy majors must complete at least 33 semester hours in philosophy. At least 21 semester hours must be courses at the 300 level or above, including six credit hours at the 400 level or above. These hours must be distributed in the following way:

1. All majors must take:
   PHIL 173: Introduction to Logic or PHIL 376:
   Symbolic Logic (formerly 273): Introduction to Symbolic Logic
   PHIL 301: History of Western Philosophy (Ancient)
   PHIL 303: History of Western Philosophy (Modern)

2. All majors must submit a minimum of three credits each from category A and category B courses:
Category A: The Analytic Tradition
PHIL 355: Contemporary Ethical Theory
PHIL 373: Theory of Knowledge
PHIL 374: Philosophy of Mind
PHIL 574: Current Issues in Philosophy of Psychology

Category B: The Continental Tradition
PHIL 336: Contemporary Continental Thought
PHIL 337: Contemporary Continental Thought
PHIL 531: Freud and Philosophy

All students pursuing this track may submit six hours of credit from among the following courses for credit toward the major:
HIST 306: Reformation
SOCI 385: Sociology and Religion
ANTH 313: Anthropological Perspectives on Religion

Category C: PHIL 305: Business Ethics
PHIL 306: Criminal Justice Ethics
PHIL 309: Medicine and Human Values
PHIL 510: Seminar in Ethics of Health Care
PHIL 555: Environmental Ethics

For those students who plan to pursue graduate studies in Philosophy, the following courses are recommended: Ethics or Social and Political Philosophy; Metaphysics; Philosophy of Mind or Theory of Knowledge; Twentieth Century Analytic Philosophy; Contemporary Continental Thought (Existentialism and Phenomenology).

Religion Track in Philosophy. This program offers students the opportunity to reflect on reciprocal relations, past and present, between philosophy and religion and to approach contemporary questions and issues in religion, both substantive and methodological through philosophical ideas pertinent to them. Students who plan to pursue a program in philosophy and religious studies must complete at least 33 semester hours in philosophy and religion. All students pursuing this track must take:

PHIL 173: Introduction to Logic or PHIL 376 (formerly 273): Introduction to Symbolic Logic
PHIL 301: History of Western Philosophy (Ancient)
PHIL 303: History of Western Philosophy (Modern)
PHIL 313: Philosophy of Religion
RELI 300: Approaches to the Study of Religion
RELI 490: Comparative Religions

All students pursuing this track must submit a minimum of nine credits from among the following courses:
RELI 370: Judaism
RELI 371: History of Western Christian Thought (I)
RELI 372: History of Western Christian Thought (II)
RELI 374: Islamic Thought
RELI 375: Buddhism

Students must take six credits from one of the following pairs of historical courses.* Both courses will count towards both majors.

1. ENGL 341: Chaucer; or ENGL 342: Literature of Middle Ages; or ENGL 431: Medieval Intellectual Topics
PHIL 302: History of Western Philosophy (Medieval)

2. ENGL 401 (345): Literature of Sixteenth Century,
   or ENGL 472 (346): Spenser
PHIL 301: History of Western Philosophy (Ancient)

3. ENGL 405 (358), 406 (361), 450 (370), 423 (381)
PHIL 303: History of Western Philosophy (Enlightenment)

4. ENGL 425 (382): Literature of American Renaissance, or ENGL 452 (387): American Novel to 1914
PHIL 331: Philosophy in the United States

5. ENGL 380, 390, 556 (555) (contemporary literature
   or language study)
PHIL 332: Twentieth Century Analytic Philosophy

Some classes of English 496 (441), 444, 446, and Philosophy 391, 392 may fulfill these requirements, with the prior permission of the departments.

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6. ENGL 448 (375), 376, 377, 378, 454 (388) or 447 (389): (continental literature or influence) PHIL 336 or 337: Contemporary Continental Thought: Phenomenology and Existentialism

Students must take a four-credit, 500 level seminar. The topic of the seminar will vary from term to term; possible topics include structuralism, technology, form and matter, conceptions of the future. The course will be cross-listed team taught. Prerequisites are senior standing, six hours of 300 level English and six hours of 300 level philosophy, and permission of instructor.

Sample Schedule for Philosophy Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>English composition</td>
<td>Literature</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>PHIL 100, 111, or 173</td>
<td>PHIL 151 or 212 or 273</td>
</tr>
<tr>
<td>Social sciences</td>
<td>Elective</td>
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<tr>
<td>Group A or B</td>
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<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Literature</td>
<td>English Composition</td>
</tr>
<tr>
<td>Social sciences (Group A or B)</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td>PHIL 301 (231)</td>
<td>PHIL 303 (232)</td>
</tr>
<tr>
<td>Philosophy elective</td>
<td>Philosophy elective</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>Social sciences (Group A or B)</td>
<td>Social sciences (Group A or B)</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>PHIL 336 or 337</td>
</tr>
<tr>
<td>PHIL 332</td>
<td>Philosophy electives</td>
</tr>
<tr>
<td>Philosophy electives</td>
<td>Non-philosophy elective</td>
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<tr>
<td>ENGL 302</td>
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<td>15</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
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<tr>
<td>PHIL 421</td>
<td>PHIL 422 or 425</td>
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<tr>
<td>Fine arts</td>
<td>Electives</td>
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<tr>
<td>Electives</td>
<td>12</td>
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<td>15</td>
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</tbody>
</table>

Courses in Support of Graduate Programs

Although a graduate program is not available through the Department of Philosophy and Religion, the department does offer graduate courses in support of graduate programs, and administers the Liberal Studies track of the MAIS program. Course descriptions appear in the Course Dictionary of this catalog.
## Physics

### Faculty

**Professors:** Ehrlich (Chair), Kafatos, Lankford, Lieb, Mielczarek  
**Associate Professors:** Ceperly, Dworzecka, Ellsworth, Evans, Flinn  
**Assistant Professor:** Kowalski  
**Instructors:** Hannigan

### Course Work

This department offers all course work designated ASTR and PHYS in the Course Dictionary of this catalog.

### Degree Requirements

**B.S. Degree with a Major in Physics.** In addition to general requirements, a Bachelor of Science in physics requires the completion of 45 semester hours in the major and 20 semester hours in mathematics. The following physics courses constitute a required 34 hour core for the B.S. degree: PHYS 111, 250, 351, 352, 353, 361, 303, 305, 306, 402, 407, 408, 412, 414, 417, 428, 510, 511, 512, 514, ENGR 341, 342, 430, 432, 441, 460, MATH 446 and 447 with at least five semester hours in physics courses. The following mathematics courses are required: the two year calculus sequence (MATH 113, 114, 213 and 304); PHYS 311 or MATH 313; PHYS 312 or MATH 314.

The requirements for the B.S. in physics allow the student the flexibility of preparing for graduate school or for one of the many careers in business or industry where physics graduates are employed. In meeting the requirement for eleven credit hours outside the core, a student has the option of electing an area of concentration. The courses comprising each concentration are listed below. Students who wish to complete a concentration should plan a program of study in consultation with their adviser with whom they are required to meet at least once a semester.

- **Graduate School Preparatory Concentration.** Although any of the options listed here provide the successful student with a fully adequate background to enter graduate school, this concentration is for the student whose career goals definitely include graduate school in physics. In order to complete this concentration the student should take at least nine hours from the following courses: PHYS 414, 510, 511, 512 and 514. In addition, the students should complete a senior project (PHYS 408) in the specialty which they intend to pursue in graduate school.

- **Computational Physics Concentration.** This concentration is for the student who wishes to pursue a career that applies computers to the solution of physical problems. In order to complete this concentration, the student should take at least nine hours from the following courses: PHYS 412, ENGR 441, MATH 446, and 447. In addition, the student should complete a senior project (Physics 408) on a problem that involves the use of the computer for the solution of a physical problem.

- **Astrophysics Concentration.** This concentration is for the student who is planning to attend graduate school in astrophysics or pursue a career in industry. In order to complete this concentration the student should take the following courses: PHYS 328; PHYS 428 or PHYS 510 or PHYS 511; and MATH 446. In addition, the student should complete a senior project (PHYS 408) on an astrophysics problem.

- **Electronics Concentration.** This concentration is for the student who wishes to pursue a career in industry applying a strong background in electronics to physical problems. In order to complete this concentration, the student should take at least nine credit hours from the following courses: PHYS 301, 302, ENGR 341, 342, 430, 432, and 460. In addition, the student should complete a senior project (PHYS 408) on an electronics problem.

- **Applied Solid State Physics Concentration.** This concentration is for the student who wishes to pursue a career in the semiconductor industry. In order to complete this concentration, the student should take the following courses PHYS 512, ENGR 430 and 431, and complete a senior project (PHYS 408) in applied solid state physics.

- **B.A. Degree with a Major in Physics.** In addition to general degree requirements, a B.A. in physics requires the completion of 31 semester hours in the major and 17 semester hours of mathematics. The following physics courses are required: PHYS 111, 250, 350, 351, 352, 353, 303, 305, 306, 402, 407, 408, 412, 414, 417, 428, 510, 511, 512, 514, ENGR 341, 342, 430, 432, 441, 460, MATH 446 and 447 with at least five semester hours in physics courses. The following mathematics courses are required: the two year calculus sequence (MATH 113, 114, 213 and 304); PHYS 311 or MATH 313; PHYS 312 or MATH 314.

The requirements for the B.A. in physics allow the student the flexibility of preparing for graduate school or for one of the many careers in business or industry where physics graduates are employed. In meeting the requirement for eleven credit hours outside the core, a student has the option of electing an area of concentration. The courses comprising each concentration are listed below. Students who wish to complete a concentration should plan a program of study in consultation with their adviser with whom they are required to meet at least once a semester.

- **Secondary Teacher Certification.** Students who wish to become secondary school teachers should consult with the secondary education adviser in their department. The professional preparation component of the state-approved teacher education programs for secondary school teachers is offered in...
the Department of Education. Please refer to the catalog section under the Department of Education, Secondary School Education.

Course Work

PHYS 341–342 are recommended for biology, chemistry, geology, and premedical students and for mathematics majors who seek a Bachelor of Arts degree. PHYS 103, 104, 106, 151, 201, 300, 315, 316 are intended for non-science majors. PHYS 250, 350, 351, 352, and 353 consist of a calculus-based sequence in general physics to be taken by physics and engineering majors and those chemistry, computer science, and mathematics students who pursue a Bachelor of Science degree. Students may receive credit for only one of the following three sequences: 341–342 or 103, 104 or 250, 350, 351, 352, 353.

Students who intend to major in physics should take the University Physics introductory sequence (PHYS 350, 351, 352, 353). However, students who decide to major in physics after completing PHYS 341, 342 may do so, but only with written permission of the physics department. Such students will be required to take at least five additional credits in approved physics courses.

Sample Schedule for Physics Majors

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<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>PHYS 111</td>
<td>PHYS 250</td>
</tr>
<tr>
<td>MATH 113</td>
<td>MATH 114</td>
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<tr>
<td>CHEM 211 or BIOL 113</td>
<td>CHEM 212 or BIOL 114</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
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<thead>
<tr>
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<td>PHYS 352</td>
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<tr>
<td>PHYS 351</td>
<td>PHYS 353</td>
</tr>
<tr>
<td>MATH 213</td>
<td>MATH 304</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Elective</td>
<td>Computer science</td>
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<tr>
<td>Elective</td>
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<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tr>
<td>PHYS 303</td>
<td>PHYS 306</td>
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<td>PHYS 305</td>
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<td>PHYS 355</td>
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<td>Elective</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>PHYS 407</td>
<td>PHYS 408</td>
</tr>
<tr>
<td>PHYS 402</td>
<td>PHYS 414</td>
</tr>
<tr>
<td>PHYS 510</td>
<td>PHYS 416</td>
</tr>
<tr>
<td>Mathematics elective</td>
<td>PHYS 512</td>
</tr>
<tr>
<td>Elective</td>
<td>Physics elective</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>15</td>
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<tr>
<td></td>
<td>16</td>
</tr>
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</table>
Psychology

Faculty

Professors: Barocas, Boneau, Evans (visiting), King, Mandes, Pasnak, Tyler

Associate Professors: Allen, Blaha, Buffardi, Erdwins, Flinn (Chair), Gessner, Goldman (visiting), Holt, Lehman, Mellinger, Moretz, Rugel, Sanford, Smith, Wahl

Assistant Professors: Boehm–Davis, Goplerud, Manning

Adjunct Professor: Becker, Chapanis, Kurke, Pelham, Pence

Lecturers: Allen, Besseches, Caldwell, Cooper, Crowe, Goodman, Hahnemann, Mitchell, Murdock, R. Mutchler, Navec, Ross, Smith, Weisman, Wiggs

Course Work

This department offers all course work designated PSYC in the Course Dictionary of this catalog.

Degree Requirements

B.A. Degree with a Major in Psychology. In addition to general requirements for a B.A. degree, students must complete 36 semester hours of course work in psychology of which 24 must be upper division. These hours must include PSYC 100, 300; either 360, or 365; and one of the following: PSYC 304, 305, or 309. Hours earned in psychology may be applied to both the general degree requirement and the psychology major.

B.S. Degree with a Major in Psychology. Students who wish to graduate with the B.S. degree with a major in psychology must complete the following requirements:

1. Psychology: 38 semester hours, of which 24 must be upper division, including PSYC 100, 300; either 360 or 365; and two of the following: 304, 305, 309, 323 and 372/373 or 371/374. (One of the courses must be 304, 305, or 309.)

2. BIOL 113, 114.


4. CS 161 and 262.

5. Nine additional hours of behavioral, natural or social science, other than psychology, that are not applied to any other requirement.


7. Literature: 6 semester hours.

8. Cognate Courses: 24 semester hours.


There are six specialty areas for the B.S. degree in psychology: clinical, developmental, experimental, industrial, physiological and social. For each of these specialty areas there is a list of cognate courses that are not in psychology but in related subjects. Twenty–four semester hours of cognate courses must be chosen from one of these approved lists. Students are also required to take psychology courses in their specialty area as determined by their adviser. Before or during their junior year, written approval of cognate and psychology specialty courses must be obtained. Students are required to plan their program of courses with a B.S. adviser in their specialty area. The planned program is then submitted to the B.S. coordinator appointed by the psychology department for final approval. Students who have not obtained approval may not be allowed to graduate with a B.S. degree in psychology. For information concerning cognate areas and specific courses within each cognate, students should contact the psychology department.

Students planning to go to graduate school should ascertain whether the school they plan to attend has a foreign language requirement. If there is one, the student should select foreign language courses as electives.

B.A. and B.S. Degrees with a Major in Psychology. At least 24 of the semester hours credited toward the major must be completed at the 300 level or above. Students intending to major in psychology should note that PSYC 300 is a prerequisite to required 300–level laboratory courses. In addition, it is recommended that students planning to pursue graduate study in psychology take PSYC 320, 371, 372, 373, 374, and CS 161 and 262. A working knowledge of computers is also recommended.

In addition to course work, undergraduate research experience and letters of recommendation are major factors for admission to graduate school. It is therefore recommended that students interested in graduate school distribute courses across a number of areas in psychology and work closely with one or more professors on an individual research project during the junior and senior years.
Students interested in developing skills in the application of psychology may wish to earn a psychology technician certificate or a gerontology certificate. These programs provide students with technical expertise for use in human service employment settings at the paraprofessional level. No more than 6 semester hours of PSYC 326, 421, 422, 548, and 549 may be used to satisfy either the 36-hour psychology requirement for the B.A. degree, the 38-hour psychology requirement for the B.S. degree, or the 24-hour requirement in psychology at the 300 level or above. Further information on these certificate programs may be found under Certificate Programs in this catalog.

### Sample Schedule for B.A. Psychology Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Social science (Non-Western)</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Natural science</td>
</tr>
<tr>
<td>Natural science</td>
<td>Psychology (any 200-level course)</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>PSY (any 200-level course)</td>
</tr>
<tr>
<td>Mathematics or Logic*</td>
<td>Social science (non-Western)</td>
</tr>
<tr>
<td>Psychology (any 200-level course)</td>
<td>Psychology (any 300- or 400-level course)</td>
</tr>
<tr>
<td>Fine arts</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Literature</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 302</td>
<td>PSYC 304, 305, or 309</td>
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<tr>
<td>Philosophy or religion</td>
<td>6</td>
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<td>PSYC 300</td>
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<td>Foreign language</td>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology (300 or 400-level)</td>
<td>PSYC (300- or 400-level course)</td>
</tr>
<tr>
<td>Electives</td>
<td>Elective</td>
</tr>
<tr>
<td>6-7</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Schedule for B.S. Psychology Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>ENGL 101</td>
</tr>
<tr>
<td>PSYC 100</td>
</tr>
<tr>
<td>Mathematics*</td>
</tr>
<tr>
<td>Behavioral, natural, or social science</td>
</tr>
<tr>
<td>Elective</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>Cognate</td>
</tr>
<tr>
<td>PSYC 300</td>
<td>PSYC 304, 305, or 309</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognate</td>
<td>CS 161 and 262</td>
</tr>
<tr>
<td>PSYC 304, 305, 309, 323, 371/374 or 372/373</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognate</td>
<td>Psychology electives</td>
</tr>
<tr>
<td>PSYC 304, 305, 309, 323, 371/374 or 372/373</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

### Secondary Teacher Certification.

Students who wish to become secondary school teachers should consult with the secondary education adviser in their department. The professional preparation component of the state-approved teacher education programs for secondary school teachers is offered in the Department of Education. Please refer to the catalog section under the Department of Education, Secondary School Education.

*Students earning only six credits in mathematics require one additional course to total 120 hours, unless they take four-credit behavioral, natural, or social science courses.
Public Affairs

Faculty

**Distinguished Professor:** Wayne Anderson

**Professors:** Clark, Early (Director, Law Enforcement Program), Stillman

**Research Professor:** Cole, (Director, Public Management Institute)

**Visiting Professors:** Gibbons, Knowles

**Associate Professors:** Andrews (Director, Geography Program), Brown, Fonseca, (Director, Individualized Study Degree Programs), Gortner (Chair), Hung (Director, Indochina Institute), Knight, Nicholson, Pfiffner, Plant (Director, Public Administration Program). Sacco, Sando (Joint appointment with Center for Conflict Resolution), White

**Adjunct Associate Professors:** Anderson, J.C. Boswell-Thomas

**Assistant Professors:** Friedlander, Hayden, Mahler, Ostrowski, Travis

**Adjunct Assistant Professors:** First, Joyner

**Instructors:** Lindberg, Rundstrom

**Lecturers:** Angelino, D. Boswell-Thomas, Brand, Burlison, Corrigan, Dilger, Froelich, Fuchsmann, Gillard, Guzman, Harrison, Hoobler, Jentsch, Keller, Mangun, Neal, Ogelvie, Olson, Persil, Rogers, Simmons, Smith, Stephenson, Walochik, Zuck.

Course Work

This department offers all course work designated GECA, GEOG, GOVT, PUAD, and PUAF in the Course Dictionary of this catalog.

Degree Requirements

**B.A. Degree with a Major in Geography.** To be eligible to graduate with a B.A. with a major in geography, a student must complete at least 120 semester hours of work and satisfy all requirements for the Bachelor of Arts degree prescribed by the University.

A candidate for the degree must present 36 semester hours of credit in geography to include GEOG 102, 103, 310, 415 and three of the following: GEOG 301, 304, 305, and 306. MATH 250 (Statistics) is also required but may not be counted toward the 36 hours in geography. In addition, a student may offer a maximum of three of the following regional courses toward the degree: GEOG 280, 315, 316, 320, 325, 330. Up to twelve semester hours of credit for geology courses approved by the geography program director may be counted in the geography major.

**Secondary Teacher Certification.** Students who wish to become secondary school teachers should consult the secondary education adviser in their discipline. The state-approved teacher preparation programs are outlined in the catalog under the Department of Education. Students requiring information about Virginia minimum teaching requirements should contact the Certification Specialists in the office of the Dean of the College of Professional Studies (Room 2237 Robinson Hall).

**B.A. Degree with a Major in Government and Politics.** To obtain a B.A. in government and politics, a student must complete at least 120 semester hours of course work, satisfy all requirements for the Bachelor of Arts degree prescribed by the University, and complete 39 hours of course work in government and politics. Twelve of these hours must be in the four introductory courses: GOVT 103, 132, 241, 250. Twenty-four hours must be drawn from courses in the six fields in the curriculum: American Government Institutions and Processes (GOVT 301–309; 401–409); Political Behavior (GOVT 310–319, 410–419); Political Theory (GOVT 320–329, 420–429); Comparative and Regional Politics (GOVT 330–339, 430–439); International Relations (GOVT 340–349, 440–449); or Public Administration/Policy Analysis (GOVT 350–359, 450–459). With approval of the department, a student may substitute three hours of Internship or Seminar for an equivalent amount of credit in the field requirement of 24 hours. No more than six hours from any single field may be used to complete major requirements. Three additional hours must be in courses involving politically relevant skills or techniques. Courses from the GOVT 460–469 series will satisfy this requirement. The requirement may also be met by the following courses: MATH 250; SOCI 221; DESC 202; CS 261; or INFS 201.

 Majors in government and politics who have completed at least one five-credit seminar under the requirements of an earlier catalog will probably find it in their interests to graduate under the terms of that catalog, rather than the 1979–80 or later catalogs. Since there are no longer any five-credit seminars offered in government, these students may fulfill their degree requirements by completing enough three-credit upper-level (300 and 400) government courses to reach a minimum of 34
semester hours. Students seeking to graduate under a 1978-79 or earlier catalog are responsible for consulting their faculty advisers about the appropriate ways to fulfill their degree requirements in the new curriculum.

**B.A. Degree with a Major in International Studies.**

To earn a B.A. with a major in international studies a student must complete 120 semester hours of course work and satisfy all requirements for the B.A. degree prescribed by the College of Arts and Sciences.

Each candidate for the degree must complete the following:

1. A required core of courses amounting to 56 hours distributed as follows:

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
</tr>
<tr>
<td>Composition (ENGL 101, 302)</td>
</tr>
<tr>
<td>Oral Communication (COMM 100, 101, 110, 120, 130)</td>
</tr>
<tr>
<td>Foreign language</td>
</tr>
<tr>
<td>Analytical reasoning</td>
</tr>
<tr>
<td>Humanities</td>
</tr>
<tr>
<td>Literature</td>
</tr>
<tr>
<td>Fine Arts</td>
</tr>
<tr>
<td>Philosophy or Religion</td>
</tr>
<tr>
<td>Social sciences</td>
</tr>
<tr>
<td>ECON 103, 104</td>
</tr>
<tr>
<td>ANTH 114, 332</td>
</tr>
<tr>
<td>Laboratory science</td>
</tr>
</tbody>
</table>

2. A required core of International Studies courses amounting to 24 hours distributed as follows:

<table>
<thead>
<tr>
<th>Required core</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVT 132, 133 (preferably in freshman year)</td>
</tr>
<tr>
<td>GOVT 243-244 (preferably in sophomore year)</td>
</tr>
<tr>
<td>GOVT 340, 341 (preferably in junior year)</td>
</tr>
<tr>
<td>GOVT 449 (must be completed in last semester)</td>
</tr>
<tr>
<td>ECON 380 or 390</td>
</tr>
</tbody>
</table>

3. Advanced courses in international studies amounting to 18 hours distributed as follows:

| Two courses from GOVT 330s, 430s** | 6 |

4. Free electives amounting to 22 hours

**Total**

120

**B.S. Degree with a Major in Law Enforcement.** This interinstitutional and interdisciplinary program requires a minimum of 128 semester hours of course work. Participants should familiarize themselves fully with the requirements for this degree and with the academic regulations of George Mason University. Credits earned in law enforcement courses may not be transferred to other majors. Not more than one-half of the 128 semester hours required by this program may be transferred to the University from one or more junior or community colleges.

The quantitative and distributional requirements which must be fulfilled by candidates for this degree are summarized below. English composition or an equivalent course must be completed prior to entry into the program at the University. Except for the specified professional courses and English composition, all requirements may be completed at this University.

Inquiries concerning this program should be directed to Dr. Stephen T. Early, Jr., Department of Public Affairs.

### Requirements for the B.S. with a Major in Law Enforcement Minimum Quantitative and Distributional Requirements by Subject

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General</td>
</tr>
<tr>
<td>English composition</td>
</tr>
<tr>
<td>Literature</td>
</tr>
<tr>
<td>A two-semester course in one recognized science with a laboratory</td>
</tr>
<tr>
<td>Management (MGMT 301)</td>
</tr>
<tr>
<td>2. Major requirements</td>
</tr>
<tr>
<td>Law enforcement – Northern Virginia Community College (NVCC)</td>
</tr>
</tbody>
</table>
The following courses taught at NVCC and described in the course dictionary of that institution's current catalog are required:

ADJU 100, 114, 115, 116, 126 or 176, 228, 231, 232, 233, 246, 247, 248 or 237, and 267.
At GMU: GOVT 371, 372, 376, 377 (PHIL 306 may be substituted for either GOVT 376 or 377.)

3. Directly related

Government—to consist of:
At GMU, GOVT 103 or at NVCC, G 281 and 282 or 187 and at GMU, GOVT 204 or at NVCC, G 188 and at GMU, GOVT 241
Two courses from among GOVT 301, 309 and either 320 or 420 and both GOVT 356 and 451
Psychology—to consist of:

9
at GMU, PSYC 100 or at NVCC, Psyc 201 and 202 and at GMU, PSYC 314, 325
Sociology—to consist of:

15
at GMU, SOC! 101 or at NVCC SOCI 101 and 102 and at GMU, four courses selected from SOCI 301, 302, 304, 307, 308, 332, 402, and 471.

4. Electives

Sufficient credit hours earned in courses of the student's choice as may be necessary to bring the total presented for graduation to 128 semester hours, to include 45 hours of courses selected from 300 and 400 levels.

B.S. Degree with a Major in Public Administration.
This program of study comprises a core of work in government and politics and appropriate courses in other subjects. Students must earn 125 semester hours of credit and meet general degree requirements set for the B.S. degree by work falling within the following pattern:

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition and Literature</td>
</tr>
<tr>
<td>Core Requirements</td>
</tr>
<tr>
<td>Required GOVT courses:</td>
</tr>
<tr>
<td>103, 204, 241, 250, 320, 355, 356, 358, 401, 451</td>
</tr>
<tr>
<td>GOVT Electives</td>
</tr>
<tr>
<td>(any two of the following courses; an internship (GOVT 480) may be substituted for this requirement): 309, 402, 452, 461, 490</td>
</tr>
<tr>
<td>Supporting Requirements</td>
</tr>
<tr>
<td>ECON courses (required):</td>
</tr>
<tr>
<td>103, 104, and six hours to be selected from 306, 309, 310, 311, 330, and 350</td>
</tr>
<tr>
<td>MATH 250 and 350</td>
</tr>
<tr>
<td>ACCT 201</td>
</tr>
<tr>
<td>Communications</td>
</tr>
<tr>
<td>COMM 130 or 310</td>
</tr>
<tr>
<td>Social science/humanities</td>
</tr>
<tr>
<td>Three courses from:</td>
</tr>
<tr>
<td>ANTH 114, PHIL 105, PSYC 100, SOCI 101</td>
</tr>
<tr>
<td>HIST: Four courses</td>
</tr>
<tr>
<td>(at least two at 300/400 level)</td>
</tr>
<tr>
<td>Administrative Tools</td>
</tr>
<tr>
<td>Computer science: CS 103, 262 (or equivalents)</td>
</tr>
<tr>
<td>Option A: Government Information Systems:</td>
</tr>
<tr>
<td>Two computer science and/or information science courses</td>
</tr>
<tr>
<td>(INFS 201, 301, GEOG 411, or approved course) and</td>
</tr>
<tr>
<td>GOVT 359, 459</td>
</tr>
<tr>
<td>Option B:</td>
</tr>
<tr>
<td>Foreign language: Four courses in one modern foreign language</td>
</tr>
<tr>
<td>Open Electives</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
### Social Work

**Faculty**

**Associate Professors:** Hughes, Polivka (Chair), Raskin  
**Assistant Professors:** Gary, Greene, Pasztor

**Course Work**

This department offers all course work designated *SOCW* in the Course Dictionary of this catalog.

**B.S. Degree with a Major in Social Work.** To receive a Bachelor of Science with a major in social work, the student must successfully complete requirements for the Bachelor of Science degree, including:

1. Forty-one semester hours in social work, to include *SOCW* 301, 351, 323, 352, 357, 358, 453, 454 or 455, 471, and two 400-level social work electives;  
2. *SOCI* 101 and 221, *PSYC* 100, and either *SOCI* 203 or *PSYC* 231;  
3. Six semester hours in each of the following: English composition; English literature; philosophy/religion; and the social sciences (history/economics/government), to include *GOVT* 204;  
4. *BIOL* 103, 104;  
5. Three semester hours in mathematics;  
6. Additional semester hours to total 120 hours.  

To be admitted to the Social Work Program, a student must:

1. Have completed at least 45 credits with a GPA of 2.00;  
2. Have achieved at least a C in each of the following: *SOCW* 301, including a satisfactory evaluation of field experience, and *SOCW* 351;  
3. Have submitted application for social work major to the director of Social Work Admissions. Sophomores should file this application between January 1 and March 15, juniors between September 1 and November 1. The student’s application for admission to the social work major will be reviewed by social work faculty members for action. A personal interview may be required.  

The Social Work Program is designed to prepare the student for beginning generalist professional practice in social work and has been granted full accreditation by the Council on Social Work Education. The faculty has the responsibility to evaluate the student’s performance periodically and the right to require a student to withdraw from the program when in its judgment performance is not satisfactory. The decision will be based on the quality of academic and field performance as well as on personal fitness for the profession of social work. The student has the right to appeal.

### Sample Schedule for B.S. Degree with a Major in Social Work

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ANTH 114</td>
</tr>
<tr>
<td>PSYC 100*</td>
<td>MATH 106</td>
</tr>
<tr>
<td>History, economics, or government</td>
<td><em>GOVT</em> 204</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>Philosophy or religion</td>
</tr>
<tr>
<td><em>SOCI</em> 101</td>
<td>Elective 3</td>
</tr>
<tr>
<td></td>
<td>SOCW 100 (optional) (1)</td>
</tr>
<tr>
<td></td>
<td>15 (16)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Literature</td>
<td><em>PSYC</em> 231 or <em>SOCI</em> 203</td>
</tr>
<tr>
<td><em>BIOL</em> 103</td>
<td>English Literature</td>
</tr>
<tr>
<td>Elective 3</td>
<td><em>BIOL</em> 104</td>
</tr>
<tr>
<td>Elective 3</td>
<td>Elective 3</td>
</tr>
<tr>
<td>Elective 3</td>
<td>Elective 3</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>SOCW</em> 357*</td>
<td><em>SOCW</em> 352</td>
</tr>
<tr>
<td><em>SOCW</em> 323*</td>
<td><em>SOCW</em> 358</td>
</tr>
<tr>
<td><em>SOCW</em> 301</td>
<td><em>SOCW</em> 324</td>
</tr>
<tr>
<td><em>SOCW</em> 351*</td>
<td>Elective 3</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>Elective 3</td>
</tr>
<tr>
<td></td>
<td>15 (14)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>SOCW</em> 453 or 455**</td>
<td><em>SOCW</em> 454 or 455**</td>
</tr>
<tr>
<td>Social work elective</td>
<td>Social work elective</td>
</tr>
<tr>
<td><em>SOCI</em> 221</td>
<td><em>SOCW</em> 471</td>
</tr>
<tr>
<td>Elective 3</td>
<td>Elective 3</td>
</tr>
<tr>
<td></td>
<td>15 (14)</td>
</tr>
</tbody>
</table>

*The Social Work Program can be completed in the final four semesters. Students who must do so are advised to take the courses with asterisks in their fifth (Fall) semester. Otherwise, their graduation will be delayed.  
**Students who wish to register for Block Placement must meet specific requirements and be advised by the director of field instruction.*
Sociology and Anthropology

Faculty

Professors: Gittler (Sociology); Scimecca (Sociology) (Chair); Williams (Anthropology).

Associate Professors: Avruch (Anthropology); Black (Anthropology); Borkman (Sociology); A. Hickey, (Sociology); Kolker (Sociology); Krech (Anthropology) (Coordinator); Rader (Sociology); Tavani (Sociology).

Assistant Professors: Golomb (Anthropology); Horton (Sociology); Palkovich (Anthropology); Rosenblum (Sociology); Schlueter (Sociology); Sherman (Sociology).

Lecturers: Badr (Sociology); Daddio (Sociology); Gerber (Anthropology); J. Hickey (Sociology); Hopkins (Anthropology); Kalof (Sociology); Wyatt (Sociology); Yrchik (Sociology).

Course Work

This department offers all course work designated ANTH and SOCI in the Course Dictionary of this catalog.

Degree Requirements

B.A. Degree with a Major in Anthropology. In addition to meeting the general requirements for a B.A. degree in the College of Arts and Sciences, students majoring in anthropology must complete 36 hours in anthropology, including ANTH 114, 120, 135, 332, 380, and 490 and 12 additional hours at the 300-400 level. SOCI 311 is also required. SOCI 221 may apply toward the 36-hour requirement in anthropology.

Within the Anthropology Program are three optional concentrations: Sociocultural Anthropology, Applied Anthropology, and Archaeology. Suggested courses in anthropology and electives in other departments for each of these concentrations are detailed in a description of the program, available at the Anthropology office.

Sample Schedule for a B.A. Degree with a Major in Anthropology

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Literature</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>ANTH 114, 120</td>
<td>ANTH 135</td>
</tr>
<tr>
<td>Psychology, sociology*</td>
<td>Analytic reasoning*</td>
</tr>
<tr>
<td></td>
<td>Economics, geography, government, history*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral communication</td>
<td>Philosophy or religion*</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Economics, geography, government, history*</td>
<td>Literature</td>
</tr>
<tr>
<td>Psychology, sociology*</td>
<td>ANTH 200-level</td>
</tr>
<tr>
<td>ANTH 200-level</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Summer</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 220</td>
<td>Foreign language</td>
</tr>
<tr>
<td></td>
<td>ANTH 380 (or ENGL 481)</td>
</tr>
<tr>
<td></td>
<td>ANTH 300-level</td>
</tr>
<tr>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 300-400 level electives*</td>
<td>ANTH 490</td>
</tr>
<tr>
<td>ANTH 300-400 level electives</td>
<td>3</td>
</tr>
</tbody>
</table>

B.A. Degree with a Major in Sociology. In addition to the general requirements for a B.A. degree, 35 semester hours of work in sociology are required. Students must include SOCI 101, 221, 303, 311, and 412, and 18 additional hours at the 300 and 400 level. ANTH 332 may apply toward the 35-hour sociology requirement.

*Come to Anthropology office for guidance to electives.
In addition to the above requirements for majors, students are advised to elect other relevant anthropology courses, as well as courses in biology, philosophy, psychology, government, and politics.

**Secondary Teacher Certification.** Students who wish to become secondary school teachers should consult with the secondary education adviser in their department. The professional preparation component of the state-approved teacher education programs for secondary school teachers is offered in the Department of Education. Please refer to the catalog section under the Department of Education, Certification for Secondary School Teaching.

---

**Sample Schedule For B.A. Degree with a Major in Sociology**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 101</td>
<td>Sociology (200 level)</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Literature</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology (200 and above)</td>
<td>Sociology (200 and above)</td>
</tr>
<tr>
<td>Oral communication</td>
<td>SOCI 221</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Literature</td>
</tr>
<tr>
<td>Analytical reasoning</td>
<td>ANTH 114</td>
</tr>
<tr>
<td>Literature</td>
<td>Foreign language</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
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<thead>
<tr>
<th>Fifth Semester</th>
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<tbody>
<tr>
<td>Sociology 300–400 level</td>
<td>Sociology 300–400 level</td>
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<tr>
<td>ENGL 302</td>
<td>Economics, government, geography, or history elective</td>
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<tr>
<td>SOCI 303</td>
<td>Fine Arts</td>
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<td>ANTH 332</td>
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<td>SOCI 412</td>
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<tr>
<td>Economics, government, geography, or history</td>
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College of Professional Studies
The College of Professional Studies, dedicated to preparing scholars and practitioners in the fields of human services, occupies a unique position within the University community. Students come to the College from diverse backgrounds and are encouraged to seek excellence through programs of study which have become increasingly multidisciplinary in order to respond to the richness and complexity of a pluralistic society. In addition to providing the framework for the integration and application of knowledge from a variety of disciplines, the curricula of the College provide the opportunity for students to examine, evaluate, and practice professional knowledge, skills and techniques. Since there are many ways in which human service endeavors may respond to individual and group needs, the function of the faculty goes beyond imparting knowledge to include engaging students in critical thinking, research, analysis, and problem-solving activities. The curricula and the faculty both contribute to the college goal of preparing students to make sound professional judgments and personal contributions to the world in which they live.

Course Work

The College of Professional Studies enrolls students preparing for specific professions and is composed of three departments offering course work in the following disciplines shown in the catalog and the catalog of the Graduate School:
Department of Education: DAED, EDAS, EDCI, EDGC, EDRD, EDSE, EDUC;
Department of Health and Physical Education: HEAL, PHED, PRLS;
Department of Nursing: NURS.

PAGE

Students enrolled at George Mason University may fulfill their general education requirements through the alternative plan for general education (PAGE). PAGE students pursuing degrees in the College of Professional Studies should follow the PAGE program approved by each department in the College.

Administration
Larry S. Bowen, Dean
Betty J. Schuchman, Assistant Dean

Teacher Certification

The College of Professional Studies is responsible for professional courses, special standards, and certification recommendation for students desiring to complete requirements for the Virginia Collegiate Professional Teaching Certification in all state-approved and NCATE-accredited programs preparing teachers, administrators, counselors, and related instructional personnel. Virginia requires persons seeking initial certification to submit score(s) obtained on National Teacher Examinations. Information on these tests can be obtained from the Teacher Certification Specialists in the office of the Dean.

Academic Policies and Degree Requirements

College of Professional Studies academic policies and undergraduate degree requirements are described in detail under the following departmental sections: Education, Health and Physical Education, and Nursing. Academic policies and degree requirements for graduate programs are described in The Graduate School Catalog.

Note that in addition to the requirements described under each departmental section, students should consult the Baccalaureate Degree and the Graduation sections of Undergraduate Policies and Procedures for information concerning the literacy requirement, English Composition requirement, catalog requirements, residence requirements, and academic requirements.
Sample Schedules

Sample schedules listed are illustrative only. Courses need not be taken in sequences or semesters indicated, except as prerequisites or other necessities prescribe.

Faculty

Professors: Azarowicz, Beyer, Bindel, Bowen, Edgemon, Gilstrap, Martin, Montebello, Spikell

Associate Professors: Bonfadini, Carroll, Chu, Dobson, Duck, Ozama, Given, Isenberg, Jacobs, Levy (Chair), Sears, Schuchman, Seligman, Smith, C. Thomas, Wilkin

Assistant Professors: Behrmann, Collier, Haynie, E. Jacob, J. Jones, Remley, W. Thomas, Valero-Figueira

Instructor (clinical): Burnham

Available Teacher Education Programs

The teacher education programs are designed to prepare students who are qualified academically and professionally and who possess the personal attributes needed for success in the teaching profession. Teacher education programs serve undergraduates in the College of Professional Studies and in the Bachelor of Music degree program and post-baccalaureate students through the Graduate School.

The following teacher preparation programs are available:

1. Early Education—Nursery School, Kindergarten through Grade 4 (NK-4)*

2. Middle Education—Grades 4 through 8 (4-8)*

3. Secondary Education—Grades 8 through 12 (Consult graduate catalog for description of the post-baccalaureate certification program in secondary education and the additional requirements to earn an M.Ed.)*

4. Special Certification (Music Education, K-12; Health Education, 8-12; and Physical Education, K-12)*

5. Vocational Education
   a. Industrial Arts
   b. Trade and Industrial Education.

*Program approved by the Virginia State Department of Education, the National Association of State Directors of Teacher Education, and Certification and the National Council for Accreditation of Teacher Education.
Admission to the Teacher Education Program for Early and Middle Education Majors

Admission to the Teacher Education Program is granted on a selective basis by the Teacher Education Screening Committee (TESC). Students must make application for admission prior to enrolling in 400-level courses except for sections of EDUC 490. Application forms and detailed admission policies and procedures are available in the Office of Field Experiences.

Students who do not meet the prerequisites for admission should not apply; however, in cases of extenuating circumstances students may apply provided that they submit a statement explaining why they have not met all requirements. Students who are denied admission may appeal that decision in writing to the Coordinator of Field Experiences, who will then present that appeal to the TESC in accordance with established policy.

Prerequisites for admission are the following:

Deadlines

Completed and signed application forms must be submitted to the Office of Field Experiences by January 1, March 15, August 1, or November 1 of the semester preceding that in which the student intends to enroll in 400-level courses.

Academic Requirements

1. The student must be in good academic standing in accordance with University policy.
2. Completion of a minimum of 60 credit hours, at least 6 of which must have been completed at George Mason.
3. A minimum GPA of 2.50 on their most recent 60 credit hours of collegiate-level work.
4. A minimum Professional GPA of 2.75. To qualify for a Professional GPA, the student must have:
   a. Completed EDUC 300, 302, and 313
   b. Completed a minimum of 12 credit hours selected from EDUC 305, 306, 320, 340, 344, ART 373, MUSI 251, HEAL 305, or PHED 301.
   (Note—No grade below C will be accepted for satisfactory completion of course work in the professional sequence. Deficiencies may be remedied in accordance with University policy.)

Proficiency Exams

1. Submission of scores for the General Knowledge and Communications Skills components of the National Teachers Exam (NTE) that meet the minimum standards for teacher certification in Virginia and are in effect at the time of the test administration.
2. Successful demonstration of proficiency in written English, math, and computer literacy.
3. Completion of a panel interview as scheduled through the Office of Field Experiences.

Suitability for Teaching

Demonstrated suitability for teaching as stated in part by Virginia Certification Regulations for Teachers: "...the applicant must be at least 18 years of age and must possess good moral character," and also possess the "physical and mental health necessary for the tasks to be performed."

Retention in the Teacher Education Program for Early and Middle Education Majors

Upon admission to teacher education programs, the student’s progress and development as a teacher will be monitored by the Coordinator of Field Experiences and the Education Department faculty. Should a student fail to maintain the standards required for entrance to the program, admission status will be revoked until such time as the student presents appropriate evidence to the TESC that these deficiencies have been remedied.

Requirements for retention are:

Academic Requirements

1. Continued academic performance at or above the admission requirement standards
2. Courses included in the computation of the Professional GPA will include all courses taken through the Department of Education or accepted by the department for transfer credit.

Suitability for Teaching

Continued demonstration of suitability for teaching as stated in the admission requirements. Special focus will be placed on the student’s performance in methods courses and related field experience activities. When Education Department faculty notify the TESC of concerns relevant to the level of a
student's performance, a review of the case will be conducted and the student notified of those results in accordance with committee policy.

**Admission to Student Teaching**

In addition to having maintained all teacher education program requirements for admission and retention, students must make application and be accepted for placement in student teaching.

Students must recognize that the semester prior to student teaching is critical. Academic or performance deficiencies (i.e. incompletes, graduation deficiencies) may preclude student teaching.

Requirements for admission to student teaching are:

**Deadlines**

Filing of applications for student teaching in the Office of Field Experiences by February 10 for the Fall semester and September 10 for the Spring semester.

**Academic Requirements**

1. Continued academic performance at or above the admission and retention standards
2. Completion of all degree requirements, except for student teaching, as determined by the student’s graduation catalog
3. No grade below C in any professional sequence course.

**Suitability for Teaching**

Completion of an interview scheduled through the Office of Field Experiences resulting in a recommendation for admission to student teaching from the Coordinator of Field Experiences. In cases of denial, a review will be presented to the TESC for action in accordance with committee policy.

**Degree Requirements**

<table>
<thead>
<tr>
<th>B.S.Ed. Degree with a Major in Early Education (NK-4) or Middle Education (4-8)</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts and Humanities</td>
<td>35</td>
</tr>
<tr>
<td>I. English</td>
<td>6</td>
</tr>
<tr>
<td>English Composition and Introduction to Literature (ENGL 101, 102, or 302)</td>
<td>3</td>
</tr>
<tr>
<td>2. Oral communication</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>a. Introduction to Communication (COMM 100) (3)</td>
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<tr>
<td>b. Introduction to Public Speaking (COMM 120) (3)</td>
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<tr>
<td>3. Literature</td>
<td>9</td>
</tr>
<tr>
<td>a. Readings in English and American Literature (ENGL 205 or 206 or 253) (3 ea.)</td>
<td></td>
</tr>
<tr>
<td>b. Any other 200-level English course (3)</td>
<td></td>
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<tr>
<td>c. Children’s Literature (EDUC 305) (3)</td>
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<tr>
<td>4. Arts</td>
<td>8</td>
</tr>
<tr>
<td>a. Art for the Elementary School (ARTS 373) (4)</td>
<td></td>
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<tr>
<td>b. Music for the Elementary School (MUSI 251) (4)</td>
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<tr>
<td>5. Language Arts Professional Courses</td>
<td>9</td>
</tr>
<tr>
<td>a. Developmental Reading (EDUC 403 or 404) (3)</td>
<td></td>
</tr>
<tr>
<td>b. Diagnostic Reading (EDUC 407 or 408) (3)</td>
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<tr>
<td>c. Teaching Language Arts in the Elementary School (EDUC 306) (3)</td>
<td></td>
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<tr>
<td>Social Science</td>
<td>18</td>
</tr>
<tr>
<td>1. U.S. History (HIST 121, 122)</td>
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<tr>
<td>2. Geography (GEOG 101 or 103)</td>
<td>3</td>
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<tr>
<td>3. Economics (ECON 103 or 104)</td>
<td>3</td>
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<tr>
<td>4. Regional Cultures (LAC 151, 152, 153 or 154)</td>
<td>3</td>
</tr>
<tr>
<td>5. Teaching Social Studies in the Elementary School (EDUC 412)</td>
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</tr>
<tr>
<td>General Health and Sciences</td>
<td>38</td>
</tr>
<tr>
<td>1. Teaching Health in the Elementary School (HEAL 305)</td>
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</tr>
<tr>
<td>2. Teaching Physical Education in the Elementary School (PHED 301)</td>
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<tr>
<td>3. Physical Education Activities</td>
<td>2</td>
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<tr>
<td>4. Mathematics</td>
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</tr>
<tr>
<td>a. MATH 371 and 372 (6)</td>
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<tr>
<td>b. Microcomputers and School Mathematics (EDUC 340) (3)</td>
<td></td>
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<tr>
<td>c. Problem Solving in School Mathematics (EDUC 344) (3)</td>
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<tr>
<td>5. Laboratory Science. Select from three separate disciplines. (At least two of the courses must be options a, b, or c.):</td>
<td>12</td>
</tr>
<tr>
<td>a. BIOL 151 (4)</td>
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<tr>
<td>b. CHEM 106 (4)</td>
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<tr>
<td>c. PHYS 151 (4)</td>
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<tr>
<td>d. ASTR 105 (4)</td>
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<tr>
<td>e. GEOL 101 (4)</td>
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<tr>
<td>6. Professional courses in Science and Math</td>
<td>6</td>
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</tbody>
</table>
a. Teaching Math in the Elementary School (EDUC 411) (3)
b. Teaching Science in the Elementary School (EDUC 413) (3)

Other Professional Courses

1. Foundations and Practices (3)
   a. Foundations of Elementary Education (EDUC 300) (3)
   b. Human Growth and Development (EDUC 302) (3)
   c. Educational Psychology (EDUC 313) (3)
   d. Introduction to Tests and Measurements (EDUC 320) (3)
   e. Utilization of Instructional Media and New Technology (EDUC 325) (3)

2. Practicum (15)
   Student Teaching (EDUC 431 or 432) (15)

3. Educational Topics and Techniques (6)
   Choose six hours from: (6)
   a. EDUC 490 (1–3) Selected Topics Courses (Admission to the Teacher Education Program not required)
   b. With permission, appropriate 500–level courses approved by the Curriculum and Instruction unit faculty. Graduate Course for Undergraduate Credit form required.

Total 36

Sample Schedule for Early Education (NK–4) or Middle Education (4–8) Majors

First Semester |
| ENGL 101 | 3 |
| HIST 121 | 3 |
| GEOG 101 or 103 | 3 |
| EDUC 300 | 3 |
| Lab science | 4 |
| **16** | |

Second Semester

| ENGL 102 or 302 | 3 |
| HIST 122 | 3 |
| MATH 371 | 3 |
| EDUC 302 | 3 |
| Lab science | 4 |
| **16** | |

Third Semester

| ENGL 205, 206, or 253 | 3 |
| MATH 372 | 3 |
| EDUC 313 | 3 |
| Oral communication | 3 |
| Lab science | 4 |
| **16** | |

Fourth Semester

| Any other 200–level ENGL literature course | 3 |
| MATH 372 | 3 |
| EDUC 313 | 3 |
| Oral communication | 3 |
| Lab science | 4 |
| **17** | |

Total 36

Apply for admission to Teacher Education Program

| Fifth Semester | Sixth Semester |
| EDUC 305 | EDUC 306 | 3 |
| EDUC 403/404 | EDUC 411 | 3 |
| EDUC 344 | EDUC 413 | 3 |
| ARTS 373 | EDUC 490 | 3 |
| EDUC 325 | Regional Cultures | 3 |
| **16** | **15** | |

| Seventh Semester | Eighth Semester |
| EDUC 412 | EDUC 431/432 | 15 |
| EDUC 407/408 | | 15 |
| EDUC 490 | | |
| MUSI 251 | | |
| HEAL 305 | | |
| **16** | **15** | |

Bilingual/Multicultural Education. Specializations in bilingual/multicultural education and/or English as a second language are offered within the early and middle education degree as well as the secondary certification program at the graduate level. Interested students should consult with an adviser in the Bilingual/Multicultural Education Center in the Education Department.

1Sequence after ENGL 101 may be either literature, ENGL 302, or ENGL 102, literature. At least one literature course must be ENGL 205, 206, or 253. ENGL 302 may not be taken until after 45 hours have been earned.
2Approved 500–level courses may be substituted for EDUC 490.
Vocational Education Program. The Vocational Education program is a cooperative arrangement between the University and Northern Virginia Community College (NVCC). Freshman students may enroll in either institution. Individuals who have completed an A.A.S. degree are accepted into the program with appropriate credit given for general education and technical courses taken at NVCC or other institutions. Some specialized technical laboratory courses are taught at NVCC. The Vocational Education program offers two specialties—Industrial Arts and Trade and Industrial Education. Both specialties require completion of 123 hours including one semester of student teaching in the senior year. A maximum of 50 percent of the degree requirements may be transfer credits from community or junior college.

Specialty in Industrial Arts. Preparation for an Industrial Arts teacher requires the completion of the prescribed technical and curriculum courses offered at the University. The program leads to the B.S.Ed. degree and a Virginia certificate with endorsement to teach industrial arts in the public schools, K–12.

General Education courses may be taken at either GMU or NVCC with proper approval from the Coordinator of Vocational Education and the Dean of the College of Professional Studies.

Students entering GMU should attempt to take GMU technical teaching courses before enrolling in technical elective courses at NVCC.

Sample Schedule for Industrial Arts Specialty (K–12)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ENGL 101</td>
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<tr>
<td>EDUC 370</td>
<td>Science</td>
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<tr>
<td>EDUC 364</td>
<td>Technical electives</td>
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<td>Technical electives</td>
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<tr>
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<tbody>
<tr>
<td>Technical Elective</td>
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<tr>
<td>EDUC 371</td>
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<td>EDUC 372</td>
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<tr>
<td>Science elective</td>
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<td>Physical education</td>
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<td>Technical Elective</td>
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<td>EDU 308</td>
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<td>EDUC 373</td>
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<td>EDUC 374</td>
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<td>EDUC 469</td>
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<td>Technical elective</td>
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<td>EDUC 313</td>
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<td>Humanities elective</td>
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<td>Social Studies elective</td>
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<td>EDUC 467</td>
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<td>EDUC 365</td>
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<td>Math or science elective</td>
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<td>Humanities elective</td>
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<td>EDUC 463</td>
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<tr>
<td>Regional cultures</td>
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<tr>
<td>World Literature or communication HEAL 110</td>
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<td>Humanities elective</td>
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<thead>
<tr>
<th>Summers</th>
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<tbody>
<tr>
<td>EDUC 366</td>
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- Specialty in Trade and Industrial Education. The Trade and Industrial Education specialty is associated with one specific area of vocational education, for example: auto mechanics, air conditioning/refrigeration, cosmetology, carpentry. Prospective teachers may complete and transfer an A.A.S. degree or the equivalent from NVCC. University credit is given for technical work experience where appropriate. Program leads to the B.S.Ed. degree and a Virginia certificate with endorsement to teach industrial education in the public schools. Practicing industrial education teachers can earn a college degree or meet state vocational certification by completing the requirements of this program.

The program requires both course work and appropriate work experience relating to the area of specialization. The University's Coordinator of Vocational Education evaluates prospective candidates' work experience and transcripts and recommends approval for University credit where applicable.
## Sample Schedule for Trade and Industrial Education Specialty

**Freshman and sophomore years:** Obtain A.A.S. degree, or equivalent (Maximum transfer hours from community college: 60 semester hours)

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>EDUC 463</td>
<td>EDUC 467</td>
</tr>
<tr>
<td>EDUC 313</td>
<td>EDUC 373</td>
</tr>
<tr>
<td>EDUC 320</td>
<td>EDUC 374</td>
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<tr>
<td>EDUC 469</td>
<td>EDUC 308</td>
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<tr>
<td>General elective</td>
<td>General elective</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<tbody>
<tr>
<td>EDUC 325</td>
<td>EDUC 417</td>
</tr>
<tr>
<td>Vocational elective</td>
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<tr>
<td>Math/science elective</td>
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<tr>
<td>HEAL 110</td>
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<td>15</td>
<td>12</td>
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</table>

**Summers**
- General elective: 3
- Math/science elective: 3
- 6

**Certification for Secondary School Teaching.** The Secondary School Teacher Education Program has three components:

1. Courses in the teaching discipline as developed by the College of Arts and Sciences or College of Professional Studies. CAS majors include biology, chemistry, economics, English, French, German, geography, geology, government, history, mathematics, music, physics, psychology, sociology, and Spanish. Added secondary endorsement certification is offered in pre-algebra, earth science, and general science. In addition, a specialization in bilingual/multicultural education is offered. Interested students should consult with an adviser in the Bilingual/Multicultural Education office. Students who major in music should consult the Department of Performing Arts. Students with majors in health education or physical education should consult the Department of Health and Physical Education. Students majoring in vocational education should consult the Department of Education.

2. General Education Requirements as mandated by the State of Virginia.

3. The Professional Courses required by the Department of Education:

   Students who wish to be certified in a Secondary School discipline must complete the graduate-level 30-hour certification program in Education listed below. They must also complete those general education and discipline courses that they need to meet state certification requirements. These courses may either be undergraduate or graduate courses. In addition, students must have an approved plan of study of course work needed for certification.

### Education Courses

1. EDUC 522 Introduction to Secondary Education (3)
2. EDUC 510 Human Development (Adolescence–Adulthood) (2) and EDUC 524 Learning Theory (2)
3. EDUC 531 Educational Tests and Measurements (3)
4. EDUC 593 Utilization of Instructional Technology (3)
5. Curriculum and Methods. Select one from the following:
   - EDCI 567 Social Studies

### Humanities

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
</tr>
</tbody>
</table>

### English, foreign language, oral communication, fine arts, music, or philosophy

<table>
<thead>
<tr>
<th>Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 121 or 122</td>
</tr>
<tr>
<td>Anthropology, economics(^2), geography, history, political science, psychology, or sociology</td>
</tr>
</tbody>
</table>

### Laboratory Science and Mathematics

<table>
<thead>
<tr>
<th>Laboratory Science and Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(At least one course in each area)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives (from the above categories)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health and Physical Education</td>
</tr>
<tr>
<td>HEAL 110</td>
</tr>
<tr>
<td>Physical Education activities(^3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
</tr>
</tbody>
</table>

\(^1\) May only be taken by students who have completed literature requirements and 45 hours.

\(^2\) Required for all social science endorsements.

\(^3\) Credits for these courses may not be applied toward a degree in the College of Arts and Sciences.
Health and Physical Education

EDCI 569 English
EDCI 572 Math
EDCI 573 Science
EDCI 550 Foreign Language
EDCI 519 English as a Second Language
Prerequisites: Courses in Areas 1, 2, 3, and 4

6. EDUC 529 Pluralism in U.S. Education (2)

7. Practicum
EDCI 515 Practicum in Secondary Education (12)

Total Hours (30)

Students who wish to earn a Master's in Education degree in secondary education must complete 17 hours beyond the certification requirements for a total of 47 hours. This total includes 12 hours of practicum, which is the student teaching experience. The total number of hours any given student will complete is dependent upon the individual’s preparation in general education and in the liberal arts area of the discipline.

Students should consult with the secondary education adviser in the department of their discipline as well as the appropriate discipline adviser in the Department of Education.

All students interested in certification should also consult the information in the graduate catalog which describes the additional courses needed to earn an M.Ed.

Undergraduate students may meet six semester hours of their certification requirements while completing their bachelor’s degree. Since all education courses required for certification are at the 500 level, students must be upper division students in order to obtain permission to enroll in the following courses: EDUC 522, 510, 524, 531, 593 and 529.

Faculty
Professors: Cooper (Chair), Kilby, Stein
Associate Professors: Freed, Metcalf, Schack
Assistant Professors: Agne-Traub, Bennett, Bever, Cato, Linn
Lecturers: DiGilio, Godin, Reynolds
Assistant Research Professor: Howze

Course Work

The department offers all course work designated HEAL, PHED, and PRLS in the Course Dictionary of this catalog.

Physical Education

B.S. in Education Degree in Physical Education with Teacher Certification

This physical education program includes basic course work in biological and social sciences with special preparation in theory and methodology of physical education meeting state certification requirements for teaching grades K–12. Students must take both the Common and the Physical Education Area Examinations of the National Teacher Examinations prior to being recommended for state certification.

Admission to the Teacher Education Program

The program in teacher education is accredited and approved by the National Council for Accreditation of Teacher Education and the Virginia State Department of Education. Admission is granted by the Teacher Education Screening Committee. Students should obtain an application form from the Field Experience Coordinator’s office and apply to the teacher education program during or upon completion of the spring semester of the junior year. To be considered for admission, students must:

1. Have completed or be in the process of completing 72 semester hours, 6 of which must have been taken at the University before applying;

2. Have a GPA of 2.50 in all courses attempted at any institution of higher education or 2.80 (or above) for the most recently completed 30 hours;

3. Have a GPA of 2.50 (or above) and have

http://catalog.gmu.edu
completed the following courses with a minimum grade of C in each: EDUC 300 (or 522), 302, 313. Deficiencies may be corrected by repeating the courses in accordance with University regulations; Physical education majors must have successfully completed the following professional courses: BIOL 124–125, PHED 206, 300, 303, 311, 312, 315, 317 and 318.

4. Have submitted the department checklist of requirements from the catalog year in which the student entered the university. This is obtained from the Coordinator of Field Experiences or the Health and Physical Education Department;

5. Have demonstrated proficiency in written and oral communication and computer literacy. (See the Department of Education in order to register for the examinations.)

6. Submit scores for the General Knowledge and Communication Skills components of the National Teachers Exam (NTE) that meet the minimum standards for teacher certification in Virginia in effect at the time of test administration.

### Student Teaching Admission

1. The same minimum GPA options of 2.50 in the most recently completed 30 hours for admission to student teaching must be maintained. Students are directed to “Admission to Student Teaching” in the Department of Education section of the catalog.

2. Students must have a GPA of 2.50 or above in the major and in the professional courses PHED 206, 371.

3. All other major courses in the curriculum must have been completed with the exception of PRLS 316 and PHED 450.

4. In the semester preceding student teaching the student majoring in physical education is required to meet minimum standards of fitness and have a current Certificate in American Red Cross Standard First Aid.

5. Prior to the student–teaching semester, the physical education major must pass a proficiency test in swimming or enroll in and pass with a grade of C or better a swimming course taken as an elective.

### Teacher Certification in Physical Education

Students must take the Common Examination and the Physical Education Area Examination of the National Teacher Examination prior to being recommended for state certification.

### Program for B.S.Ed. Degree in Physical Education with Teacher Certification

<table>
<thead>
<tr>
<th>Language Arts and Culture</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 101, 102 (or 302)</td>
<td>3</td>
</tr>
<tr>
<td>Oral communication</td>
<td></td>
</tr>
<tr>
<td>COMM 100 or 120</td>
<td></td>
</tr>
<tr>
<td>Regional cultures¹ (select two)</td>
<td>6</td>
</tr>
<tr>
<td>LAC 151, 152, 153, 154</td>
<td></td>
</tr>
<tr>
<td>Literature (200 level)</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>art, music, theatre, or philosophy (except logic)</td>
<td></td>
</tr>
</tbody>
</table>

### Social Sciences

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 121 or 122</td>
</tr>
<tr>
<td>Select 6 hours from the following: anthropology, economics, geography, government, history, sociology, psychology</td>
</tr>
</tbody>
</table>

### Required Courses

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 124–125, HEAL 110, 205</td>
</tr>
<tr>
<td>EDUC 300 (or 522), 302, 313, 415</td>
</tr>
<tr>
<td>Math²(3)</td>
</tr>
</tbody>
</table>

### Major Courses

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
</table>

### Total

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
</tr>
</tbody>
</table>

### B.S. in Education Degree in Physical Education with Selected Specialization

This degree is designed to meet the needs of students seeking a career in physical education or a sports-related field such as sports journalism or broadcasting, employment in, or management of, exercise or sports facilities, and sales and marketing of sports equipment. Course work includes a general education component and a core curriculum in health education and physical education. In addition, the student selects 24 semester hours in a supporting discipline or program of special interest outside of physical education. Fifteen of these hours

¹May substitute equivalent number of hours in foreign language.
²May not use MATH 371 or 372.
must be in 300/400-level courses. The final semester includes a 12 semester hour internship.

Students working toward this degree must have a 2.50 or higher GPA in the major and in the area of specialization for graduation. In addition, students are required to meet minimum standards in the area of cardiovascular fitness, strength, and flexibility in the semester preceding the internship (Consult department for fitness requirements.) and obtain Standard Red Cross First Aid certification. Students must also pass a proficiency test in swimming or enroll in and pass with a grade of C or better a swimming course taken as an elective.

Prior to making application for graduation, students must have completed a proficiency examination in writing. See the Department of Education for registering for the examination.

Internship

The internship, PHED 490, may be taken in any semester or summer provided all but three hours of course work has been completed. Application for the internship must be made no later than September for the Spring semester or February for the Summer or Fall terms. See the Internship Coordinator.

Program for B.S. in Education Degree with a Major in Physical Education with Selected Specialization

<table>
<thead>
<tr>
<th>General Education</th>
<th>47 Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language arts and culture</td>
<td>24</td>
</tr>
<tr>
<td>ENGL 101, 102 (or 302); COMM 120 and 130; LAC (3); art, music, theatre, or philosophy (except logic) (3); literature (6)</td>
<td></td>
</tr>
<tr>
<td>Social studies</td>
<td>12</td>
</tr>
<tr>
<td>history, sociology, psychology, economics (3 each)</td>
<td></td>
</tr>
<tr>
<td>Math¹</td>
<td>3</td>
</tr>
<tr>
<td>Science</td>
<td>8</td>
</tr>
<tr>
<td>BIOL 124–125</td>
<td></td>
</tr>
</tbody>
</table>

Core Requirements

<table>
<thead>
<tr>
<th>14 Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEAL 110, 205; PHED 105, 107, 108, 151 (or 152 or 153)</td>
</tr>
</tbody>
</table>

Major Requirements

<table>
<thead>
<tr>
<th>35 Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHED 300, 303, 304, 308, 450, 490; PRLS 316; EDUC 302</td>
</tr>
</tbody>
</table>

¹May not use MATH or 372.

Electives in HEAL, PHED, or PRLS at 300 level or higher | 3 Semester Hours |
|--------------------------------------------------------|-----------------|

Specialization | 24 Semester Hours |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Taken in any one discipline or program outside of Physical Education. A minimum of 15 hours must be in 300/400-level courses.</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours | 120 Semester Hours |
|-------------|-------------------|

Physical Proficiency Examination

All students majoring in physical education must pass all of three parts of the examination to be eligible for the B.S. degree. The following are the requirements:

Men

- Sit & Reach: 10 second hold
- Flexed Arm Hang: 30 seconds
- 1 1/2 Mile Run: 12 minutes or less

Women

- Sit & Reach: 10 second hold
- Flexed Arm Hang: 20 seconds
- 1 1/2 Mile Run: 13:30 or less

Certification in Athletic Training

Certification in Athletic Training by the National Athletic Training Association (NATA) may be obtained by meeting the following educational requirements:

1. A college degree with teaching certification.

2. Completion of the following NATA requirements:
   a. Anatomy and physiology
   b. Physiology of exercise
   c. Applied anatomy and kinesiology
   d. Psychology (two courses)
   e. First aid and CPR
   f. Nutrition
   g. Remedial exercise
   h. Personal, community, and school health
   i. Techniques of athletic training
   j. Advanced techniques of athletic training
   k. Clinical Experience – 1800 clock hours of on-the-job training

GMU Course Equivalent

<table>
<thead>
<tr>
<th>BIOL 124–125</th>
<th>PHED 450</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHED 300</td>
<td></td>
</tr>
<tr>
<td>PSYC... (6)</td>
<td>HEAL 111</td>
</tr>
<tr>
<td>HEAL 330</td>
<td>PHED 308</td>
</tr>
<tr>
<td>HEAL 110, 120</td>
<td></td>
</tr>
<tr>
<td>PHED 430</td>
<td>PHED 432</td>
</tr>
<tr>
<td>by arrangement with a certified athletic trainer over a period of at least two years.</td>
<td></td>
</tr>
</tbody>
</table>
Recommendations
1. Acting team physician;
2. NATA supervising athletic trainer.

Examination. Students must pass written and practical tests administered by NATA and make application for certification.

Note: The requirements are subject to change and students must meet current NATA certification standards.

Health Education

B.S. in Education Degree in Health Education

This degree is designed to prepare students for health education careers in health agencies, industry, other nonschool community settings and education. The course work includes a general education component which provides a broad base in behavioral, social, and natural sciences. The professional sequence in health education includes a twelve semester hour internship and/or student teaching with a six semester hour internship for students seeking teacher certification and is supplemented by additional study in one of the following Support Disciplines: sociology, psychology, communication, marketing, sciences, education, physical education.

Students planning to pursue this degree program must present a 2.00 or higher GPA in all courses and a 2.50 or higher GPA in health education courses completed prior to applying for admission to the program. Applications to major in this program should be submitted to the Health and Physical Education Department upon completion of 45 semester hours (must include personal health and community health courses). All students must have a current Certificate in American Red Cross Standard First Aid prior to graduation.

Teacher Certification in Health Education

The health education major includes background in the biological and behavioral sciences. EDUC 302, 313, 414, and 522 must be taken as the education support discipline in order to meet state certification requirements for teaching at the secondary level (grades 7–12). Students must take the Common Examination of the National Teacher Examinations prior to being recommended for state certification.

Admission to the Teacher Education Program

The program in teacher education is accredited and approved by the National Council for Accreditation of Teacher Education and the Virginia State Department of Education. Admission is granted by the Teacher Education Screening Committee. Students should apply to the teacher education program during, or upon completion of, the spring semester of the junior year if all requirements are met. To be considered for admission to the teacher education program in health education, students must:

1. Have completed or be in the process of completing 60 semester hours, 6 of which must have been taken at the University before applying;
2. Have a GPA of 2.50 or above in all courses attempted at any institution of higher education or 2.80 (or above) for the most recently completed 30 hours;
3. Have completed the following courses with a GPA of 2.50 (or above) and a minimum grade of C in each: EDUC 302, 313, 522 (Graduate Course for Undergraduate Form must be approved for undergraduates to take 500-level courses). Deficiencies may be corrected by repeating the courses in accordance with University regulations; a. Health education majors must have successfully completed or be currently enrolled in the following courses: BIOL 103–104, 124–125; HEAL 110, 120, 205, 220, 315 and one of the following three courses: HEAL 310, 325, or 330;
4. Have submitted the departmental checklist of requirements from the catalog year in which the student entered the University. This may be obtained from the coordinator of Field Experiences or the Health and Physical Education Department;
5. Have demonstrated proficiency in written and oral communication. (See the Department of Education in order to register for the examinations.)

Student Teaching Admission

1. The same minimum GPA options of 2.50 and 2.80 for the most recently completed 30 hours must be maintained for admission to student teaching. Students are directed to review "Admission to Student Teaching" in the Department of Education section of the catalog.
2. Undergraduate and post-baccalaureate students should be admitted to the teacher education program prior to enrollment in HEAL 420 and 440. These courses are required for admission to student teaching.
3. Prior to student teaching the student should have obtained a current certificate in American Red Cross Standard First Aid.

Program in Health Education

Semester Hours

Language Arts and Culture 15
ENGL 101 and 102; COMM 100 or 130 9
Literature1 3
ENGL 203, 204, 205 or 206 9
Humanities2 3
art, music, philosophy or foreign language 3
Social and Behavioral Sciences 12
PSYC 100; SOCI 101; HIST 121 or 122; ANTH 114
Mathematics and Natural Science 23–24
BIOL 103–104 or 113–114, 124–125, 261;
MATH 250 or SOCI 221
Required Courses 7
Physical education activities 4
EDUC 325 3
Support Discipline 15+
Professional Sequence 48
HEAL 110, 120, 315, 323, 420, 430, 440, 450 24
HEAL 205, 220, 310, 325 or 330 (select 4 12
out of 5)
HEAL 4603 12
Total Hours 120–124

Support Discipline—Select at least 15 hours (or 18 hours with teacher certification) from one of the following disciplines with adviser's approval: communication, education, marketing education, physical education, psychology, sciences, sociology.

Parks, Recreation, and Leisure Studies

B.S. in Parks, Recreation, and Leisure Studies

This degree is designed to prepare students for management careers in private and public recreation agencies or park systems. A broad background in the behavioral sciences is required for people management and leadership at recreation sites. Training in the biological and management sciences is required to aid in natural resource decision-making. Specialized course work in business management, marketing, economics and communication systems provides a strong base for the professional courses in planning, design, operation and evaluation of park and recreation facilities. The curriculum provides three options: park resources, recreation services and leisure studies.

Degree Requirements

Program for B.S. degree with a Major in Parks, Recreation and Leisure Studies

Semester Hours

General Education 35
Language arts and culture 12
ENGL 101, 102 (or 302) (3); COMM 120 or 130
(Art, music, theatre, literature) (3)
Science 11
PSYC 100 (3)
Social Sciences (GEOG, ANTH, PSYC, SOCI or GOVT) (6)
HEAL 110 or 205 (3) 3

Professional Interest Option (Second year) 15
(Select one option only)
1. Park Resource Option
   Emphasis in science (biology, chemistry, geology) and technology courses. Consult with adviser.
2. Recreation Service Option
   Emphasis on social and behavioral sciences with skill development in physical, social, or cultural arts. Consult with adviser.
3. Leisure Studies Option
   Emphasis on the lower division foundations in humanities and social science (philosophy, anthropology, psychology, ethics, etc.) leading toward upper division analysis of the world of leisure. Consult with adviser.

Management Core 15
ACCT 201, ECON 103, MGMT 301, 311, MKTG 301

1May substitute SOCI 303 (four credits) if Support Discipline is not Education. Total credit required then is 122 hours.
2Must substitute ECON 103 or 104 if Support Discipline is Marketing.
3HEAL 460 may be taken for six credits with nine credits of student teaching if Teacher Certification is selected. Total credit required then is 124 hours.
## Nursing

### Professional Program
PRLS 100, 103, 210; PRLS activities courses (4); PRLS 305 (or 405), 310 (or 410), 315, 320, 325, 326, 400 (or 401), 415 (or 470), 420 (or 460), 425, 450

### Electives

<table>
<thead>
<tr>
<th>Electives</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>122</td>
</tr>
</tbody>
</table>

### Faculty

#### Professors: Silva, D. Walker

#### Associate Professors: Ailinger, Billingsley, Carty (Chair), Cherry (Associate Chair, Undergraduate Program), Connelly (Associate Chair, Graduate Program), Liu, Millonig, Moore, Shine, Smith, Trainor

#### Assistant Professors: Baker, Bednash, Bennett, Boland, Burke, Cianci, Dahlen, Dienemann, Ehike, Fant, Feeg, Jenkins, Kopac, Kramer, Michael, Redmond, Roberts, Ruff, L. Walker, Wiederhorn, Williams

#### Instructor: Brenkus

#### Lecturers: Adrian, Boyd, Browning, Crimm, Fant, Flynn, Hall, Hewlett, Langley, Miller, Reafs, Reaves, Rigney, Rudowski, Shepherd, Swenson, Vail

The undergraduate and graduate programs are accredited by the Virginia State Board of Nursing and by the National League for Nursing.

### Course Work

This department offers all course work designated NURS in the Course Dictionary of this catalog.

### Degree Requirements

**B.S.N. Degree** The Bachelor of Science in Nursing degree is designed to enable individuals to meet the challenge of a changing and increasingly demanding health care delivery service. Graduates are prepared to function as professional nurses in hospitals, nursing homes, community health agencies, and in the home. Emphasis is placed on early detection of potential health problems, health maintenance in ambulatory services, and enlarged responsibilities for nurses in hospitals and other health agencies.

Candidates for the degree must present at least 120 semester hours of work. Specific requirements for the B.S.N. are as follows:

<table>
<thead>
<tr>
<th>Language Arts and Culture</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 101-102)</td>
<td>6</td>
</tr>
<tr>
<td>Communication</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Art (appreciation, history, criticism, or theory)</td>
<td></td>
</tr>
<tr>
<td>Music (appreciation, history, criticism, or theory)</td>
<td></td>
</tr>
</tbody>
</table>
Literature (in addition to six hours of ENGL 101, 102)
Philosophy, language, religion, or humanities

Social Behavior Sciences
Sociology 3
Psychology 6

Natural Sciences
Chemistry (CHEM 103–104) 8
Biology (BIOL 124–125) 8
Microbiology (BIOL 261) 4
Statistics (MATH 250, PSYC 300, or SOC 221) 3–4

Nursing Major 58
NURS 254/304, 250, 262, 301, 302, 311, 312, 321, 322, 411, 426, 431, 450, 470, 476

Physical Education Activities¹ 2
Electives² 13–15
Total 120

The department provides opportunity for credit by examination in several courses for students presenting some evidence of previous training. Questions should be directed to a faculty adviser in the department.

Registered nurses may obtain a maximum of 31 hours of credit toward the baccalaureate degree by successful performance on proficiency exams. This is in addition to the University-wide regulation of a maximum of 30 hours of credit that may be granted to all students on the basis of examinations administered to candidates presenting some evidence of qualification. Questions should be directed to the R.N. Coordinator in the department.

Students are required to obtain annual health examinations and immunizations beginning with registration for their first clinical course. They are also responsible for their own uniforms and transportation. Students are required to purchase personal liability insurance through the University and are billed for this insurance each semester (or summer session) of enrollment in clinical nursing courses. Registered nurse students who are assigned to clinical agencies in Virginia are required to be licensed in Virginia. A student may not take a clinical experience in an agency in which he/she is employed. A junior student must have CPR certification before entering a junior clinical and maintain it throughout the remainder of the program.

Completion of the program may require attendance in one or more summer sessions.

PAGE Students

General education requirements are satisfied by successful completion of the Program for Alternative General Education. In addition, nursing students complete 58 hours in the major, plus BIOL 124–125 and BIOL 261.

Special Quality Standards in the Major Field

Because knowledge, skills, and behavior patterns in the major field of this program are so vital to the health and perhaps even the survival of individuals or groups being served, failure or borderline achievement cannot be tolerated. Therefore, the faculty of the department has established, with approval of the University faculty and administration, the following special major field quality standards which go beyond the general University quality standards printed elsewhere in this catalog:

Acceptance into Junior Standing in Nursing.
Acceptance into junior standing in Nursing is based on a prerequisite cumulative average of 2.8 in those courses required for junior-level nursing courses (anatomy and physiology; chemistry; microbiology; psychology (three hours); sociology; Nursing 254, 250, 262). Students must achieve C or better in all prerequisite courses. Students not accepted for junior standing in Nursing may re-petition and, if they meet the criteria, may be admitted on a space-available basis.

Students enrolled in the Program for Alternative General Education must achieve a C or better in PAGE 130, PAGE 131, PAGE 227, and PAGE 228. In addition, PAGE students must achieve a 2.8 prerequisite cumulative average in the following courses: BIOL 124–125, BIOL 261, NURS 250, NURS 254, and NURS 262.

Permission to register for NURS 301, 302, 311, 312, 321, 322 requires prior acceptance into junior standing in Nursing. Application must be made during the semester in which the student will be completing the prerequisites for the junior-level courses.

¹Recommended
²No more than three hours of nursing department electives may be used to satisfy this requirement.
Application for acceptance into junior standing in Nursing for the Fall semester must be made prior to March 15; for the Spring semester, prior to November 15.

All prerequisite courses and credit by examination must be successfully completed before recommendations are made to accept the student into junior standing. These recommendations are made at the end of the semester when all courses are completed and grades have been reported. Students who have not successfully completed credit by examination or course work by the end of the Spring semester cannot be guaranteed clinical placement in junior-level courses in the following Fall. The registered nurse student takes proficiency exams for junior standing.

Full-time nursing requires carrying a heavy schedule; therefore, outside obligations should be limited to ensure success.

Additional Academic Grade Standards

A final nursing course grade of less than C prohibits further progress in the sequence of required nursing courses until that course is repeated and a satisfactory grade is earned. (The sequence is as listed in the following "Sample Schedule for Nursing Majors." ) For a grade of C or better in a course that includes clinical instruction, a final grade of C or better must be earned in both laboratory and lecture portions.

A nursing course in which a grade of less than C is earned may be repeated once. Upon earning a grade of C or better the student may resume progress in the sequence of required courses.

Failure to earn a grade of C or better in a course being repeated, or earning a grade of less than C in a second nursing department course, results in suspension of eligibility to progress in the sequence of required nursing courses.

A student so suspended may, after the subsequent academic period (Fall semester, Spring semester, or Summer Session, petition the department chair for permission to repeat the nursing course (or courses, if two grades of less than C were earned in the same semester) that resulted in the suspension.

No more than two nursing courses may be repeated. Failure to produce a satisfactory grade of C or better in the trial course(s) or subsequently in any nursing course results in exclusion from the University’s nursing program.

Sample Schedule for Undergraduate Nursing Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Oral Communication</td>
<td>Sociology</td>
</tr>
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<td>PSYC 100</td>
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<td>BIOL 124</td>
<td>BIOL 125</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
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<tbody>
<tr>
<td>Psychology</td>
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<tr>
<td>CHEM 103</td>
<td>CHEM 104</td>
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<tr>
<td>BIOL 261</td>
<td>Elective</td>
</tr>
<tr>
<td>NURS 254/304</td>
<td>NURS 262</td>
</tr>
<tr>
<td>NURS 250</td>
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<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>NURS 301</td>
<td>NURS 302</td>
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<tr>
<td>NURS 311</td>
<td>NURS 321</td>
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<td>NURS 312</td>
<td>NURS 322</td>
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<td>Statistics</td>
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<td>NURS 450</td>
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<td>NURS 426</td>
<td>NURS 470</td>
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<td>NURS 431</td>
<td>NURS 476</td>
</tr>
<tr>
<td>Elective</td>
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<td>15</td>
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</tr>
</tbody>
</table>

Undergraduate Catalog 1985-1986
George Mason University

http://catalog.gmu.edu
School of Business Administration
School of Business Administration

Business Administration should follow the PAGE program approved by the School.

Administration

The administrative office for the School of Business Administration is located in Room 4611, Robinson Hall:

Lloyd M. DeBoer, Dean
Richard L. Coffinberger, Acting Associate Dean for Academic Programs
Gerald Kraft, Assistant to the Dean

Course Work

The School of Business Administration offers all course work designated ACCT, BULE, DESC, FNAN, IRM, MGMT, MKTG, and REUD in the Course Dictionary of this catalog.

Bachelor of Science Degree

The programs in business administration offered by the University culminate in a B.S. degree with majors in accounting, business administration, decision sciences, finance, management, or marketing. A minimum of 122 hours of course work is required, of which at least 45 hours must be at the 300 or 400 level.

Students should consult the Baccalaureate Degree and the Graduation sections of Undergraduate Policies and Procedures for information concerning the literacy requirement, English Composition requirement, catalog requirements, residence requirements, and academic requirements.

The areas of concentration in the majors are designed to meet the needs of students with highly diverse interests and career goals: careers in business or government, graduate work, or studies that will support their current occupation or profession. Each of the five faculties has developed groups of required and elective courses pertaining to specific areas of concentration within each major.

All students must complete at least 30 semester hours in this degree program following acceptance to the School of Business Administration. Of these 30 semester hours, at least 18 must be in the required and elective semester hours of concentration in a major, and three semester hours must be in the policy course (MGMT 498).

PAGE

Students enrolled at George Mason University may fulfill their general education requirements through the Alternative Plan for General Education (PAGE). PAGE students pursuing degrees in the School of
# Degree Requirements

The following requirements must be met by all degree applicants:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Core Courses</strong></td>
<td></td>
</tr>
<tr>
<td>Accounting (ACCT 201, 202)</td>
<td>6</td>
</tr>
<tr>
<td>Applied Statistical Analysis (DESC 200–202)</td>
<td>6</td>
</tr>
<tr>
<td>Computer–Based MIS (IRM 201)</td>
<td>3</td>
</tr>
<tr>
<td>Decision Models (DESC 301)</td>
<td>3</td>
</tr>
<tr>
<td>Business Legal Studies (BULE 301, 401)</td>
<td>6</td>
</tr>
<tr>
<td>Finance (FNAN 301)</td>
<td>3</td>
</tr>
<tr>
<td>Management (MGMT 301)</td>
<td>3</td>
</tr>
<tr>
<td>Marketing (MKTG 301, 307)</td>
<td>6</td>
</tr>
<tr>
<td>Business Strategy and Policy (MGMT 498)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Major</strong></td>
<td></td>
</tr>
<tr>
<td>Language Arts and Culture</td>
<td></td>
</tr>
<tr>
<td>English Composition (ENGL 101 and 102 or 101 and 302)</td>
<td>6</td>
</tr>
<tr>
<td>Speech Communication (COMM 100, 101, or 130)</td>
<td>3</td>
</tr>
<tr>
<td>Literature and Humanities</td>
<td>9</td>
</tr>
<tr>
<td><strong>Social Sciences</strong></td>
<td></td>
</tr>
<tr>
<td>Principles of Economics (ECON 103, 104)</td>
<td>6</td>
</tr>
<tr>
<td>Economics (Upper–level, including ECON 306 or 310)</td>
<td>6</td>
</tr>
<tr>
<td>History or Government or Geography</td>
<td>3</td>
</tr>
<tr>
<td>Psychology and/or Sociology and/or Anthropology</td>
<td>6</td>
</tr>
<tr>
<td><strong>General Sciences</strong></td>
<td></td>
</tr>
<tr>
<td>Mathematics (MATH 108)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Sciences (Astronomy, Biology, Chemistry, Geology, Physics)</td>
<td>8</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>122</td>
</tr>
</tbody>
</table>

## Change in Communication Requirement

A change in the speech communication requirement became effective with the 1985 Spring semester. Students may satisfy the speech communication requirement by completing COMM 100, 101, or 130.

## Change in Literature and Humanities Requirements

A change in the Literature and Humanities requirements becomes effective with the Fall 1985 semester. Students must take nine semester hours from the Literature and Humanities categories with at least one course in each category. These students may either take six semester hours of Literature and three semester hours of Humanities or six semester hours of Humanities and three semester hours of Literature.

## Change in Business Legal Studies Sequence

A change in the business legal studies sequence for the School of Business Administration became effective with the 1982 Fall semester. The required sequence of BULE 301 and 302 was replaced by the sequence BULE 301, 401. Students who have completed the old sequence are not required to complete the new sequence but may take BULE 401 for general elective credit. Students who have completed BULE 301 in the old sequence should take BULE 401 in order to finish the sequence.

## Change in Mathematics–Statistics Sequence

A change in the mathematics–statistics sequence for the School of Business Administration became effective with the 1980 Fall semester. The required sequence includes:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics (MATH 108)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Sciences (Astronomy, Biology, Chemistry, Geology, Physics)</td>
<td>8</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>122</td>
</tr>
</tbody>
</table>

1Completion with a grade of C or better required before or during semester of application for acceptance to the School of Business Administration.

2Must be taken at George Mason University.

3Approved areas of concentration within a major are shown in each program.

4Humanities includes DANC 101, 391, MUSI 101, 105, 106, 107; THR 101, 351, 352, 353, 356, 357; any Art History; any Philosophy; or any Religion course.

5May include no more than four semester hours of activity courses in any department such as those listed under the catalog designations dance, individual sports, physical education, team sports, and recreational activities.

6May include a maximum of 62 semester hours of credit from accredited two–year institutions.
sequence of MATH 107, 108, DESC 205, 206 was replaced by the required sequence of MATH 108, 200 (formerly MATH 109), DESC 202, 301. Students who have completed the old sequence are not required to complete the new sequence. Students who have only completed one to three courses of the old sequence should consult the table below for the courses they must complete in order to finish the mathematics-statistics sequence.

<table>
<thead>
<tr>
<th>Have Completed</th>
<th>Must Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 107</td>
<td>MATH 108, DESC 200, 202</td>
</tr>
<tr>
<td>MATH 107, 108</td>
<td>DESC 200, 202</td>
</tr>
<tr>
<td>MATH 108</td>
<td>DESC 200, 202, 301</td>
</tr>
<tr>
<td>MATH 107, 108, DESC 205</td>
<td>DESC 202</td>
</tr>
</tbody>
</table>

Students who will complete the required mathematics-statistics sequence by taking DESC 202 may take courses with a prerequisite of DESC 301 following completion of DESC 202. However, students exempted from DESC 301 or any other upper-level course must still present 45 hours of 300/400-level courses on their degree applications.

A minimum of 30 hours of course work must be completed following acceptance to the School of Business Administration. Of these 30 hours, 18 must be in the upper-level business courses required in a major offered by the School of Business Administration and three must be in MGMT 498.

**Acceptance to the School of Business Administration**

Acceptance to the School of Business Administration is competitive, based on the quality of academic work and the courses presented on the application, and is limited to the resources available to the school and an appropriate share of projected total University enrollment. Special consideration is given to grades earned in the courses specified in eligibility requirements outlined below and any other courses offered by the School of Business Administration that students may have completed prior to acceptance.

To apply and be eligible for acceptance to the School of Business Administration students must complete 60 or more hours at the University by transfer credit by the end of the semester in which application is made; complete the following courses or their equivalent with a grade of C or better in each course: ENGL 101 and 102 or 302; ECON 103 and 104; MATH 108; ACCT 201 and 202; IRM 201; and DESC 200 and 202 by the end of the semester in which application is made.

The decision to accept a student to the School of Business Administration is based on grades received in all course work completed by the student at the University and/or other colleges, including that completed during the semester of application.

Failure to perform satisfactorily (defined as satisfactory grades in more than two-thirds of the credit hours undertaken) during the semester of application is cause for denial of acceptance to the School of Business Administration, regardless of the student’s overall performance.

Students should file for acceptance to the School of Business Administration by the deadline established for the semester at the end of which they will have met the eligibility requirements. The deadline in a given semester is on or before February 1 or October 1. Applications received after these dates will be returned. Students have the right to appeal a denial.

Students planning to transfer to the University from another institution and who have completed or will complete the requirements for acceptance to the School of Business Administration by the end of their current semester should file a separate application with the School of Business Administration on or before the appropriate deadline. These same students must file a separate application for admission to the University. Failure to comply with this requirement will mean that the students, if admitted to the University, would enter the school as prebusiness students and would be expected to apply for acceptance to the School of Business Administration in the semester following the semester of admission to the University.

Students should submit an application for acceptance to Business Administration as soon as eligible. In the case of a full-time student in residence, this should be no later than the beginning of his fourth semester. In the case of a part-time student or student intending to transfer, this should be no later than the beginning of the semester in which the requirements for acceptance will be completed. Note that “semester” does not include Summer terms.

All business administration students newly admitted to the University are classified as pre-business administration. Students readmitted to the University, who previously were pursuing a degree in the School of Business Administration, are
classified as pre-business administration unless in their previous enrollment they had been accepted to the School of Business Administration. The program for pre-business students is administered by the Associate Dean for academic programs.

Upon acceptance to the School of Business Administration, students must complete the requirements for the degree as declared majors in accounting, business administration, decision sciences, finance, management, or marketing. The programs of business administration majors are administered by the department chairs of the School of Business Administration and the Associate Dean for academic programs.

Sample Schedules

Sample schedules for pre-business administration students and students accepted to the School of Business Administration are shown below. Courses need not be taken in the precise sequence or semesters indicated, except as prerequisites or other necessities prescribed.

Sample Schedule for First Four Semesters in Pre-Business Administration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ECON 103&lt;sup&gt;1&lt;/sup&gt;</td>
<td>ECON 104&lt;sup&gt;1&lt;/sup&gt;</td>
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<tr>
<td>ENGL 101&lt;sup&gt;1&lt;/sup&gt;</td>
<td>ENGL 102&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>MATH 108&lt;sup&gt;1&lt;/sup&gt;</td>
<td>DESC 200&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Laboratory science&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Laboratory science&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>Humanities&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Humanities or Literature&lt;sup&gt;2&lt;/sup&gt;</td>
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<td>16</td>
<td>16</td>
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<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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<tbody>
<tr>
<td>ACCT 201&lt;sup&gt;1&lt;/sup&gt;</td>
<td>ACCT 202&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>IRM 201&lt;sup&gt;1&lt;/sup&gt;</td>
<td>History, government, or geography</td>
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<tr>
<td>Literature or Humanities</td>
<td>ECON 306 or 310</td>
</tr>
<tr>
<td>DESC 202&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Speech Communication</td>
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<tr>
<td>COMM 101 or 130</td>
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</table>

<sup>1</sup>Completion with a grade of C or better required before or during the semester of application for acceptance to the School of Business Administration.

<sup>2</sup>Students may choose to take ENGL 302 in place of ENGL 102, but should consult the prerequisites for ENGL 302 first.

<sup>2</sup>Two required—may be taken in any order.
Accounting and Business Legal Studies

Faculty

Associate Professors: Coffinberger, Floyd, Millspaugh, Samuels, Stagliano (Department Chair)

Assistant Professors: Buchanan, Cao, Hicks, Lynn, McDermott, Rymer

Instructors: Kraft, Mariano

The Accounting faculty offers a major in Accounting with courses available for specialization within the major. In addition to the general degree requirements for the B.S. degree within the School of Business Administration, students who pursue the major program must complete 18 credit hours in upper-level Accounting courses. The following courses are required of all Accounting majors: ACCT 311, 331, 332, 351, and 461. Each student in the program must complete the major requirements with at least one course from among the following (for three credits): ACCT 312, 411, 431, 451, 461, 471, 472, 491, 499.

Advising materials are available in the Department office (4634 Robinson) to provide guidance regarding recommended electives. Students should see their faculty adviser when selecting courses for concentration in a particular professional specialty area within the field of Accounting. Students who anticipate sitting for the Uniform CPA Examination should consult applicable State regulations and discuss their program with a member of the Accounting faculty.

The faculty of the School of Business Administration, with the Associate Dean for academic programs, offers a major in business administration. In addition to the general degree requirements for the B.S. degree, students must complete 18 hours of upper-level business administration courses as shown below. Note: Students may not utilize the major in business administration if credit for more than one major is desired.

Concentration in General Business Administration. Required: ACCT 311, DESC 352, FNAN 401, MGMT 311, MKTG 471. Electives: One or more upper-level, noncore courses offered by the School of Business Administration.

Note: Students may take additional courses offered by the School of Business Administration to satisfy all or any of the 15 hours of General Elective requirements for graduation.

Decision Sciences

Faculty

Professor: Greenberg

Associate Professors: Kelly, Render (Department Chair), Ruth

Assistant Professor: Gardner

Instructors: Quitmeyer, Schank

Lecturers: Carlisle, Carlson, Cotton, Goldstein, Green, Hwang, Pauler, Pinto, Pugh, Stein, Wang

The Decision Sciences department has three major thrusts: information resource management, operations management, and management science. These three areas are complementary and supportive, representing the application of modern technologies to practical problems of business and government organizations. Management science is applied operations research, information resource management is applied computer science, and operations management is quantitative management of the organization. The department is also responsible for undergraduate core courses in information systems, statistics, and quantitative analysis.

Graduates of the program receive a B.S. degree in Business Administration with a major in Decision Sciences. Students choose one of three areas of concentration—Operations Management, Management Science, or Information Resource Management. In addition to the general degree requirements for the B.S. degree, students desiring to major in Decision Sciences must complete 18 hours in upper-level Business Administration courses within an area of concentration as shown below. Students should discuss their choice of major within Decision Sciences with a faculty adviser.


Concentration in Operations Management. Required: DESC 355, 452, 461. Electives: Three or more from: DESC 352, 353, 456, 535, ACCT 311, LOGS 310, MGMT 381, IRM 411, SYST 570 (DESC 456 and SYST 570 may not both be used as electives).

Concentration in Information Resource Management. Required: IRM 403, 411, INFS 310 Electives: Three or more from: IRM 410, 491, INFS
Finance/Real Estate and Urban Development

311, 312, 315, 316, 422, ACCT 312, DESC 352 (only one of the last two courses may be included—either ACCT 312 or DESC 352, but not both).

Notes:
1. Students may take additional Decision Sciences courses as well as other courses offered by the School of Business Administration to satisfy any or all of the 15 hours of general elective requirements for graduation. Signed Graduate Course for Undergraduate Credit Form must be submitted to take DESC 535 or SYST 570, or other graduate-level courses.
2. For students graduating under the provisions of an earlier catalog, DESC 301 may be considered equivalent to DESC 351 (which is no longer offered). This substitution can be effected only if DESC 301 is not used to complete the required 12-hour mathematics-statistics sequence.
3. Individuals who have taken INFS 211 may use it to meet the prerequisites of courses requiring INFS 310; an additional upper-level information resource management elective must be substituted for INFS 310.

Scheduling Note: Because INFS 310 is prerequisite to several INFS courses, students concentrating in information resource management should try to take INFS 310 in their fifth semester.

Faculty

Associate Professors: Johnston, Hysom

Assistant Professors: Crawford (Acting Chair), Grimshaw, Hanweck, Pierce

Lecturers: Emerson, Hartley, Moore, Pagett, Shaikh, Sherbo, Villani

The finance and real estate and urban development faculty offers a B.S. degree in finance with five areas of concentration designed to prepare students for professional careers in finance or in real estate and urban development. In addition to the general degree requirements for the B.S. degree, students desiring to major in finance or in real estate and urban development must complete 18 hours in upper-level business administration courses within an area of concentration as shown below.

Concentration in General Finance. Required: FNAN 311, 321, 401. Electives: Three or more from ACCT 351, FNAN 411, 421, 491, REUD 301, 415.

Concentration in Financial Management. Required: FNAN 401, 491. Electives: Four or more from ACCT 351, DESC 353, FNAN 311, 321, 421.

Concentration in Investments. Required: FNAN 311, 411, 421. Electives: Three or more from ACCT 351, DESC 353, FNAN 321, 401, 412, 491, REUD 301, 415, 419.

Concentration in Financial Institutions. Required: FNAN 321, 421, REUD 301. Electives: Three or more from ACCT 351, FNAN 311, 401, 491, REUD 415.

Concentration in Real Estate and Urban Development. Required: REUD 301, 415, 416, REUD 304. Electives: Two or more from ACCT 351, FNAN 311, 321, 421, REUD 417, 418, 419, 583, 584.

Note: Signed Graduate Course for Undergraduate Credit Form must be submitted to take REUD 583 or 584 and other graduate-level courses.
Management

Faculty
Professors: English (Department Chair), Kovach, Steinhauer
Associate Professors: Marchione, Sands
Assistant Professors: Bolce, Carper, Ondek, Pejsar, Roberson-Bennett
Senior Lecturers: Duke, Stimson

The Management faculty administers a major in management with three areas of concentration designed to prepare students for managerial careers in the public and private sectors.

In addition to general degree requirements for the B.S. degree, students must complete 18 hours in upper-level business administration courses within an area of concentration as shown below.


Concentration in Personnel/Industrial Relations. Required: MGMT 311, 321, 331, 421, or 431. Electives: Two or more from MGMT 341, 381, 411, 421, 431, 451, 471, 491, DESC 461.

Concentration in Entrepreneurship and Small Business Management. Required: MGMT 311, 381, 451, 411, or 491. Electives: Two or more from MGMT 321, 341, 491, ACCT 311, IRM 411, MKTG 311, 332, DESC 461.

Note: Students may take additional management courses, as well as other courses offered by the School of Business Administration, to satisfy any or all of the 15 hours of general elective requirements for graduation.

Marketing/Logistics

Faculty
Professors: DeBoer (Dean), McCrohan, Tongren
Associate Professor: Entrikin (Department Chair)
Assistant Professors: Domzal, Goretzky, Harvey
Instructors: Rishell,

Lecturers: Hoelzel, Hood, B. Jones, Mason

The Marketing faculty offers a major in marketing with four areas of concentration designed to prepare students for careers in marketing and related fields. In addition to general degree requirements for the B.S. degree, students must complete 18 hours in upper-level business administration courses within an area of concentration as shown below.


Concentration in Business Logistics. Required: LOGS 310, 320, 330, or DESC 352. Electives: Three or more from DESC 461, GEOG 405, 411, DESC 452, or LOGS 491.

Concentration in Government Logistics. Required: LOGS 310, 311, 331, or 341. Electives: Three or more from DESC 352, LOGS 432, BULE 305, or DESC 461.

Note: Students may take additional marketing courses as well as other courses offered by the School of Business Administration to satisfy any or all of the 15 hours of general elective requirements for graduation.

* All students must take ECON 375, "Economics of Transportation," for three credits of the six credit School of Business Administration upper-level ECON requirement.

* It is recommended that all students take ENGL 310, "Technical and Report Writing." These three credits will be deducted from general electives.
Division of Continuing Education
George Mason University's commitment to continuing education was formalized in 1973 when the Office of Extended Studies was created. Its purpose was to develop and administer a continuing education program for the community. To serve more Northern Virginia citizens, the Office of Extended Studies started two significant and unique continuing education activities in 1974: the Extended Studies enrollment procedure and off-campus credit courses. These activities began with 500 students and now serve more than 3,000.

The Extended Studies office initiated the University's first noncredit courses and reorganized the undergraduate evening session to accommodate the part-time, working, adult student. In 1975, the University began the Bachelor of Individualized Study (B.I.S.) degree program and initiated the Continuing Education Units (CEUs) to participants in organized community service workshops, conferences, and institutes.

In response to the continuing education needs of health professionals, the Office of Extended Studies and the Department of Nursing began a cooperative Nursing Continuing Education Program in 1977. Later, a similar cooperative In-Service Education program began with the Department of Education.

In the fall of 1978, President George W. Johnson announced the upgrading of the status of the University's continuing education service from the Office of Extended Studies to the Division of Continuing Education, effective January 1, 1979. This change recognized the maturing of George Mason University and the essential place in its offerings for adults who turn to their regional university for educational renewal. The step emphasized the University's determination to provide an extensive lifelong learning program to the community.

Programs and Services

The Division of Continuing Education provides the Northern Virginia community with a comprehensive program of learning opportunities: the nontraditional Bachelor of Individualized Study degree program; undergraduate evening programs; the nursing continuing education program; in-service education; the Extended Studies enrollment procedure; off-campus credit instruction; contract courses; undergraduate guest matriculant enrollment; senior citizen enrollment; community services; and noncredit courses. The Division also administers a non-traditional Master's program under the Graduate School. Academic programs offered through the Division of Continuing Education originate in the appropriate colleges and schools of the University and are subject to official University regulations and procedures. The Dean of the Division of Continuing Education serves as the academic dean of all students enrolled in programs administered by the Division.

Administration
Robert T. Hawkes, Jr., Dean
Sally J. Reithlingshoefer, Assistant Director

Extended Studies Enrollment

The Extended Studies enrollment procedure serves the academic counseling and career information needs of adult learners and provides an opportunity for qualified students to apply for enrollment in courses without being formally admitted to the University. The program accommodates the diverse continuing education needs of students for achieving personal enrichment, upgrading skills, retraining for new jobs, increasing the enjoyment of retirement or leisure time, entering or reentering the job market, exploring new areas of study or making up academic deficiencies or prerequisites in order to qualify for entry into a degree program. While meeting these needs, students earn credit that can be later applied to a degree program.

Extended Studies enrollment is based on evaluative criteria and availability of space in course selections. Enrollment in high-demand fields may be restricted or prohibited from time to time.
Enrollment Procedures. Prior to each semester, professional academic counselors assist more than 3,000 students in selecting courses appropriate to their career goals. They also advise students about requirements for courses and programs, approve course selections, explain registration procedures and acquaint students with the University services available to Extended Studies enrollees. All academic policies and procedures apply to Extended Studies enrollees. Completed courses, earned credits, and grades are recorded on regular University transcripts.

Counseling appointments are required of all new Extended Studies students and of all returning students who have earned 15 or more semester hours of credit as Extended Studies students at GMU. Counseling appointments are optional for all other returning Extended Studies students who have taken courses at some time during the past two years, have transcripts on file, and have earned 14 or fewer semester hours of credit at GMU.

Counseling and enrollment services are available to the public throughout the entire year in the Division of Continuing Education. During non-registration times, career and academic counseling services are available on a walk-in basis and appointments are not needed. During pre-semester registration periods, counseling services are limited to course approval only, and appointments are required. Interested students should call the Division for appointments and office hours.

Enrollment Requirements. Prospective enrollees are required to supply unofficial evidence of their academic background during their first visit to the Division of Continuing Education. High school transcripts and evidence of graduation are required of those who have no previous college course work. Transcripts, grade reports, diplomas, or certification documents are required of those who have had previous academic work.

Extended Studies enrollees are expected to achieve satisfactory grades, i.e., a semester average of at least C (2.00), in all undergraduate courses and at least B (3.00) in all graduate courses. Students who do not meet these criteria during two consecutive periods of enrollment are not permitted to register again as Extended Studies enrollees.

Credits Applicable to a Degree Program. If an Extended Studies enrollee wishes to apply for admission to a degree program, the regular graduate or undergraduate admissions procedures take effect, almost as if the student were applying for transfer.

Extended Studies enrollees may apply for formal admission at any time. The Office of Admissions applies the same criteria for admission of these students as for students transferring from other institutions.

If accepted for admission into a degree program and if the courses taken meet the current catalog requirements of the degree program, students may apply up to 60 hours earned as an Extended Studies enrollee toward an undergraduate degree. A maximum of 12 hours of graduate credit earned through Extended Studies enrollment may be applied toward a master's degree program if the student applies for admission to the Graduate School and is accepted into a degree program. It is the responsibility of the student, after admission to the Graduate School and upon initial registration as a degree student, to initiate a request for applying credit earned through Extended Studies enrollment to the appropriate graduate degree program.

If the student has transferable credit from another institution, the amount of applicable credit earned through Extended Studies enrollment is reduced accordingly. Grades for the graduate courses taken through Extended Studies enrollment, if approved toward a master's degree, are included in the student's grade point average. Prospective degree-seeking students are urged to apply for regular admission as soon as possible or as soon as they are eligible to do so. Candidates for degrees must fulfill the degree requirements outlined in the catalog that is in effect at the time they are admitted.

Guest Matriculant Enrollment

Persons enrolled in undergraduate degree programs at other accredited institutions who wish to take undergraduate courses at the University for transfer back to their home institution enroll through the Division of Continuing Education during the Fall and Spring semesters. Such students should submit transcripts and permission to enroll from the appropriate dean of the home institution to a counselor in the Division of Continuing Education. Only students in good academic standing at their home institution are permitted to enroll as guest matriculants at George Mason.

Guest matriculants enrolled in graduate programs at other accredited institutions should contact the Graduate School to make arrangements for taking graduate courses.

During the Summer terms, however, both undergraduate and graduate guest matriculants
should contact the Office of the Registrar to arrange for course work.

**Senior Citizens Enrollment**

The Division of Continuing Education coordinates enrollment under the Senior Citizens Higher Education Act of 1974, as amended and as applicable to the University. Under the terms of this act, eligible Virginia residents over 60 years of age with a taxable income of less than $7,500 are entitled to enroll in courses offered for academic credit on a space-available basis without payment of tuition and fees.

In addition, the Act provides for audit of course(s) offered for academic credit and also for enrollment in noncredit course(s) without payment of tuition and fees on a space-available basis, regardless of the taxable income level. Tuition, however, may be charged for those courses which are designed exclusively for senior citizen groups. No senior citizen may change registration status in any given semester once he or she has initially registered for classes.

**Undergraduate Evening Program**

The Division of Continuing Education coordinates undergraduate courses and programs scheduled after 4:15 p.m. for the undergraduate colleges and schools. Undergraduate degree programs in business administration, communication, economics, English, history, mathematics, philosophy, psychology, and sociology are completely available in the evening. All academic departments offer evening courses, and other undergraduate majors will be added as the evening session expands.

The dean of the Division administers many academic policies for undergraduate evening students. Evening class schedules are included in the University's Schedule of Classes.

**Community Services Activities**

The Office of Community Services is a significant outgrowth of continuing education at the University. Its purpose is to bring the University to the community, and the community to the University.

To accomplish this, the Office of Community Services focuses on both community education and service programs such as conferences, workshops, seminars, institutes, or short courses. They may be either sponsored or co-sponsored by the University.

In addition, conferences of outside organizations or groups may be serviced by the University for a fee.

Community Services maintains an active conference servicing component. In this regard it assists with the planning of numerous conferences, workshops, seminars, and summer residential programs that provide an opportunity to share with the community some of the University's unique capabilities, resources, and faculty expertise.

Community Services also assists faculty members in sponsoring conferences, workshops, and seminars to promote continuing education in their respective professions. In this capacity, it has facilitated meetings for educators in various fields and encouraged the academic departments of the University to work with public agencies, professional organizations, and private concerns to offer one- and two-day conferences and occasional residential programs to be conducted primarily by University faculty members. Continuing Education Units (CEU's) may be awarded to participants as permanent records of their attendance in previously designated community education programs.

The University offers outstanding accommodations for continuing education programs for business, industry, and professional associations. Its two campuses provide a wide choice of meeting rooms and facilities. Noncredit programs at the Main Campus are usually held in Student Union II, the Harris Theatre, or in several large lecture halls. These have included an annual "New Horizons in Technology Lecture Series," library continuing education courses and workshops, and conferences on mediation and negotiation, environmental ethics, education, and government contracts. Other sites may be used for specific activities, such as music programs, which are usually held in the new Humanities Module. The GMU Professional Center, located on the third floor of the Metro Campus in Arlington, Virginia, is accessible through the Virginia Square Metro Station. Many community education and service programs are held there throughout the year, including art displays, theatre productions, and numerous workshops, conferences, seminars, credit and noncredit courses.

**Off-Campus Credit Instruction**

Off-campus credit instruction is offered at sites convenient to the residential communities and places of employment in Northern Virginia. Courses are located where there seems to be a logical need or presumed interest, and at times that are convenient for working adults. Currently, the
Section 1: Contract Courses

Division administers more than 100 courses in 15 disciplines at more than eight off-campus locations.

Off-campus credit course work is aimed at the continuing education student. The courses can be used to fulfill certain necessary prerequisites for advanced degrees. Students may take several courses off campus, and take only those courses on campus that require the use of special facilities, such as a computer.

As off-campus credit instruction expands, the Division will attempt to respond to students enrolled at the Northern Virginia Community College campuses who wish to continue their studies in a bachelor’s program, and to undergraduate and graduate students who are located in U.S. government or business facilities in Northern Virginia.

All off-campus graduate and undergraduate courses are approved by the appropriate college or school in the University and are fully applicable as resident credit toward the appropriate degree at George Mason. In most instances, these courses are taught by full-time faculty members of the University. Transcript records for courses taken off campus are identical to those taken on campus. The University calendar, regulations, and tuition are the same for off-campus courses as for those on campus. The University insists that its faculty and students adhere to all regulations of the off-campus facilities, such as those concerning smoking, parking, and security.

Students who wish to register for an off-campus course may do so in the Division of Continuing Education or through the Office of the Registrar at the time they are approved to take the course. In addition, registration periods for all courses are scheduled on campus before the beginning of each term or semester. Off-campus site registrations may be scheduled by special request.

Contract Courses

The University offers specialized courses designed to meet the specific needs of a business, government agency, or school system on-campus, at the work site of the client, or at a designated location. These contract courses are approved by the appropriate college or school of the University. They are taught by faculty members or recognized authorities.

Contract courses are offered for credit or may also be offered on a noncredit basis specifically designed for a particular audience. The students may receive Continuing Education Units (CEU’s) or some other recognition of achievement that may apply toward professional certification. The major topical areas have been Management Information Systems, Technical Project Management, Proposal Writing, Logistics Management, Purchasing, Performance Appraisal, and Communications. Contact the Coordinator of Off-Campus Instruction for specific information.

Professional Awareness Programs

The Division of Continuing Education Professional Awareness Programs provide quality training and education to professional managers and potential executives who are moving into positions requiring broad managerial or technical talent. Programs are usually conducted at the Professional Center in Arlington, and are open to the public. However, programs can be arranged on-site at the organization or elsewhere in the Washington metropolitan area if requested. Program offerings are reasonably priced and conveniently designed to avoid taking participants away from their jobs for substantial lengths of time.


Contact the Coordinator of Off-Campus Instruction for specific information pertaining to offerings.

In-Service Education

Among the primary audiences served through contract courses are the teachers and administrators of local school divisions. In-Service experiences are specially designed to increase the knowledge and upgrade the competence of public and private school educators on a variety of topics. Contract courses are offered in school divisions by the University departments in such specialized areas as, for example, computer literacy, the teaching of writing, and substance abuse.

Instructors for In-Service contract courses are adjunct University faculty members as well as full-time faculty members. In-Service credit courses are applicable to degree programs subject to adviser approval.

For further information contact the GMU In-Service
Education Coordinator in the Division of Continuing Education.

Nursing Continuing Education

The Department of Nursing, in cooperation with the University’s Division of Continuing Education, offers opportunities for noncredit courses representing a variety of subjects focusing on the concerns of nurses and health care consumers.

When planning and presenting continuing education program activities, the Department of Nursing utilizes the wealth of available resources in Northern Virginia and the Washington Metropolitan area. Nationally recognized nursing consultants are frequent guests on campus.

Comments and suggestions for programming from the health care community are welcomed and encouraged. One may be placed on the mailing list to receive notice of specific activities scheduled throughout the academic year by contacting either the Division of Continuing Education or the Department of Nursing.

Bachelor of Individualized Study Degree Program (B.I.S.)

The B.I.S. Degree Program offers mature students an academically sound program that provides an alternative to traditionally structured baccalaureate degrees. It provides each student, guided by a University academic adviser, an opportunity to formulate a course of study that complements individual needs and interests. The choices in any given instance are inter-institutional, individualized, and interdisciplinary.

The B.I.S. degree is conferred by the University in partial fulfillment of its service obligation to Northern Virginians. Approximately 550 students have been granted B.I.S. degrees since the program was established in 1975. Another 400 students are currently enrolled in the Program. The Program is administered by the Director of Individualized Study Degree Programs in the Division of Continuing Education, and the Dean of the Division is academic dean for all students in the Program.

The Program recognizes the breadth of an adult student’s background by providing for generous transfer of credits earned at accredited institutions and by providing procedures to translate knowledge gained from prior experiential learning or self-education into academic credits as appropriate.

In acquiring credits toward a B.I.S. degree, a student may proceed at his or her own pace. The Program recognizes that not all knowledge is gained in the classroom. It emphasizes the development and evaluation of the student’s ability, not the manner in which the knowledge was acquired. The Program is aimed at meeting the varied needs of the mature adult student who may not need or desire the traditional B.S. or B.A. degree, or who is confronted with obstacles barring the pursuit of a more conventional degree.

Eligibility. Applicants to the B.I.S. Program must have been out of high school at least eight years and have accumulated at least 30 semester hours of college credit with a minimum grade of C. At least 15 of the initial 30 hours required for admission must have been earned through conventional classroom instruction.

Application and Acceptance. Students who meet the eligibility requirements may fill out an application to the B.I.S. Program after an initial counseling session with B.I.S. counselors. Appointments for counseling may be made by calling (703) 323-2342. Application deadlines are January 1, April 1, July 1, and October 1 of each year. Although a student may apply to the B.I.S. Program before making application to the University, only students admitted to the University can be accepted into the program. Students are notified of their acceptance or denial by the last day of the month following each deadline. Acceptance into the B.I.S. Program is conditional until the student obtains a faculty adviser and a signed educational contract. Although the B.I.S. Director and counselors can assist the student in this process, finding a faculty adviser remains the responsibility of the student.

Acceptance decisions are based on the Director’s assessment of the individualized, non-traditional nature of the course of study desired by the applicant; the availability of courses relevant to the desired field of study within the Northern Virginia Consortium for Continuing Higher Education; the availability of academic advisers in the field; the GPA of the student and the likelihood of the student benefitting from the proposed course of study. In general, a non-traditional, individualized course of study is defined as one not offered through established academic departments at the University. Denials of admission to the program may be appealed to the Dean, Division of Continuing Education and to the B.I.S. Advisory Committee.

Reaplication to the B.I.S. Program is required of students who have been inactive for two years or
more or who wish to change the content of their individualized course of study.

Program Requirements

The student must complete a minimum of 120 semester hours of course work. At least 45 semester hours must be upper-level course work (courses numbered in the 300 or 400 sequences), and at least 30 semester hours must be completed at George Mason University or at other institutions of the Northern Virginia Consortium.

The following minimum General Education requirements must be completed: (1) Six hours in English Composition/Literature (ENGL 101 (100), 102 or 302; or equivalent). (2) Six hours of Science or Mathematics. (3) Six hours of Humanities. (4) Six hours of Social or Behavioral Sciences.

In conjunction with a University academic adviser, the student must design and complete an individualized program of course work relevant to his/her non-traditional educational interest. This study core constitutes the student’s “individualized major.” The core must include a minimum of 30 semester hours of credit, at least 12 of which must be upper-level course work. A maximum of 6 hours of grades of D may be included in the core. A student with 33 hours or less remaining in the degree program is required to obtain a faculty adviser before additional course work is completed.

The student must also complete a final project the content of which must be related to the individualized study core. This project is undertaken in the last semester of study under the course heading B.I.S. 490. Three credits are given for successful completion of the project (grade of C or better). These credits can be counted toward all program requirements above but they may not be counted toward the 30 hours of the individualized study core. The student’s academic adviser and two other faculty members constitute the evaluation committee for this project. One member of the committee is selected by the faculty adviser and one member is selected by the student. A grade of IP (In Progress) may be given by the adviser, if appropriate, to allow the student additional time to complete the B.I.S. project. The IP grade will be changed to F if the project is not completed by the end of the next Fall or Spring grading period.

The following are examples of the types of individualized, non-traditional concentrations designed by B.I.S. students in conjunction with faculty advisers:

American Folk Culture
Art Therapy
Aviation Management
Community Resources Program Development
Computer Applications to Health Care
Consumerism
Corporate/Community Relations
Economics of Politics
Eighteenth Century Medicine
Environmental Design
Procurement and Grants
Graphic Arts and Photography
Health Care Program Administration
History of Private Enterprise
Interpretive Naturalist
Investments and Commodity Trading
Liturgical Music
Medical Illustration
Meteorology and Oceanography
Museum Management
Music Management
Philosophy and Psychology of Sports
Psychology of Marketing
Senior Citizen Communities
Therapeutic Recreation in Gerontology
Women’s Studies
Writing for Government.

Credit for Non-Traditional Modes of Learning

In addition to liberal acceptance of credit earned through traditional course work at accredited institutions, the University’s B.I.S. degree allows a student to receive college credit for learning acquired through a variety of nontraditional methods.

A maximum of four credits for experiential learning demonstrated by a portfolio may be granted following an assessment and recommendation by the student’s academic adviser or by a committee assembled by the faculty adviser. The number of credits granted for experiential learning is not limited if such learning can be demonstrated by examination such as course equivalency examinations offered by academic departments. Credit for experiential learning granted by other institutions, however, may not be transferred unless such credit was earned through examination.

Credit earned through CLEP, USAFI, or DANTES subject examinations can be granted. A limited amount of credit may also be earned through CLEP General Examinations. Credit earned through correspondence courses, television courses, and other nontraditional modes of imparting knowledge certified by accredited institutions of higher learning
can be applied toward the degree. Completion of certain recognized certificate programs may also be granted credit. Course work taken through branches of the military, government agencies, and some private corporations may be transferred if such course work is indexed and evaluated as college-level work by the American Council of Education.

B.I.S. Course Work at Consortium Institutions

George Mason University awards the B.I.S. degree on behalf of the Northern Virginia Consortium. The members of the Northern Virginia Consortium are George Mason University (the host institution), Marymount College of Virginia, Northern Virginia Community College, Strayer College (Arlington campus), the University of Virginia, and Virginia Polytechnic Institute and State University. Courses completed at any Consortium institution count toward the 30 semester hour Consortium requirement of the B.I.S. degree. In addition, fewer restrictions apply to the transfer of Consortium credits into the B.I.S. program than into traditional programs.

Although permission must be obtained from the Dean, Division of Continuing Education, for admitted George Mason University students to take courses at other institutions, the B.I.S. program allows full use of the education resources of the Consortium in work toward the B.I.S. degree. Faculty members at Consortium institutions may serve on the B.I.S. 490 Project Committee, although only a George Mason University faculty member may sign an educational contract or serve as the major adviser.
Certificates and University Courses
Certificates and University Courses

Certificate Programs

The Faculty Senate, acting on advice from the committee on University Curriculum Matters, has established guidelines for the offering of certificate programs by the various units of the University. Not meant as substitutes for degree programs, these certificate programs are special sequences of credit study, the completion of which is signified by the awarding of a certificate. Their use may be significant to individuals who already hold degrees and/or who are greatly interested in the fields in which these certificates are offered.

Each of the colleges and schools of the University has the ability to devise certificate programs, following the University guidelines.

The following certificate programs are open to undergraduate and post-baccalaureate students. Completion of these programs requires the possession of a bachelor's degree either previously or simultaneously awarded. Additional certificate programs at the post-baccalaureate and master's level are described in the graduate catalog.

Certificate Programs in Gerontology

Committee


The certificate programs in Gerontology are designed for students who wish to train for work with older people and for professionals working with the elderly. The programs provide a background of basic knowledge in gerontology and then permit the students to train in professional skills in areas such as counseling, recreation, social services, nursing, and administration. The master's level program is described in the graduate catalog.

Individuals who wish to enter the bachelor's level certificate program may obtain an application form from any of the participating departments and should submit the completed form to Catharine Kopac, Department of Nursing.

Program Requirements

Bachelor's Level Certificate. The bachelor's level certificate program in gerontology consists of 24 semester hours of courses. Students receiving the certificate must hold a baccalaureate degree or be receiving a baccalaureate degree from the University at the time they receive the certificate. Students are required to have 8 hours of biology, anatomy, or physiology, and 3 hours of psychology or sociology.

The 24 semester hours are divided as follows:

1. A minimum of 12 semester hours selected from:
   NURS 480, NURS 570, PRLS 470, PSYC 415, SOCI 441, SOCW 483

2. Six semester hours in a practicum in gerontology:
   PSYC 548, 549 (Students have completed at least nine credits of core courses before enrolling in the practicum.)

3. Three hours of electives selected from:
   EDUC 525, HEAL 220, PUAD 502, PHED 530, PSY 325, SOC 390, any 499 Independent Study (Emphasis in Gerontology).

To qualify for the certificate, a student may present all courses applicable to the certificate in which satisfactory grades have been received and up to 6 hours in which D grades have been received. Undergraduates must have Graduate Course for Undergraduate Credit Forms signed in order to take 500-level courses.

Certificate Program for Psychology Technicians

Inquiries should be directed to Dr. Carol Erdwins (Department of Psychology).

http://catalog.gmu.edu
Purpose of Program

The psychology technician program provides the theoretical background and behavioral skills necessary for successful performance at the paraprofessional or introductory level in many human service settings and agencies. Completion of this program enhances the graduate's ability to perform in settings such as group homes, sheltered workshops, and activity centers for emotionally disturbed children and adults; training centers for mentally retarded persons; adolescent treatment programs; and residential facilities for juvenile offenders and the aged.

Program Content

This certificate program consists of 24 semester hours in psychology beyond the introductory-level course (PSYC 100, which is a prerequisite to all other courses). These hours include:

PSYC 220, 325, 326, 322

One of the following:
PSYC 211, 313, 314, 397

One of the following:
PSYC 320, 414, 420, 423 and PSYC 421, 422

Note: Some courses are prerequisites to others and need to be taken in sequence. Specifically, PSYC 220 is a prerequisite to PSYC 322, 325, and 423; PSYC 325 is a prerequisite to PSYC 326, 414, and 420; and both PSYC 325 and 326 must be completed before beginning the practicum (PSYC 421, 422). This practicum is ordinarily taken during the student’s senior year; it offers the student an opportunity to gain work experience under supervision in a variety of human service agencies. The work placement is for approximately 8 to 10 hours per week with a minimum of 240 hours during the two semesters.

Program Requirements

The psychology technician program is open to persons who are majoring in or have previously completed a B.A. or B.S. degree in psychology, sociology, or social work. Application to the program may be made at any time during the academic year after the student’s completion of PSYC 325 and 326 and preferably prior to beginning the two-semester practicum (PSYC 421, 422). Students ready to begin the practicum should contact Dr. Erdwins prior to registration so that their names may be included for evaluation by a clinical review committee. Admission to the practicum is based upon the student’s demonstration of sound interpersonal skills as well as successful completion of prior course work.

Completion of the Program

The psychology technician certificate is awarded upon completion of the 24 semester hours listed above with no more than two unsatisfactory grades (D) and a minimum grade of B in each semester of the practicum. The Certificate is awarded after completion of and in conjunction with the baccalaureate degree unless the student has previously completed this degree with a major in one of the three specified disciplines.

Course Work

Descriptions of all courses applicable to this program, as indicated in the above requirements, are listed (in alphanumerical order) in the Course Dictionary.

Certificate Program in Cartography

The certificate program in cartography provides specialized training and skills to students who need to apply methods of spatial data collection, analysis, and display in their major field of study. The program is open to students from all disciplines, but it should be particularly useful to those in the natural and social sciences who need to employ the techniques of cartographic communication and cartometric analysis.

Inquiries should be directed to Dr. Mark Lindberg (Department of Public Affairs).

Program Requirements

The certificate program in cartography consists of 24 semester hours of courses. Students receiving the certificate must hold a baccalaureate degree or be receiving a baccalaureate degree from George Mason University at the time they receive the certificate. Only those courses with grades of C or better will be counted towards the certificate program. No more than 12 hours may be completed at the 100 level. At least 12 hours must be completed at the 300–400 level. A maximum of six hours may be transferred from another institution, with the approval of the Certificate Program Adviser.

The 24 hours required in the certificate program must include the following 15 hours of courses:
Certificate Program in Environmental Management

The certificate program in environmental management is designed primarily for students who want to learn more about the problems and techniques of environmental management, who may be seeking employment in the field and who wish to add an applied or administrative component to their training.

Inquiries should be directed to Dr. Robert Hayden (Department of Public Affairs).

Program Requirements

The certificate program in environmental management consists of 24 semester hours of courses. Students receiving the certificate must hold a baccalaureate degree or be receiving a baccalaureate degree in one of those disciplines from the University at the time they receive the certificate. Students are required to complete a two-semester laboratory science sequence in biology, chemistry, or geology. Only those courses with a grade of C or better will be counted toward the certificate program.

The 24 semester hours required in the certificate program consist of the following: (No more than 12 hours may be completed at the 100 level. At least 12 semester hours must be completed at the 300–400 level.)

1. Fifteen semester hours of required courses in the Management Core: GEOG 303; *GECA 503, PUAD 241, 357 and ENGL 310

2. At least nine hours of elective courses approved by the Certificate Program Adviser. Students must elect at least six hours from Group A and at least three hours from Group B.

A. Environmental Management Electives (at least six hours): BIOL 230, 307, 449, CHEM 106, GEOG 102, 309, GEOL 204, 205, 301, 302, GOVT 358, 401, PHYS 201

B. Environmental Tool Electives (at least three hours): CS 261, 262, GEOG 411, 412, MATH 250

Certificate Program in Real Estate and Urban Development

The certificate programs in Real Estate and Urban Development provide an opportunity for students to enrich their understanding of the areas of study associated with the fields of urban planning, land development, and real estate brokerage, law, finance, appraisal, investment, and management. The master's-level program is described in the graduate catalog.

The bachelor’s-level certificate program consists of 24 semester hours of courses. It is primarily for students who already have a baccalaureate degree and those who are enrolled in a baccalaureate degree program at the University. It is for students who plan to make a career in real estate, but want additional recognition for their academic pursuits.

Individuals who wish to enter the bachelor’s-level certificate program may obtain an application from the Finance Department of the School of Business Administration. Either a junior- or senior-level degree student or a Continuing Education student may apply.

Foundation Courses

Students must have credit for these courses, or their equivalents, before taking the five required courses, except for REUD 301, which can be taken concurrently.

ACCT 201 Financial Accounting
ECO 103 Contemporary Economic Principles and Issues I
DESC 201 Introductory Statistics with Business Applications

Required Courses

REUD 301 Principles of Real Estate
REUD 304 Real Estate Law (same as BULE 304)
REUD 415 Real Estate Finance
REUD 416 Real Estate Appraisal
REUD 418 Real Estate Brokerage

*Undergraduates must have Graduate Course for Undergraduate Credit Form signed in order to take 500–level courses.
After Completing the five required courses, a student can select either the 'Development Option' or the 'Finance Option.'

**Development Option**

REUD 419 Real Estate Investment  
REUD 583 Residential Property Development and Management  
REUD 584 Commercial Property Development and Management

**Finance Option***

REUD 417 Real Property Asset Management  
FNAN 311 Principles of Investment  
FNAN 321 Financial Institutions

Only those courses with grades of C or better will be counted toward a certificate. Up to six hours of courses may be transferred from another institution as substitutes for the required or elective courses.

*Students selecting the Finance Option will be required to have credit for the following courses, or their equivalents, before completing any courses in the Finance Option:  
ACCT 202 Managerial Accounting  
DESC 202 Applied Statistical Analysis  
ECON 104 Contemporary Economic Principles and Issues II  
FNAN 301 Financial Management

University Courses are special academic offerings which are interdisciplinary, in-depth presentations of broad interest. Proposals for University Courses are developed by faculty, usually by several acting together. After review and approval by the University Faculty Standing Committee on Curriculum Matters, these courses are administered by the office of the Vice President for Academic Affairs. Unless specific prerequisites are indicated, the courses are open to all students.

University Courses, as shown below, are designated UNIV. Descriptions appear in the Course Dictionary. Recent offerings have included:

- **UNIV 407**: Introduction to Irish Studies (3). Offered Fall 1984.
- **UNIV 410**: Assassination and Terrorism as Political Weapons (3). Offered Fall 1980.
- **UNIV 411**: Electronic Communication (Television) and the Representation of Reality (3). Offered Fall 1980.
- **UNIV 412**: Family Law (3). Offered Fall 1980.
- **UNIV 413**: Life in the Universe (3). Offered Fall 1980.
- **UNIV 414**: Feminist Perspectives on Sexual Liberation (3). Offered Spring 1981.
- **UNIV 416**: Intelligence in the Universe (3). Offered Fall 1981.
- **UNIV 417**: Energy Alternatives for the Eighties (3). Offered Fall 1981.
- **UNIV 418**: Corporate–Government Relations in the International Environment (3). Offered Fall 1981.
- **UNIV 420**: Nuclear War (3). Offered Spring 1982 and Fall 1984.
- **UNIV 421**: Archaeoastronomy (3). Offered Spring 1982.
- **UNIV 423**: Consciousness and Modern Physics (3). Offered Fall 1982.
- **UNIV 424**: South Africa: Crisis and Conflict (3). Offered Fall 1983.
- **UNIV 425**: Utopias and Utopian Thought in the Western World (3). Offered Spring 1984.

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Committee on University Curriculum Matters

Richard F. Baum, Barry K. Beyer, Jeffrey T. Chamberlain, Michael G. Emsley, John M. Smith (Chair)

On January 26, 1977, the Faculty Senate of the University voted to establish a new category of courses, University Courses. These were first offered during the Spring semester, 1978.
UNIV 426: Human Allegiances and Modernization (3). Offered Spring 1983.
UNIV 428: Understanding the Brain (3). Offered Fall, 1983.
UNIV 430: Where Have the Heroes Gone? (3)
Course Dictionary
Glossary

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<thead>
<tr>
<th>Course Dictionary</th>
</tr>
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<tbody>
<tr>
<td>Accounting</td>
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<td>American Studies</td>
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<td>Anthropology</td>
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<td>Art History</td>
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<td>Art Studio</td>
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<td>Astronomy</td>
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<tr>
<td>Bachelor of Individualized Study</td>
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<td>Biology</td>
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<td>Business Legal Studies</td>
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<td>Cartography</td>
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Course Numbering and Abbreviations

General

1. Course titles are followed by numbers in parentheses (0:0:0), separated by colons. The numbers have the following significance:
   - First number: semester credit hours for the course
   - Second number: hours of lecture/seminar per week for the course
   - Third number: hours of laboratory/studio per week for the course

2. For independent study, reading, topics, or similar courses, individual instructors set hours.

3. The following abbreviations are used in the course dictionary:
   - coreq – corequisite(s)
   - cr – credit(s)
   - equiv – equivalent(s)
   - grad – graduate(s)
   - grad stdg – graduate standing
   - hr – hour(s)
   - incl – including/include(s)
   - intro – introduction/introductory
   - lab – laboratory(ies)
   - nat – natural
   - non-W – non-Western
   - PoC – Permission of chair
   - PoD – Permission of department
   - Pol – Permission of instructor
   - prereq – prerequisite(s)
   - rec – recommend(ed)/recommendation(s)
   - regis – registration/register
   - req – require(d)/require(s)/requirement(s)/require(s)
   - sci – science(s)
   - sem – semester(s)
   - undergrad – undergraduate(s)
   - 24 hr – sophomore standing
   - 54 hr – junior standing
   - 84 hr – senior standing

Undergraduate

1. Courses numbered 499 and below are undergraduate courses. Course numbers in the 100 series are customarily taken by freshmen, the 200 series by sophomores, the 300 series by juniors, and the 400 series by seniors.

2. The number designations of the course descriptions below have the following significance:
   a. A single number (as HIST 301) indicates that the course is complete within a single semester, and that the semester course may be taken separately with credit toward a degree.
   b. A double number separated by a hyphen (as BIOL 124–125) indicates that the course extends through two semesters, that both semesters must be completed before the course may count toward a degree, and that the first semester is prereq to the second semester. Students may not take the second semester of a hyphenated course unless they have received either transfer credit for the equiv of the first semester or advanced placement from the department concerned.
   c. A double number separated by a comma indicates that the subject matter or content of the course extends through two semesters but that either semester may be taken by itself. Unless otherwise specified, the first semester is not prereq to the second semester.

3. Advanced undergraduate students who have secured the permission of the department offering the course may select from courses numbered 500–599 to accumulate the hours necessary for the completion of an undergraduate degree; and with the written permission of the dean of the grad school, they may take these courses for reserve grad credit.
Accounting Courses (ACCT)

School of Business Administration

If a student takes noncore, upper-level Business Administration courses prior to acceptance to junior standing, those courses will not count on an undergraduate degree application for any major in the School (except as general elective credit).


351 Federal Taxation (3:3:0). Prereq ACCT 202. Introduction to federal income taxation of individuals. Examination of tax laws and procedures through the use of illustrative examples and problems.


431 Advanced Financial Accounting (3:3:0). Prereq ACCT 332. Preparation of consolidated financial statements, partnership accounting, international accounting, and other financial accounting topics. (Not available to those with credit for ACCT 333.)

451 Advanced Federal Taxation (3:3:0). Prereq ACCT 351. Federal taxation of corporations, partnerships, fiduciaries, and gratuitous transfers. (Not available to those with credit for ACCT 352.)

461 Auditing (3:3:0). Prereq ACCT 331 and DESC 202. An introduction to the public accounting profession with emphasis on the attest function and auditor’s report. Includes an examination of auditing standards and procedures, the impact of internal controls, professional ethics and responsibilities, and an introduction to statistical auditing and the audit of computerized accounting systems.


491 Accounting Seminar (3:3:0). Prereq 84 hr and ACCT

332. Discussion of selected current topics in the theory and practice of accounting and auditing.

499 Independent Study (1-3:0:0). Prereq 9 hrs in upper-level ACCT courses. Research and analysis of selected problems or topics in Accounting. Must be arranged with an instructor and student must receive written approval of chair before registration. Written report required. May be repeated to a maximum of six hrs if topics vary.

American Studies Courses (AMST)

American Studies

201, 202 Studies in Popular Culture (3:3:0). (3:3:0). Aspects of popular culture and its significance in contemporary society. Topics include the social and intellectual background of American culture, themes and techniques of major forms of communication, and the conventions of such media as television, film, comics, advertising and westerns. May be repeated for cr with PoC.

302 Introduction to American Studies (3:3:0). Prereq 45 hr. Seminars are limited to 20; pref to AMST majors. Intro to interdisciplinary methods and to the interdisciplinary concentrations offered by the American Studies Program.

310 Places and American Culture (3:3:0). Prereq 45 hr. The course will examine the relationship between the natural landscape and American culture. Particular subtitles will be announced and the courses may be repeated when the subtitle is different. Seminars are limited to 15.

320 Peoples and American Culture (3:3:0). Prereq 45 hr. The course will examine the relationship between the various peoples of the American continent and American culture. Particular subtitles will be announced and the course may be repeated when the subtitle is different. Seminars are limited to 15.

330 Eras and American Culture (3:3:0). Prereq 45 hr. The course will examine the relationship between specific historical eras and American culture. Particular subtitles will be announced and the course may be repeated when the subtitle is different. Seminars are limited to 15.

340 Institutions and American Culture (3:3:0). Prereq 45 hr. The course will examine the relationship between American institutions and American culture. Particular subtitles will be announced and the course may be repeated when the subtitle is different. Seminars are limited to 15.

401 Themes in American Civilization (3:3:0). Prereq 54 hr. Seminars are limited to 15; pref to AMST majors. Intensive study of a significant theme, motif or idea in American culture. Subject determined by instructor.

402 Readings in American Studies (3:3:0). Prereq 54 hr. Seminars are limited to 15; pref given to AMST majors. Advanced application of AMST methods to primary documents and artifacts of American culture. Subject determined by instructor.

403 American Studies Independent Study (1–6:0:0). Prereq 54 hr, PoC and Pol. Intensive study of a period, problem, or project related to American culture proposed by an individual student to be conducted in close consultation with an AMST faculty member.

410 Senior Seminar in American Studies (3:3:0). Prereq AMST majors with 90 hrs. Senior majors in the program will complete significant projects in the interdisciplinary concentration they have chosen. Seminars are limited to 15.

490 Internship (2–6:0:0). Prereq 54 hr and PoC. Internships are non-paying, work–study positions established by the AMST Program with employers involved in interdisciplinary AMST issues. Qualified students are placed with area schools, interest groups, agencies, museums, parks, or corporations. Placement depends upon availability of positions.

502 Problems in American Culture (3:3:0). Prereq grad stdg. Interdisciplinary study of a particular aspect of American...
culture. Limited to 15 students. Specific content varies and is announced before regis. May be repeated with PoC. Past offerings were: A) The Hudson River, B) Early American Culture, C) The American Imagination and World War I, D) The Enlightenment.

Anthropology Courses (ANTH)

Sociology
114 Introduction to Cultural Anthropology (3:3:0). Intro to the branch of anthropology that describes people living in societies today, and that seeks to explain human behavior and various aspects of primarily non-W culture and society. For non-W cr.

120 Introduction to Archaeology (3:3:0). Intro to survey of anthropological archaeology. Development and use of contemporary theory and field and lab methods.

135 Human Evolution and Prehistory (3:3:0). Exploration of human origins and nature; of primate social groups and behavior; of fossil evidence for human evolution and for the evolution of culture and human society; of natural and sexual selection; race and intelligence, aggression and other topics.

201 Native North Americans (3:3:0). Prereq ANTH 114 or Pol. Exploration of contemporary native North American cultures and of selected aspects of Indian–White historical relations. Emphasis on cultural persistence as well as change. For non-W cr.

202 Indigenous Populations of Mesoamerica (3:3:0). Prereq ANTH 114 or Pol. Examination of contemporary Mesoamerican cultures and of selected aspects of historical record.

204 Peoples of the Pacific (3:3:0). Prereq ANTH 114 or Pol. Survey of 20th-century Melanesian, Polynesian and Micronesian cultures. Case studies of interplay between contemporary cultural systems and island ecology. For non-W cr.

206 Peoples and Cultures of Island Asia (3:3:0). Prereq ANTH 114 or Pol. Examination of contemporary cultures of the Island Asia culture region; focus on native cultures of Indonesia, Borneo and the Philippines. For non-W cr.

207 Ethnology of the Middle East (3:3:0). Prereq ANTH 114 or Pol. Examination of contemporary cultures in the Middle East and North Africa; focus on articulation of societies in the interplay of ecological and historical factors. For non-W cr.

208 Ethnology of Sub-Saharan Africa (3:3:0). Prereq ANTH 114 or Pol. Examination of contemporary cultures in sub-Saharan Africa. Several traditional societies are studied in depth, with attention to their emerging roles in modern African nation-states. For non-W cr.

210 Peoples and Cultures of Selected Regions (3:3:0). Prereq ANTH 114 or Pol. Examination of contemporary cultures of a specific region, e.g., India, South America.

211 Peoples and Cultures of Mainland Southeast Asia (3:3:0). Prereq ANTH 114 or Pol. Survey of societies of mainland Southeast Asia, with emphasis on successive waves of outside cultural influences and relations between contrasting ethnic groups in modern states. Focus on Thailand and Malaysia. For non-W cr.

220 Field School in Archaeology (3-6:0). Prereq ANTH 120 or Pol. Intensive 4–6 week summer term on-site intro to archaeological field methods. Lectures on method and theory in archaeology, on local culture history and on specific research methods accompany field and lab work. The entire time is spent at one site; location may change each summer.

299 Independent Study (1–3:0:0). Prereq ANTH 114 or Pol. Individual study in anthropology on topic organized in advance by student and instructor.

300 Civilizations (3:3:0). Prereq 54 hr, ANTH 114, or Pol. Cross-cultural and trans-temporal examination of complex societies and civilizations. Exploration of developmental schema for rise, articulation, spread and decline of historic and contemporary civilizations.

305 Hunter–Gatherer Societies (3:3:0). Prereq 54 hr, ANTH 114, or Pol. Examination of early human societies with emphasis on environmental, technological and cultural aspects of hunting and gathering as a successful prehistoric and contemporary means of adaptation.

310 Social Organization and Kinship (3:3:0). Prereq 54 hr, ANTH 114, or Pol. Examination of social organization, kinship, descent and kinship terminologies in mainly non-W cultures, emphasizing both the meaning of specific cultural systems and cross-cultural similarities and differences.

312 Comparative Political Systems (3:3:0). Prereq 54 hr, ANTH 114, or Pol. Examination of cultural and ecological contexts of political structures and competition for power in selected societies; a cross-cultural and comparative approach to study of political conflict, leadership, values and symbolism.

313 Anthropological Perspectives on Religion (3:3:0). Prereq 54 hr, ANTH 114, or Pol. Examination of religion as a cultural system. Topics include mythology, ritual, symbolism and dogma. Cross cultural and predomimnately non-W material are emphasized. For non-W cr.

315 Socialization Processes (3:3:0). Prereq 54 hr, ANTH 114 or Pol. Examination of selected aspects of the cultural transmission process in specific local cultures, selected from various world culture regions, with emphasis on transmission of cultures.

320 Laboratory Techniques in Archaeology (4:3:2). Prereq ANTH 120, 54 hr or Pol. Study of research techniques by directed group projects in analysis of materials such as ceramics, glass and lithics through discussions, demonstrations and participation.

322 Historical Archaeology (3:3:0). Prereq ANTH 120, 54 hr or Pol. Examination of materials, theories and methods of archaeology derived from and applied to historical sites, as they complement archival records.

332 Cultures in Comparative Perspective (3:3:0). Prereq ANTH 114 or Pol. Historical and comparative examination of various theoretical orientations in cultural anthropology and analysis of contrasting explanations of cultural data. Several cultures are studied in depth. For non-W cr and cr for the sociology and international studies majors.

360 Biological Aspects of Human Sociality (3:3:0). Prereq ANTH 135, 54 hr or Pol. Inquiry into the biological dimensions of human social systems as culture-bearing animals. Topics include altruism, aggression, primate social organization, morphology, comparative ethology and microevolutionary genetic differentiation.

370 Ecological Anthropology (3:3:0). Prereq 54 hr, ANTH 114 or Pol. Examination of relationships between environment, culture and human behavior with an emphasis on cultural ecological explanations in mainly non-W contexts.

371 Psychological Anthropology (3:3:0). Prereq 54 hr, ANTH 114 or Pol. Study of issues of relationships between cultural and psychological variables. Major topics viewed cross-culturally in personality, mental illness, projective systems, cognition and learning.

375 Ethnohistory (3:3:0). Prereq 54 hr, ANTH 114 or Pol. Use of ethnographic, archaeological, linguistic and documentary data, in light of anthropological theory, to interpret the past and processes of change among indigenous peoples throughout the world.

380 Anthropological Linguistics (3:3:0). Prereq ANTH 114, 54 hr or Pol. Anthropological analyses of language behavior, origins and change, emphasizing interplay between language and culture and anthropology and linguistics.

381 Medical Anthropology (3:3:0). Prereq ANTH 114, 54 hr
or Pol. Survey of the discipline of medical anthropology with focus on traditional medical beliefs and on the diverse responses to modern scientific medicine both in developing countries and among cultural minorities in the U.S.

399 Issues in Anthropology (3:3:0). Prereq 54 hr, ANTH 114, or Pol. A topic of contemporary interest in anthropology, changing from sem to sem, and focusing on topics such as sex roles, anthropology and ethics, and primate social organization. Repeatable for cr.

420 Interpretation in Archaeology (3:3:0). Prereq 6 hr of anthropology incl ANTH 120 or Pol. Exploration of theoretical and methodological issues encountered in archaeology. Patterns and contexts of archaeological remains, analytic problems, and interpretation of material culture will be considered.

425 Public Archaeology (3:3:0). Prereq ANTH 114, 54 hr or Pol. Consideration of the public significance of archaeology, and anthropological contributions to public concerns such as antiquities legislation and cultural resource management.

440 Applied Anthropology (3:3:0). Prereq ANTH 114, 54 hr or Pol. Focus on anthropologist's contributions to major policy issues in development agencies in the U.S. and abroad. Attention to techniques that lead to prevention or management of social and cultural conflict.

450 Qualitative Methods in Sociocultural Research (3:3:0). Prereq 54 hr and 6 hr of anthropology incl ANTH 114 or Pol. Exploration of some of the most useful nonquantitative research techniques used in social sciences and practice in their application.

490 Classics in Anthropology (3:3:0). Prereq 9 hr of anthropology incl ANTH 332 and 54 hr or Pol. Examination of some of the most important works in anthropological theory and explanation. Explores merits of works recognized as classics and assesses their impact on the field. Req for anthropology majors and usually taken as a senior-junior seminar.

499 Independent Research (1-3:0:0). Prereq 54 hr or 9 hr of anthropology or Pol. Individual research on a topic to be organized in advance by student and instructor.

Arabic Courses (ARAB)

Foreign Languages & Literatures

Arabic 101 Introduction to The Arabic Language (3). Prereq none. Not part of a sequence that fulfills the foreign language requirement. Intro to Modern Standard Arabic, with emphasis on the written language. Lab work required.

Arabic 102 Introduction to The Arabic Language (3). Prereq Arabic 101 or PoD. Continuation of Arabic 101. Lab work required.

Art History Courses (ARTH)

Art

101 Art Appreciation (3:3:0). Intro to principles of aesthetics in art through a study of painting, sculpture and architecture; chronological (prehistoric times to the present) or ideational approach varying with the instructor.

102 Symbols and Stories in Western Art (3:3:0). Classical and Christian themes and imagery in Western art from early Greece to the modern era.


112 History of Urban Design in Early Modern Europe (3:3:0). Development of city planning from Middle Ages to the Renaissance, the scenographic effects of the Baroque city, and the rise of the new industrial city in the 18th century.
cultural context from its inception in the 17th century through the 20th century.

392 Exhibition Projects (3:3:0). Prereq 6 hr in ARTS or 3 hr in ARTH or Pol. Planning, promotion and production of visual art presentations and related events on the GMU Campus. Exhibitions are produced by students who alternatively serve in all operational capacities from proposal research and budget planning to the graphic design of announcements and the installation of exhibitions.

393 Art Apprenticeships (3-6:0:0). Prereq art major with Pol. Seminar followed by an apprenticeship or internship project with a professional individual or organization in the field of visual arts in the D.C. area. An apprenticeship may provide an introductory work experience in the professional area in which the student is considering a career.

399 Special Topics in the History of Art (3:3:0). Topics vary and incl women in art, art patronage, art criticism and others.

400 Methods of Research in Art History (3:3:0). Prereq two courses in ARTH at the 300 level or Pol. Investigation of different approaches involved in art historical research.

420 Greek Sculpture (3:3:0). Prereq ARTH 321 or 322. Advanced study and research into the development of freestanding and architectural sculpture in Ancient Greece; works in bronze, stone and terra cotta.

440 Advanced Studies in Renaissance and Baroque Art (3:3:0). Prereq 300-level course in Renaissance or Baroque Art or Pol. Study in a particular aspect of Renaissance or Baroque Art. Topics may be monographic, such as a study of Michelangelo or Rembrandt; thematic, such as a study of art theory or narrative art of a particular time; concentrated on the art of a smaller time period—e.g., 1500–1525—or a particular area, such as Venetian art. May be repeated for cr.


490, 491 Independent Study in Art History (3:0:0), (3:0:0). Prereq 54 hr, Pol, permission of art faculty and PolC, plus 9 hr in ARTH beyond ARTH 201, 201. Intensive study of a particular artist, period, or theoretical problem to be conducted by an individual student in consultation with instructor. Study proposal submitted prior to regis.

592 Exhibition Projects (3:3:0). Prereq B.A. or equiv or Pol. Planning, promotion and production of visual art presentations and related events on the GMU campus. Exhibitions are produced by students who alternatively serve in all operational capacities from proposal research and budget planning to the graphic design of announcements and the installation of exhibitions.

593 Art Apprenticeships (3-6:0:0). Prereq B.A. or equiv or Pol. Seminar followed by an apprenticeship or internship project with a professional individual or organization in the field of visual arts in the D.C. area. An apprenticeship may provide an introductory work experience in the professional area in which the student is considering a career.

596 Independent Study (3:3:0). Prereq B.A. or equiv or Pol. Independent reading and research on a specific project under the direction of a department member. A written report is required. May be repeated for cr.

599 Special Topics in the History of Art (3:3:0). Prereq B.A. or equiv or Pol. Topics vary and incl women in art, art patronage, art criticism and others.

Art Studio Courses (ARTS)

Art

102 (101, 102) Visual Thinking (3:0:6). A studio primer including an investigation into drawing, sequential design, printmaking, and film–making imagery.
design of announcements and the installation of exhibitions.

393 Art Apprenticeships (3:6:0:0). Prereq Art major with Pol. Introductory seminar followed by an apprenticeship or internship project with a professional individual or organization in the field of visual arts in the D.C. area. An apprenticeship may provide an introductory work experience in the professional area in which the student is considering a career.

411, 412 Advanced Design (3:0:6) (3:0:6). Prereq ARTS 203 and 312. Continuation of Design I ideas and specialization in two-dimensional or three-dimensional design theories and practices.

422, 423, 431 Drawing III, IV, 303 (3:0:6) (3:0:6). Prereq ARTS 322 or 323, or Pol. Advanced drawing skills and techniques with an emphasis upon individual exploration in a variety of media.

343, 343 Painting III, IV, 303 (3:0:6) (3:0:6). Prereq ARTS 332 or 333 or Pol. A more advanced painting course intended to develop individual control and direction of various media while exploring contemporary issues in painting.

442, 443 (340) Intaglio III (3:0:6). Prereq ARTS 342 or 343 or Pol. The process and history of basic intaglio methods of intaglio will be practiced and studied: monotype, metal and plastic engraving, etching, aquatint, embossing, soft and lift ground techniques, and an introduction to color intaglio printing. Fall semesters only.

443 (341) Printing IV: Color (3:0:6). Prereq ARTS 343, 344, or 442. The process and history of color printmaking in the silkscreen, relief, and/or intaglio methods will be practiced and studied. The expressive and formal use of color will be explored via various printmaking processes and developed in a serial format. Spring semesters only.

452, 453 (352, 353) Black and White Photography I, II (3:0:6) (3:0:6). Prereq ARTS 350 or Pol. Photography taught both as technical craft and as a way of seeing. Includes camera and darkroom operations and ideas relating to the photographic image.

462, 463, 361 (360) Sculpture III, IV, (3:0:6) (3:0:6). Prereq ARTS 362 or 363 or Pol. A studio course intended to develop individual ideas and solutions by promoting more advanced thinking toward sculpture. Applying original concepts to problem-solving and exploring different ways to produce sculptural form will be stressed. Emphasis is on strengthening basic technical skills and introducing new skills.


499 Special Topics in Studio Art (3:0:6). Prereq 24 hrs. and Pol. Topics of special interest in the studio arts. Content varies. May be repeated with permission of the department.

532, 533, 430, 431 Painting V, VI (3:0:6) (3:0:6). Prereq ARTS 432 or 433 or Pol. Painting on the advanced level. Emphasis on individual decision making and personal initiative.

562, 563, 460, 461 Sculpture V, VI (3:0:6) (3:0:6). Prereq ARTS 462 or 463 or Pol. A studio course involving advanced thinking about sculptural design, materials, and processes. Prior experience in sculpture is necessary as considerable emphasis is placed upon individual decision making and personal initiative.

592 Exhibition Projects (3:0:0). Prereq Undergrad degree in Art or equiv. or Pol. Planning, promotion, and production of visual art presentations and related events on the GMU campus. Exhibitions are produced by students who alternatively serve in all operational capacities from proposal research and budget planning to the graphic design of announcements and the installation of exhibitions.

593 Art Apprenticeships (3:6:0:0). Prereq Undergrad degree in Art or equiv. or Pol. Introductory seminar followed by an apprenticeship or internship project with a professional individual or organization in the field of visual arts in the D.C. area. An apprenticeship may provide an introductory work experience in the professional area in which the student is considering a career.

596 Independent Study (3:3:0). Prereq Undergrad degree in Art or equiv. or Pol. Independent reading and creative work on a specific project under the direction of a department member. A written report is required. May be repeated for credit.

Astronomy Courses (ASTR)

Physics

103 Astronomy (3:3:0). Intro to origin of life, earth, planets and sun, stars, galaxies, quasars, and nature of space radiation; incl general theory of relativity. Not for physics majors.

105, 106 Introduction to Modern Astronomy (4:3:2), (4:3:2). Lab course in astronomy for nonscience majors. Topics incl astronomical instruments, coordinates and time, celestial mechanics, astrophotography, planets, satellites, comets and meteorites, the sun, magnitudes and distances of the stars, and other topics. Can be used to fulfill the 8 hr lab req; not for physics majors.

328 Introduction to Astrophysics (3:3:0). Prereq PHYS 342 or 351, and MATH 113 or 115. Topics incl physical concepts, magnitudes of stars, Hertzsprung–Russell diagram, stellar radiation, interstellar matter, dust, and molecules and other topics.

428 Relativity and Cosmology (3:3:0). Prereq MATH 304 or 306, and PHYS 303, 305, and 352, or Pol. Special relativity, 4-dimensional space–time, general relativity, non–Euclidean geometries, geodesics, and field equations, tests of general theory of relativity, black holes, cosmology, models of the universe, remnant blackbody radiation, big bang cosmology, thermodynamics and the universe.

505 Fundamentals of Astronomy (3:3:0). Prereq grad stdg or Pol. Emphasis on the connection of astronomy to other disciplines as well as the recent developments in astronomy. Planet earth, its origin and past history and the origin of life. Ancient, Renaissance, and modern astronomers. Basic physics. Tools of the astronomer. The solar system, the sun, stars, our galaxy, quasars, general relativity and cosmology. Rec for teachers of general science.

Bachelor of Individualized Study Course (BIS)

Division of Continuing Education

490 Bachelor of Individualized Study Project (3:0:0). Final course in the B.I.S. degree program. Open only to students in the Bachelor of Individualized Study Program. Completion of an approved project in the student’s area of concentration, to be evaluated by a three-member faculty committee. Credit earned for the project may not be part of the 12 hours of upper-division work required in the core. Individualized sections by arrangement.

Biology Courses (BIOL)

Biology

103 Contemporary Biology I (4:3:3). For nonscience majors. Emphasizes human evolution and homeostatic mechanisms. Students who have taken BIOL 113–114 or BIOL 124–125 are not eligible to take this course. Fall, Summer Term A.

104 Contemporary Biology II (4:3:3). Prereq BIOL 103.

http://catalog.gmu.edu
**113 Biological Science (4:3:3). For science majors and preprofessionals in the life sciences.** Topics include the chemical and cellular basis of life, genetics and taxonomy. Students who have previously passed BIOL 103 or 104, should consult the dept undergrad coordinator before enrolling. Fall, Summer Term A.

**114 Biological Science (4:3:3). Prereq BIOL 113.** Topics include the structure and function of plants and animals, ecology and evolution. Spring, Summer Term D.

**124-125 Human Anatomy and Physiology (4:3:3). Intro to structure and function of major organ systems of the body.** Open first to nurs and phy ed maj. Must be taken in sequence. Does not satisfy the nat sci req in the College of Arts and Sciences. Not available for biol major cr. Fall, Spring, Summer.

**151 An Introduction to Biology (4:3:3). Basic biological concepts and their applications.** Lab stresses common species. Open only to elem ed. maj. Spring.

**211 Heredity and Society (3:3:0). Basic principles of heredity, incl elementary probability, nature of the gene, mutations and mutant genes in populations.** Emphasis on human hereditary diseases, genetic counseling, and application of genetics to improving the quality of life. Not available for biology major cr.

**225 Human Reproduction and Sexuality (3:3:0). Examination of the anatomy and physiology of human reproductive systems; sexuality of sexual intercourse; normal pregnancy; birth; congenital conditions; sex determination and its expression; diseases of the reproductive organs; technical developments related to reproduction.** Not available for biology major cr. Fall.

**230 Man and the Biology of the Sea (3:3:0).** Intro to organisms of oceans and bays and their physical and chemical environment. Emphasis on fisheries and effects of pollution. Not available for biology major cr.

**261 (185) Introductory Microbiology (4:3:3). Prereq BIOL 124-125 or BIOL 103-104 or BIOL 113-114 or Pol.** Intro to bacteria, molds, and viruses with emphasis on disease-causing organisms. Lab incl sterile technique and culture methods for microorganisms. Students who have taken BIOL 301, 302, or 361 may not enroll. Open first to health ed and nurs majors. Not available for biol major cr.

**274 Human Structure and Function (6:5:3). Prereq 8 hrs of biology and one sem of chemistry or Pol. Microscopic and gross structure of the organ systems of the body and their integrated functions.** Open first to nurs majors. Not available for biology major cr or to students who have taken BIOL 124-125.

**301 Cell Biology (4:3:3). Prereq BIOL 113-114; CHEM 211-212; MATH 110 or 113.** Cellular structure and function. Topics incl fine structure, chemistry, metabolism and regulatory mechanisms. Fall, Spring.

**302 Biology of Microorganisms (4:3:3). Prereq BIOL 113-114, CHEM 211-212, or Pol.** The morphology, physiology, and ecology of selected groups of bacteria, fungi, protozoa, and viruses. Applied topics, including host-parasite interactions, are stressed. #MANot available to students who have taken BIOL 261 or 361. Spring.

**307 Ecology (4:3:3). Prereq BIOL 113-114; 24 hr; or Pol.** Physical environment, energy flow, structure and function of populations, the dynamics of communities, and succession. Fall, Spring.

**309 Introduction to Oceanography (3:3:0) (Same as GEOL 309). Prereq GEOL 101 or 111 and BIOL 103 or 113, or Pol.** Intro to chemical, biological, and geological aspects of the oceanic environment. Fall.

**311 General Genetics (4:3:3). Prereq BIOL 301 or Pol.** Basic principles of heredity and the modern developments in the field.

**312 Biostatistics (4:3:3). Prereq BIOL 113-114 or Pol. Use of probability and descriptive and inferential statistical techniques in the interpretation of biological data.** Fall.

**320 Comparative Chordate Anatomy (4:2:6). Prereq BIOL 113-114 or Pol.** Comparison of anatomy and morphology of major chordate groups. Lab emphasizes shark, mudpuppy, cat, and rabbit. Fall of even-numbered yrs.

**322 Patterns of Animal Development (4:3:3). Prereq 8 hr of BIOL and 54 hr or Pol. Concepts of vertebrate organization, reproduction, embryogenesis and organ system development.** Spring.

**324 Introductory Animal Behavior (4:3:3). Prereq BIOL 113-114 or Pol. Study of the mechanisms, functions, and evolution of behavior.** Fall.

**326 Animal Physiology (4:3:3). Prereq BIOL 113-114 and CHEM 211-212.** General consideration of invertebrate and vertebrate function, emphasizing common life problems and variety of methods for solving them. Topics incl electrolyte balance, excretion, respiration, metabolism, thermoregulation, neuroendocrine control and physiological rhythms. Fall, Spring.

**331 Invertebrate Zoology (4:3:3). Prereq 8 hr in 100-level BIOL or Pol. Survey of the invertebrate phyla, excl insects, to show the morphology, phylogeny, and general biology of these groups.** Fall.

**332 Insect Biology (4:3:3). Prereq 8 hr in 100-level BIOL or Pol. Survey of insects incl taxonomy, morphology, physiology, behavior, ecology, and economic importance.** Summer Term A.

**333 Vertebrate Zoology (4:2:6). Prereq 8 hr in 100-level BIOL or Pol.** Phylogeny and systems of major vertebrate groups. Emphasis on ecological adaptation. Lab incl field studies of local fauna. Spring.

**342 Plant Morphology (4:3:3). Prereq 8 hr in 100-level BIOL or Pol.** Origin and development of organs, tissue systems and life cycles of green plants, with phylogenetic comparisons from algae to angiosperms. Spring.

**343 Mycology (4:3:3). Prereq BIOL 301 or Pol. Intro to biology of the fungi incl morphology, taxonomy, growth and development, physiology, reproduction and ecology.** Lab emphasizes representative organisms and isolation and culturing techniques.

**344 Taxonomy of Flowering Plants (4:3:3). Prereq 8 hr in 100-level BIOL or Pol.** Study of terminology and identification of flowering plants with emphasis on local flora. Spring.

**345 Plant Communities (4:3:3). Prereq 8 hr in 100-level BIOL or Pol.** Plant associations and formations and their successions in North America. Three Sat field trips req. Fall.

**371 Animal Distributions (3:3:0). Prereq 8 hr in 100-level BIOL or Pol.** Relations of the North and South American faunas with other regions in the light of continental drift. Emphasis on vertebrates. Spring.

**380 Bioinstrumentation (4:3:3). Prereq CHEM 211, 212, BIOL 301, one semester college mathematics, or Pol.** Introduces modern instrumentation including basic electronics, data processing, principles of measurements, and sample handling. Presents theory necessary to understand bases of the instruments and principles involved in specific measurements. Spring.

**425 Mammalian Physiology (4:3:3). Prereq BIOL 301 and 326.** An organ system approach to the study of mammalian homeostasis, incl cardiovascular, respiratory, renal, digestive, endocrine, and nervous system functions. Spring.

**440 Field Biology (4:2:6). Prereq BIOL 113, 114 and 54 hr or Pol.** Directed field studies emphasizing ecology and behavior. Topics vary, but incl design of field manipulations, data collection and analysis, and an intro to organisms of study site. Students bear the cost of req field trips.
441 Plant Anatomy (4:3:3). Prereq BIOL 113-114 and 54 hr or Pol. Detailed study of plant cells and tissues, their derivation and development. Emphasis on angiosperms. Fall.

446 Environmental Physiology (3:3:0). Prereq BIOL 326 or Pol. Physiological responses of animals to environmental factors and changes in the natural environment. Topics incl circadian rhythms, adaptation to temperature, high pressure and altitude. Emphasis on vertebrates. Fall.

449 Marine Ecology (3:3:0). Prereq BIOL 307 or Pol. Plants and animals of marine environments and physical and chemical conditions that affect their existence. Spring.

452 Immunology (4:3:3). Prereq BIOL 301 or Pol. Topics incl structure and function of immunoglobulins, role of cell-mediated immunity, protective role of the immune system, and disease and injury related to malfunctions of the immune system. Spring.


465 Histology (4:3:3). Prereq BIOL 113-114, 54 hr, or Pol. Study of microscopic structure of tissues and organs of animals with emphasis on vertebrates. Fall.

471 Evolution (3:3:0). Prereq BIOL 311 or Pol. Study of process of evolution with emphasis on the role of genetics, the properties of populations, and population differentiations. Spring.


495, 496 Special Readings in Biology (1-2:0:0). (1-2:0:0). Prereq Pol and PolC. Literature investigation under instructor's guidance. Mastery of subject determined by examination or paper. Total cr may not exceed two.

497, 498 Special Problems in Biology (1-4:0:0). (1-4:0:0). Prereq Pol and PolC. Study of topics not covered elsewhere in the curriculum. A written report of the research. The research and paper are completed under the instructor's guidance. Total cr for 495, 496, 497, 498 in any combination, is six hr, not to exceed four crs in any one sem.


519 Origin of the Cultivated Plants and Their Impact on Man and Society (3:3:0). Prereq One upper-division botany course, BIOL 311 or Pol. Geographic origins of major economic plants, their economic and cultural significance and problems of food distribution.

520 Systematics in Complex Angiosperm Families (3:1:6). Prereq BIOL 344 or 534 or Pol. Morphology and speciation of the more complex families such as Poaceae, Cyperaceae, and Asteraceae. Lab emphasizes identification of specimens and acquaintance with taxonomic literature.

526 Paleocology (4:3:3). Prereq Pol. Study of origin and evolution of interrelationships between components of the earth's major ecosystems.

529 Vertebrate Paleontology (4:2:6). Prereq Course in vertebrate zoology or comparable anatomy or invertebrate paleontology, or Pol. Study of evolutionary patterns of vertebrates. Emphasis on major adaptive radiations.

533 Selected Topics in Plant Biology (3:3:0) or (3:2:3). Prereq 8 hr in 100-level BIOL, upper-division course in botany, and Pol. Topic depends upon the specialty of the instructor. May be repeated only with PolC.


535 Paleobotany (4:3:3). Prereq Plant morphology or anatomy, or vertebrate or invertebrate paleontology. Evolution of fossil plants, their origin, history and extinction, incl the various selective pressures responsible for these events. Lab presents techniques to elucidate fossil plant structure. Three Sat field trips. Fall.

536 Ichthyology (4:3:3). Prereq 8 hr in BIOL or Pol. Study of the systematics, evolution, physiology, ecology, and behavior of fishes.

537 Ornithology (4:2:6). Prereq Course in ecology or Pol. Study of the evolution, systematics, physiology, ecology, and behavior of birds, emphasizing field work. Spring of odd-numbered yrs.

538 Mammalogy (4:2:6). Prereq Course in ecology or Pol. Study of the evolution, systematics, physiology, ecology and behavior of mammals, emphasizing field work. Fall of odd-numbered yrs.

539 Herpetology (4:2:6). Prereq Course in ecology or Pol. Study of the evolution, systematics, physiology, ecology, and behavior of amphibians and reptiles, emphasizing field work. Spring of even-numbered yrs.

341 Phycology (4:3:3). Prereq BIOL 301 or Pol. Study of the biology of algae including taxonomy, reproduction, physiology, ecology, evolution and economic importance.

560 Biological Ultrastructure (4:2:6). Prereq BIOL 301, CHEM 313-314 and Pol. Intro to techniques involved in electron microscopy and to the interpretation of electron micrographs of plants and animals.

561 Comparative Animal Physiology (3:3:0). Prereq BIOL 326 and biochemistry or Pol. Detailed study of selected physiological systems of invertebrates and vertebrates, emphasizing current research.

562 Microbial Physiology and Metabolism (3:3:0). Prereq BIOL 301 or Pol. A comprehensive study of microorganisms covering aspects of growth, nutrition, transport, autotrophic and heterotrophic metabolism, regulation, and differentiation.

563 Virology (3:3:0). Prereq BIOL 301 and 311 or Pol. Fundamental concepts of the nature of viruses, virus classification, cultivation, and biochemistry. Bacteriophage and animal viruses emphasized. Fall.

564 Techniques in Virology (2:1:3). Co-req Prereq BIOL 563 or Pol. Emphasis on propagation of animal viruses in embyonated eggs and cell culture, titration of animal viruses and bacteriophage, serological techniques used in virology, and biochemical and biophysical characterization of viruses.

565 Experiments in Microbiology (2:0:6). Prereq BIOL 562 or Pol. Students perform a select group of experiments that illustrate techniques used in the study of microbial taxonomy, genetics, physiology, and metabolism.

569 Parasitology (4:3:3). Prereq BIOL 301 and 311 or Pol. Topics incl parasite life cycles and ecology, identification and classification, physiology and aspects of host-parasite relationships.

572 Human Genetics (3:3:0). Prereq General genetics or Pol. Study of the inheritance of man, emphasizing current problems, incl genetic control of metabolic diseases, effects of radiation and chemical agents in the environment, and directed genetic change. Fall, even numbered years.

573 Developmental Genetics (3:3:0). Prereq General genetics or Pol. Study of genetic approaches to the problem of eukaryotic development emphasizing current research on the regulation of gene enzyme systems. Fall, even numbered years.

574 Population Genetics (3:3:0). Prereq General genetics or Pol.

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Chemistry Courses (CHEM)

Chemistry

CHEM 211–212 is prereq to all other undergrad chem courses except those numbered below 200.

103–104 Chemical Science in a Modern Society (4:3:3). Terminal course in chem for nonscience and nursing majors. Principles and application of chem. Topics incl environmental pollution, medicine, synthetics, and earth and marine science.

106 Chemistry in a Changing World (4:3:3). Chemical nature of the world in which we live. Emphasis on nature and importance of chemical pollutants in environment, energy-related chemical problems, consumer and agricultural chemistry, and relationship between chemistry and health. Students who have cr for CHEM 103–104 or 211–212 are not eligible to take this course. Enrollment restricted to majors in elementary education.

211–212 General Chemistry (4:3:3) (4:3:3). Basic facts and principles of chemistry, incl atomic and molecular structure, the gas laws, kinetics, equilibrium, electrochemistry, and nuclear chemistry. The properties and uses of the more important elements and their compounds. Students majoring in science, engineering, or mathematics should choose this course.

313–314 Organic Chemistry (3:3:0) (3:3:0). Prereq CHEM 211–212; coreq for 313: CHEM 315; coreq for 314: CHEM 316 or 320. The theoretical, synthetic, industrial, and biological aspects of the chemistry of carbon compounds. In the first sem all students take concurrently the same lab, CHEM 315. In the second sem, students may choose either of two accompanying labs, CHEM 318 or 320. Chemistry majors req to take both.

315 Organic Chemistry Lab I (2:1:3).* Coreq CHEM 313. Lab techniques and reactions arranged to accompany CHEM 313. One hr recitation.

318 Organic Chemistry Lab II (2:1:3).* Prereq CHEM 315, coreq CHEM 314. Continuation of CHEM 315, arranged to accompany CHEM 314. One hr recitation.


*Students planning to grad under the req of a catalog prior to the 1980–81 catalog can apply only one hr cr for this course toward graduation.


322 (222) General and Biochemical Equilibrium (2:2:0). Prereq CHEM 211–212; CS 111 or CS 161 or ENGR 110. Study of general and biochemical equilibria in gas-phase, ionic, and heterogeneous systems. Topics incl gas reactions, polyfunctional acids and bases, complex ion formation, solubility and free energy relationships, and the use of computer algorithms to solve equilibrium problems.

331 Physical Chemistry I (3:3:0). Prereq CHEM 211–212, MATH 113, 114. Prereq or coreq PHYS 341 or 250. CHEM 331 and 332 constitute a year–long survey covering topics incl thermodynamics, equilibria, kinetics, solution properties, elementary quantum theory, electrochemistry, atomic and molecular structure, and nuclear chemistry.

332 Physical Chemistry II (3:3:0). Prereq CHEM 331. Continuation of CHEM 331.

335 Physical Chemistry for the Life Sciences (3:3:0). Prereq CHEM 211–212. Classical topics with emphasis on application to biology and health sciences. Rigorous mathematical approaches to the theory of physicochemical processes are avoided. Topics incl gas laws and kinetic theory, structure of solids and liquids, applied thermodynamics, kinetics, and chemical equilibria. Not open to students who have passed CHEM 331. Cr is not allowed toward a major in chemistry.

336 Physical Chemistry Lab I (2:1:3).* Prereq or coreq: CHEM 321. Prereq or coreq: PHYS 341. Quantitative experimental study of physicochemical principles. CHEM 336 and 337 constitute an intro to the practice and theory of experimental physical chemistry. One hr recitation.

337 Physical Chemistry Lab II (2:1:3).* Prereq or coreq CHEM 321. Prereq or coreq CHEM 332. Continuation of CHEM 336. One hr recitation.

*Students planning to grad under the req of a catalog prior to the 1977–78 catalog can apply only one hr cr for this course toward graduation.

341 Fundamental Inorganic Chemistry (3:3:0). Prereq CHEM 211–212. Descriptive chemistry incl chemical properties, reactions, and reaction mechanisms, of inorganic elements and compounds. Topics incl main group and transition elements, organometallic compounds and bioinorganic chemistry.

422 Instrumental Analysis (4:2:6). Prereq CHEM 314, 321,
331, or Pol. Application of physicochemical methods to analytical chemistry, i.e., the quantitative study of chemical reactions by the use of modern analytical instrumentation. Intro to theory and practice of spectroscopy; ultraviolet, visible, and infrared absorption spectroscopy, electrical methods of analysis, gas chromatography; non-aqueous studies; and ion exchange.

441 Properties and Bonding of Inorganic Compounds (3:3:0). Prereq CHEM 314, 332, or Pol. Interpretation of physical and chemical properties of inorganic compounds in terms of currently used bonding concepts. Topics incl structure and bonding of ionic compounds; covalent bonding incl valence-bond, crystal field, and molecular orbital theories, and the stereochemical, electronic and magnetic properties of elements.


451, 452 Special Projects in Chemistry (2:0:6), (2:0:6). Prereq chemistry major, 84 hr, and PoD research committee. Intro to chemical research or development. Inc1 literature search, conferences, and lab. Written and oral technical reports req.

500 Selected Topics in Modern Chemistry (3:3:0). Topics of interest in biochemistry and in physical, organic, inorganic, and analytical chemistry. Rec for teachers of general science and chemistry.

501 Lab Demonstration Techniques in the Teaching of Chemistry (3:3:0). Lab for developing proficiency in the conduct of lab demonstrations. Rec for teachers of chemistry and general science.

513 (413) Special Topics in Organic Chemistry (3:3:0). Prereq CHEM 313–314. Synthetic and mechanistic organic chemistry with emphasis on topics such as heterocyclics, natural products, and biologically active compounds. Relation of applied organic chemistry to consumer products, incl drugs and agricultural chemicals.

523 (423) Selected Topics in Analytical Chemistry (3:3:0). Prereq CHEM 422. Principles and applications of currently used methods of analysis. Topics incl differential pulse polarography, anodic stripping voltammetry, atomic absorption, fluorescence, emission spectrometry, neutron activation, spectroscopy, and spark source mass spectrometry. Advances and applications to trace metal determinations in environmental samples.

533 (431, 432, 433) Selected Topics in Physical Chemistry (3:3:0). Prereq CHEM 331, 332. Advanced study of topics in physical chemistry, selected from among the areas of thermodynamics, atomic and molecular structure, spectroscopy, and chemical kinetics. Content varies; announced before regis. May be retaken for cr with PoD.


565 (463) Biochemistry Lab I (2:1:3). Prereq or coreq CHEM 563 (461). Intro to experimental methods used to study the chemical and physical properties of proteins, carbohydrates, lipids, and nucleic acids. Completes the corresponding lecture course. Designed for those who have had no previous exposure to the specialized techniques used in biochemical research. One hr recitation.

566 (464) Biochemistry Lab II (2:1:3). Prereq CHEM 563 and 564. Continuation of CHEM 565. One hr recitation.

567 (561) Protein Biochemistry (3:3:0). Prereq CHEM 563 (461), 564 (462) or Pol. Topics incl the structural, transport, and immunological roles of proteins with emphasis on role of proteins as biological catalysts. Current theories of enzyme catalysis as well as pertinent experimental techniques. Important structural proteins from muscle and connective tissue as well as free and membrane-bound transport proteins.
dramatic duo, mixed interpretation, poetry interpretation, dramatic pairs, original poetry, and prose interpretation. May be taken four times.

142 Forensics Seminar in Debate: Affirmative Strategies (1:0:6). Work in affirmative research, case construction, and oral presentation, directed toward affirmative analysis of the intercollegiate debate proposition. May be taken four times.

143 Forensics Seminar in Debate: Negative Strategies (1:0:6). Work in negative research, case attacks, and oral presentation directed toward negative analysis of the intercollegiate debate proposition. May be taken four times.

145 Newspaper Workshop I (1:1:2). Prereq: Broadside staff position or Pol. Practical experience in writing, editing, or business aspects of newspaper production, at Broadside or other papers, coordinated by the newspaper faculty adviser. May be repeated for a total of three semester hours.

148 Radio Workshop I (1:1:2). Prereq: Comm 100, 120, or Pol. Practical experience in broadcasting, production, newswriting, and newscasting for the student radio station faculty adviser. May be repeated for a total of three semester hours.

150 Communication Skills for International Students (3:3:0). Prereq: International student status in first year of study in the U.S. or Pol. Development of communication skills required to cope effectively with life in American society. Intro to speaking, listening and nonverbal skills required to communicate appropriately in university study. Students become acquainted with U.S. media, and understand U.S. social, political, economic, and religious values and customs. Does not fulfill general education requirements met by COMM 100, 101, 110, 120 or 130.

203 Introduction to Journalism (3:3:0). American journalism incl components in journalism history and the First Amendment, the role of the professional journalist, print and broadcast news operations, the economics of newspaper publishing and other topics. The course serves both as a starting point for those desiring to pursue further journalism studies and an orientation for the news consumer interested in learning more about how the news business operates.


261 Theories of Argumentation (3:3:0). Critical analysis of argument within communicative settings with emphasis upon deductive and inductive forms of reasoning, fallacies in reasoning, tests of evidence, and the models for such analysis.

300 Foundations of Public Communication (3:3:0). Prereq: 3 hr of 100- or 200-level COMM cr., or 54 hr. Theories and principles of public communication with emphasis upon methods of persuasion, propaganda, speaker/listener alignments in the public setting, and measurements of effective public communication.

301 Foundations of Interpersonal Communication (3:3:0). Prereq: 3 hr 100- or 200-level COMM cr., or 54 hr. Theories and principles of interpersonal communication with emphasis upon models of communication, verbal and nonverbal message systems, and analysis of communicative relationships.

302 Foundations of Mass Communication (3:3:0). Prereq: 3 hr 100- or 200-level COMM cr., or 54 hr. Principles of mass communication covering history and development of mass media, external and internal factors affecting the media consumer, characteristics unique to the various forms of mass media, as well as the function and future of the media.

305 Foundations of Intercultural Communication (3:3:0). Prereq: ANTH 114 and 3 hr COMM cr. or Pol. Analysis of communication variables as they relate to intercultural encounters. Emphasizes the influence of culture upon the communication process, including differences in values, assumptions, and communication rules.

306 Issues in Intercultural Communication (3:3:0). Prereq: COMM 305 or Pol. Continuation of COMM 305. Basic principles of intercultural communication are applied to the analysis of specific situations involving cultural differences. A model of integrated communication analysis is developed and applied to issues dealing with relations between a dominant society and subcultures, social change in developing countries, and international relations.


326 Rhetoric of Social Movements and Political Controversy (3:3:0). Prereq: 3 hr of COMM cr. Social and political forces of the contemporary era from a communication perspective with emphasis on political leadership, pressures for social/political change, and transformations in the communicative environment.

330 Principles of Public Relations (3:3:0). Prereq: COMM 230 and 54 hr or Pol. Survey of the nature, scope and practice of public relations in business, trade associations, non-profit organizations and educational institutions. Principles and practice of public relations, incl topics such as broadcast, publicity and public service announcements; marketing and research; planning and publicity for special events; house publications; institutional advertising.

332 Nonverbal Communication (3:3:0). Prereq: 3 hr of COMM cr. Theory, principles, and methods of analysis of nonverbal communication. Emphasis on physical behavior, facial expression, personal space and territoriality, physical appearance, vocal cues, and environment.

335 Organizational Communication (3:3:0). Prereq: COMM 100, 130, or 301, or Pol. Theory, practice, and methods of analysis of communication within organizations. Emphasis on the processes and structures, interaction formats, mechanisms for modification, and career paths in organizational communication.

340 Forensics Seminar in Creative Arts (1:0:8). Prereq: 4 cr COMM 140 or 54 hr and audition. Intensive work in various types of creative forensics events—rhetorical criticism, epideictic, informative, persuasive, extemporaneous, after-dinner, and impromptu speaking. May be taken four times.

341 Forensics Seminar in Re-creative Arts (1:0:8). Prereq: 4 cr COMM 141 or 54 hr and audition. Intensive work in various types of re-creative forensics events—dramatic duo, mixed interpretation, poetry and prose interpretation, dramatic pairs, original poetry. May be taken four times.

342 Forensics Seminar in Debate: Affirmative Strategies (1:0:8). Prereq: 4 cr COMM 142 or 54 hr, and audition. Work in affirmative research, case construction, and oral presentation directed toward affirmative analysis of the intercollegiate debate proposition. May be taken four times.

343 Forensics Seminar in Debate: Negative Strategies (1:0:8). Prereq: 4 cr COMM 143 or 54 hr and audition. Work in negative research, case attacks, and oral presentation directed toward negative analysis of the intercollegiate debate proposition. May be taken four times.

344 Parliamentary Procedure (1:1:0). Prereq: 54 hr or Pol. Procedures of parliamentary law as practiced in voluntary organizations. Practice in chairing groups that conduct business according to Roberts Rules of Order Newly Revised, a brief review of other parliamentary systems.

345 Newspaper Workshop (1:1:2). Prereq or coreq: 3 hr
COMM 145, COMM 351, or Pol. Practical experience at writing and editing for the student newspaper or other papers, coordinated with the instruction in COMM 351. May be taken three times.

346 Yearbook Workshop (1:1:2). Prereq or coreq: COMM 351. Practical experience at writing and editing for the student yearbook, coordinated with the instruction in COMM 351. May be taken three times.

347 Literary Magazine Workshop (1:1:2). Supervised practical experience in editing, make-up, and reviewing for the University's literary magazine. May be taken three times for a total of three cr hours.

348 Radio Workshop II (1:1:2). Prereq 3 hr COMM 148 or Pol. Practical experience at broadcasting, production, programming, or management for radio or television. May be repeated for credit.

349 Student Leadership Seminar (1:3:0). Prereq 54 hr or Pol. Intro to leadership concepts. An experiential seminar focusing on practical application of leadership concepts in a student organization setting.

350 Mass Communication and Public Policy (3:3:0). Prereq COMM 100, 302, or Pol. An investigation of the manner in which matters of public importance are communicated via the various channels of mass communication. Emphasis on regulations designed to minimize the influence of mass media on public decision making, and manipulation of the media by pressure groups, politicians, and media gatekeepers.

351 Newswriting and Reporting (3:2:2). Prereq ENGL 101 or COMM 203. An experience course where the student engages in actual news gathering. In addition to the news reporting component, numerous in- and out-of-class writing assignments exercise students in the unique writing style of the journalist.

352 News Editing (3:2:2). Prereq COMM 351. Techniques of copy editing, incl copy preparation, headline writing, news judging, and newspaper make-up. Intro to working on newspaper copy desks. Applications for anyone preparing copy for publication.

353 Broadcast Journalism (3:3:0). Prereq COMM 351 or Pol. Investigation of the unique writing style of journalists in the electronic media. Emphasis on concise, conversational, and timely news writing. Techniques of mixing the words of the report with the sights and/or sounds of the news story.

354 Radio Broadcast Operations (3:1:5). Prereq COMM 353 or Pol. Theory and practice of operational radio broadcasting. Topics include the programming, production, and promotion aspects of commercial radio.

355 Television Production (3:1:5-6). Prereq COMM 351 or Pol. Major elements of television production. Familiarization with the tools of production through hands-on experience. Production of video programs through practice in all operational capacities.

356 Broadcast Announcing (3:2:2). Prereq COMM 120 or 216. Development of radio and television announcing skills. Practice in news, entertainment, commercial and sports announcing. Discussion of studio technology and voice and diction skills for broadcasting.

357 Television Workshop (1:1:2). Prereq COMM 355 or Pol. Practical experience in the area of television production while working in the University television studio. Coordinated by the faculty of the Department of Communication. May be repeated for a total of three hours.

389 Internal and Public Relations Communication for Trade Associations (3:3:0). Prereq 54 hr or 3 hr lower-division COMM cr. Principles of editing and journalism as applied to the publication, public relations, and advertising needs within a corporate environment. Job req of editorial positions in the fields of public-relations publications and information as defined by trade associations, non-profit organizations, and large corporations.

399 Special Topics in Speech Communication (3:3:0). Prereq Pol. A study of speech communication by topics such as the basis for speech production, Afro-American rhetoric, communication reticence. Topics vary and some topics require laboratories. May be repeated with PoD.

400 Introduction to Research Methods in Communication (3:3:0). Prereq 54 hr or Pol. Primary research methodologies used in communication. Rhetorical and experimental-statistical methodologies.

401 Relational Communication (3:3:0). Prereq COMM 301 or Pol. A comprehensive study of the theories and research associated with the development and deterioration of interpersonal relationships. Emphasis on such dimensions as interpersonal needs, norms, rituals, attraction and attribution, intimacy, conflict and conflict resolution, roles, male-female communication, and rhetorical sensitivity.

402 Theories of Mass Communication (3:3:0). Prereq 3 hr COMM cr. Theories of mass communication that have guided the development of mass media. Emphasis on the major scientific and humanistic approaches to the question of mass media effects.


420 Senior Seminar in Theories of Communicative Interaction (3:3:0). Prereq Senior Standing and acceptance into the Communication major or Pol. Primary theories explaining human communicative behavior. Traditional rhetorical theory and contemporary social science theories.

430 Persuasion (3:3:0). Prereq COMM 230 or Pol. Theories of persuasive communication, incl traditional and contemporary attitudinal change theories; the relationship between speaker, message, and audience; and the relationship between attitudinal and behavioral change.

434 Interviewing (3:3:0). Prereq 54 hr or Pol. Theory, principles, and practical skills essential to the interview process. Emphasis on situations such as the information-gathering interview, the journalistic interview, the employment interview, and the performance-appraisal interview.

450 Internship in Communication (3:1:0). Prereq COMM majors, 54 hr and Pol. On-the-job training in communication through approved field-work study programs. Internships are arranged and supervised by the Department of Communication through an internship coordinator or adviser. May be repeated.

454 Freedom and Responsibility of Communication (3:3:0). Prereq COMM 300, 302 or Pol. Major issues surrounding the role of speech, press, and electronic media in society. Areas of study incl the history of free speech/press issues in society, the place of the government in regulating the marketplace of ideas, and the responsibility of the individual in a free society.

455 History of Print Journalism (3:3:0). Prereq 3 hr COMM or HIST cr. Development of print journalism from its inception to the present, with emphasis on the interaction of technology, audience, and government intervention. Topics incl birth of the press, development of the modern newspaper, and American development, incl the Revolutionary and Civil Wars, the rise of the independent press and the Yellow Journalism period. Same as HIST 455.

456 Comparative Mass Media (3:3:0). Prereq COMM 302 or Pol. Major foreign mass media systems as they compare to the American mass media system. Emphasis on comparisons between the American system and the systems of England, France, Germany and other countries.

460 American Public Address (3:3:0). Prereq COMM 300 or Pol. An analysis of religious, political, and social speaking from colonial times to the present. Such speakers as Susan
B. Anthony, Jonathan Edwards, Daniel Webster, and others are considered.

475 (455) Journalism Law (3:3:0). Prereq Pol. Law as it relates to the working journalist. Topics include libel, invasion of privacy, free press/fair trial, First Amendment, broadcast regulation, access to media, and advertising. Extensive use of the "case approach" involving the study of leading court decisions in mass media law.

499 Independent Study in Communication (3:0:0). Prereq 54 hr and PoD. In-depth study of a selected area in public, interpersonal, or mass communication or journalism. The independent study application must be processed before the start of the sem in which the work is to take place. May be repeated.

Communication courses at the 500 level are open to post-baccalaureate students or advanced undergraduates with PoD.

501 Communication in Professional Relationships (3:3:0). Theoretical perspectives and relevant research related to communication techniques useful in various professional roles and situations. Relates theoretical foundations to practice, allowing individual students to assess theories of communication and their applications in individual professional fields.

502 Theories of Interpersonal Communication (3:3:0). Prereq COMM 301 or Pol. Contemporary theories of interpersonal communication. Analysis of theories, concepts, and approaches to the improvement of interpersonal communication. Inc intensive examination of interpersonal communication research.

504 Communication and Interpersonal Conflict (3:3:0). Prereq Admission to Graduate School or Senior Standing and Pol. This course provides a theoretical introduction and experiential learning in the role of communication in conflict and conflict management. The focus is upon interpersonal interactions, including dyadic and small-group levels in various settings such as friendships, marriage, family, and the work-place. The course examines the factors that generate conflicts and the communication strategies and skills that help shape conflict interaction toward productive ends. Class activities include lectures, guided discussions, case analyses, exercises, and simulations.

505 Intercultural Communication (3:3:0). Analysis of communicative variables as they relate to communication across cultures. Topics incl nonverbal communication, time conceptualizations, perceptual and attitudinal foci, values, social organization patterns, cultural norms, language, ethics, conflict across cultures, and research in intercultural communication.

506 Communication in International Organizations (3:3:0). Analysis of communication variables as they relate to organizational and functional differences within international organizations. Focus on interpersonal aspects of government and business relations both outside the U.S. and with foreign visitors in the U.S., with extensions being made to management of subcultural differences within U.S. national organizations. Emphasis on developing an understanding of how cultural differences influence managerial activities, and on learning to deal effectively with these cultural differences.

510 Studies in Oral Interpretation (3:3:0). A comprehensive examination of the role of the oral communicator in the selection, adaptation and performance of literature. Seminar course topics vary depending upon genre being considered. May be repeated three times for cr if each course is devoted to a different genre.

530 Theories of Small Group Communication (3:3:0). Advanced levels of theory and practice of small group interaction. Examination of current research in small group communication; focuses on learning the theory and application of the theory to relevant setting.

535 Organizational Communication (3:3:0). An analysis of communication systems and processes within organizations, both public and private. Specific topics include conflict management, group decision making, interviewing, technical presentations and use of various channels to improve internal and external communication for the organization.

536 Communication Consulting (3:3:0). Prereq COMM 335. Investigation of theories providing the foundation for communication consulting. Designed to provide both the theoretical information and the mechanisms for application necessary to modify communicative behavior within organizations.

540 Directing Forensics Programs in Individual Events (3:3:0). An investigation of the role of the individual events forensics educator in developing a high school or college program, coaching and judging competitive original speaking, and oral interpretation events, and tournament management.


543 Advanced Debate Theory (3:3:0). Prereq Prior debate and/or debate coaching experience or Pol. Theoretical issues involved in the practice of debate. Critical examination of new issues in theory and discussion of revisions in theories designed to enhance academic debate.

550 Communication in the Classroom (3:3:0). Prereq 84 hr. Examination of both verbal and nonverbal elements that produce meaning among teachers and students, and communication theories and skills needed to manage the communicative environment in the classroom. Nonverbal aspects of space, time, action, and form are considered as they affect teaching choices. Verbal patterns for skills of classroom management: questioning skills, enhancing students' self-concept, systematic feedback, parental communication, and student development.

551 Developing Students' Speaking and Listening Skills (3:3:0). Prereq 84 hr. Speaking and listening skills that develop the oral communication competency of children and adolescents. Emphasis on development of assignments that both directly and indirectly develop communication competence. The five functions of communication and steps in developing them are developed in the context of integrating the basic skills at the elementary level and direct teaching at the secondary level. Issues of definition in terms of philosophies of communication education and curriculum development, as well as competency assessment, are covered.

590 Seminar in Communication (3:3:0). Intensive study of specific topics in interpersonal, public, and mass communication. Specific content varies. May be repeated for credit with PoD.

596 Directed Readings and Research (1-3:0:1-3). Prereq PoD. Reading and research on a specific topic, under the direction of a faculty member. A written report is required; an oral or written examination over the material may be required. Course may be repeated for a maximum of six credits.

597 Independent Production (1-3:0:1-3). Prereq PoD. Media or creative production activities, under the direction of a faculty member. A completed production is required; a written report and an oral examination may be required. Course may be repeated for a maximum of six credits.

598 Comparative Literature Courses (CL)

Comparative Literature

300 Introduction to Comparative Literature (3:3:0). Prereq Junior standing and intermediate proficiency in a foreign
Computer Science Courses (CS)

Computer and Information Sciences

Knowledge of high school algebra is a prerequisite for all computer science courses.

103 (formerly 261) Introduction to Computing (3:3:0). Prereq knowledge of high school algebra. Intro to computers and computer programming, incl. the organization of a computer system, the design and use of computer software, and the types and organization of data. Topics incl. the use of a computing system and the study and use of a high-level programming language (FORTRAN). This course is intended for non-computer science majors; cr for this course does not count toward the requirements for a major in computer science. Students who have received cr for CS 261 or CS 111 may not receive cr for this course.

111 Computer Science I (3:3:0). Intro for computer science majors. Overview of computer architecture, intro to construction of algorithms for solving problems, and high-level programming language.

181 Introduction to a Programming Language (1:1:0). Intro to a computer language. Students are not expected to become proficient in programming, in computer applications, or in the computer structure.

211 Computer Science II (3:3:0). Prereq C or better in CS 111 or ENGR 110. Basic data structures and algorithms incl. arrays, structures, stacks, queues, lists, networks, trees, greedy algorithms, divide-and-conquer algorithms and sorting algorithms. A second high-level language is taught.

212 Computer Science III (3:3:0). Prereq C or better in CS 211 Continuation of basic algorithms and data structures incl. scheduling, packing, traveling salesperson problem, maximum flow, matrix operations and string processing algorithms. Intro to file organization, incl. files, data bases, DBMS and report generation.

262 An Introduction to Computer Statistical Packages (3:3:0). Prereq CS 161 and a course in statistics. Use of computer packages in the statistical analysis of data. Topics incl. data entry, checking and manipulation, as well as the use of computer statistical packages for analysis, and analysis of variance.

311 Assembly Language Programming (3:3:0). Prereq C or better in CS 211. Symbolic assembly language and computer structures: arithmetic and logical operations; machine representations of numbers, characters, and instructions; input-output and data conversions; addressing techniques; assembler directives; subroutine linkage; macroprocessing.

311 Automata and Formal Languages (3:3:0). Prereq CS 211 and MATH 305. Theory of formal languages, grammars, and abstract computing machines, Chomsky's hierarchies of grammars and languages, transducers and acceptors, deterministic and non-deterministic machines. Regular expressions and context-free grammars and their application in the design of software, such as compilers and text processors.

363 Comparative Programming Languages (3:3:0). Prereq CS 311. Key programming mechanisms, described independently of particular machines or languages, incl. control, binding, procedural abstraction, types. Systematic survey of capabilities of diverse high-level languages.

365 Computer Systems Architecture (3:3:0). Prereq CS 311 and ENGR 301. Computer hardware organization, software structure, and data organization. Students complete a term project involving simulating one computer system on another.

370 Introduction to File Processing (3:3:0). Prereq CS 311. File organization methods and access methods for secondary storage; examination of sequential and direct file structure on tapes and direct access devices.

421 Software Design and Development (3:3:0). Prereq CS 311. Techniques in software design and development, incl. discussion of formal models of structured programming, stepwise refinement, segmentation, top-down design and documentation. Students organize, manage and develop a large-scale software project, working in teams.


440 Language Processors (3:3:0). Prereq MATH 305, CS 212, 311. Survey of basic programming language processors: assemblers, interpreters, and compilers. Topics incl. design and construction of language processors, formal syntactic definition methods, parsing techniques, and code generation techniques.


451 Computer Graphics and Software Design (3:3:0). Prereq CS 211 and MATH 303 or ENGR 311. Graphics devices and line generation, 2D computer graphics, graphics packages, raster graphics, programming projects including designing a menu-driven system.

455 Data Communications Systems (3:3:0). Prereq CS 365. Data base systems, data communication systems. Topics incl. the role of exchanges, concentrators, multiplexors, buffering; network analysis, cost and design; software consideration.


480 Introduction to Artificial Intelligence (3:3:0). Prereq CS 212 and MATH 305. Principles of representation, heuristic search, and control, in the context of specific intelligent systems in such areas as problem solving, vision, medical diagnosis, and natural language. The LISP programming language as a means of representation.

483 (465) Data Structures and Analysis of Algorithms (3:3:0). Prereq CS 212, MATH 305. Math necessary to properly analyze the computational effort of a given algorithm. Specific algorithms analyzed and improved.

498 Independent Study in Computer Science (1–3:0:0). Prereq 54 hours, a major in Computer Science, and Pol. Research and analysis of selected problems or topics in computer science. Must be arranged with an instructor and approved by the department chairman before registering. May be repeated for a maximum of 9 credits if the subject matters are substantially different.
101 Dance Appreciation (3:3:0). Prereq DANC 125 or Pol. Intro to dance as a cultural art form. Elements of dance examined separately and combined in various dance forms. A brief survey of the basic forms leads to a more intensive study of modern and the new dance. Criticism and evaluation are stressed.

125 Beginning Modern Dance (3:0:3:). (Same as PHED 125). Designed to develop knowledge, skills, and an appreciation of modern dance through the presentation of fundamental techniques and creative movement experiences.

126 Beginning Intermediate Modern Dance (3:0:3:). (Same as PHED 126). Prereq DANC 125 or Pol. Designed to further develop the knowledge, skills and appreciation of modern dance through the continued exploration of techniques, aesthetics and creativity.

127 Contemporary Dance I (3:0:3). Prereq Pol (for majors only). Beginning technique course in modern dance designed specifically to meet the professional needs of those students who have declared, or are seriously considering, a major in dance. May be repeated once for cr.

131 Beginning Jazz Technique (3:0:3). Prereq DANC 125 suggested. Mechanics of movement in the jazz style of dance. Emphasis on development of techniques for jazz training. May be repeated once for cr.

141 Beginning Ballet (3:0:3). Intro to the elements of ballet technique and vocabulary. Stress upon learning the elementary positions and movements characteristic of this highly stylized art form. May be repeated once for cr.

142 Beginning Intermediate Ballet (3:0:3). Prereq DANC 141 or Pol. Further development of knowledge, skills, and appreciation through the technique, vocabulary and history of ballet.


161 Beginning Tap Dance (3:0:3). Elementary exploration into the rhythms and steps basic to the art form of tap dancing.

224 Intermediate Modern Dance (3:0:3). Prereq DANC 126 or Pol. Continued exploration in movement and motion to further develop technical ability in dance. Emphasis on increased ability in technical training and performance skills. May be taken 4 times for credit.

231 Intermediate Jazz Techniques (3:0:3). Prereq DANC 131 or Pol. Continued study of movement in the jazz style of dance. May be taken 4 times.

241 Intermediate Ballet (3:0:3). Prereq DANC 141 or Pol. Continued training at the intermediate level. Emphasis on increasing technical proficiency and aesthetic awareness. May be taken 4 times.

251 Dance Composition I (3:0:3). Prereq DANC 125 or Pol. Intro to basic principles for composing movement for dance. Emphasis on simple compositional forms in dance as they apply to the solo performer.

252 Dance Composition II (3:0:3). Prereq DANC 251 or Pol. Further exploration of the elements of compositional forms in dance as they apply to group forms. Experience in composing and performing duets, trios, quartets and mass pieces.

305 Dynamic Alignment (3:3:0). Prereq 6 hr of DANC; course work in anatomy and biology rec. Aspects of anatomy and kinesiology that directly apply to the correct development of dance technique. Emphasis on the use of exercise correctives and imagery to correct insufficient muscle pattern and reduce stress upon the body.

313 Rhythmic Analysis and Music Resources for Dance (3:3:0). Prereq Fundamentals of Music or 6 hr prior work in dance, or Pol. Rhythmic structure of music for dance is examined through example, analytical methods and compositional procedures. Music resources incl study of forms and styles from the Medieval period through the 20th Century.

314 Music Accompaniment for Dance (3:3:0). Prereq DANC 313 or Pol. Vocaled rhythm instruments to give to both dance and music students practical experience in dance accompaniment primarily through the use of percussion instruments. Students use their knowledge of music and rhythm to accompany and enhance a dance technique class.

327 Advanced Modern Dance (3:0:6). Prereq DANC 224 or Pol. Continued training for advanced students. Emphasis on attainment of high quality technical and performing skills. May be taken 8 times.

341 Advanced Ballet (3:0:3). Prereq DANC 241 or Pol. Performance/lab dealing with ballet at the advanced level. Emphasis on attainment of high-quality technical and performance skills. May be taken 8 times.

350 Advanced Dance Improvisation (3:0:3). Prereq DANC 125, 126, and 150, or Pol. A lecture/performance course for continued study of dance improvisation. Each student is responsible for creating and directing advanced problems in dance improvisation.

360 Choreography (3:3:0). Prereq DANC 252 or Pol. Students engage in learning to choreograph a dance work. Students are responsible for auditioning dancers, costuming, staging, lighting, selecting musical accompaniment, and composing original movement material.

370 Dance Performance (3:0:3). Prereq Pol Practical experience in the areas of performance, production, and/or repertory—through participation in University dance productions or special guest artist programs. May be taken 4 times.

390, 391 Dance History (3:3:0). Prereq DANC 101 or 6 hr of DANC. History of dance chronicling its growth and development through the 20th century. Emphasis on the social, cultural, and philosophical factors shaping the progress of dance in successive historical periods.

420 Special Topics in Dance (3:0:3). Prereq 9 hr of DANC or Pol. An in-depth presentation and exploration of topical studies in dance and/or related study areas, e.g., dance as therapy, avant-garde dance, philosophic approach to 20th-century dance artists, cinedance. Topic depends on instructor. May be taken twice.

454 Teaching Principles of Modern Dance (3:3:0). Prereq 6 hr of dance technique and DANC 305. Provides advanced dance students with the methods, principles and background knowledge for teaching modern dance. Students are expected to apply knowledge gained from previous courses in technique and alignment in the demonstration of their ability to teach a modern dance class.

510 Independent Study (3:0:0). Prereq dance major with 84 hr, grad stgd in dance or theatre, or Pol. Individual research or a creative project in close consultation with an instructor. Projects selected from: performance, choreography, technical theatre as it applies to dance, management, dance history, or criticism.

Decision Sciences Courses (DESC)

School of Business Administration

If a student takes noncore, upper-level business administration courses prior to acceptance to junior
standing, those courses will not count on an undergraduate degree application for any major in the School of Business Administration (except as general elective credit).

200 Statistical Analysis for Decision Making I (3:3:0) (formerly MATH 109). Prereq MATH 108 is recommended. Frequency distributions, probability, probability distributions, decision theory, sampling distributions, estimation. Students who have received credit for MATH 250, 256, or 351 may not receive credit for this course.


301 Decision Models in Business and Operations Management (3:3:0). Prereq MATH 108, DESC 202. Examination of the principal functions of operations managers in various settings. Analytic models are used to describe key planning and control activities in both product and service industries. Linear programming, service systems, network analysis, simulation, inventory models, quality control, forecasting, work measurement, and layout models are introduced as tools for effective management. Extensive use will be made of the computers as a problem-solving aid.


353 Intermediate Applied Statistics for Management (3:3:0). Prereq DESC 202. Several of the more advanced statistical methodologies of importance in business application, incl survey sampling, experimental design, multiple regression and correlation. Techniques are applied to areas such as marketing, personnel, accounting, auditing and finance. Use of computer packages for analysis.

355 Cases in Management Science and Operations Management (3:3:0). Prereq senior standing suggested. Management science techniques and operations management concepts are applied to solve business problems. Case methodology requires identifying and structuring complex problems and performing appropriate analyses. Emphasis will be on developing a decision making approach. Use of computer packages is required.

501 Optimization Models (3:3:0). Prereq DESC 352. An examination of optimization models as applied to business problems. Both linear and nonlinear models are considered, incl dynamic, integer and goal programming. Applications to management, finance and marketing.

502 Forecasting Methods for Management (3:3:0). Prereq DESC 202. Intro to forecasting, examining alternative models and their application to a variety of business applications. Topics incl trend analysis, moving averages, exponential smoothing, adaptive models, multiple regression and correlation, time series analysis.

506 Quality Planning and Control (3:3:0). Prereq DESC 301. Development of the basic concepts and procedures associated with a quality control system. Extensive use is made of modeling and statistical inference in monitoring and evaluating performance quality control functions. Emphasis is placed on the management aspects of the quality control system. Both microcomputers and cases are employed.

461 Advanced Operations Management (3:3:0) (formerly MGMT 461). Prereq ACCT 202, MGMT 301, and DESC 301. Advanced study of selected topics in the management of operations in manufacturing and service industries. Examination of integrated systems of production and contemporary topics of automation, technological change, and group technology. Cases and group projects are used to complement lectures.

491 Seminar in Decision Sciences (3:3:0). Prereq Completion of all other req courses for a major in Decision Sciences, or Pol. Topics covering developments in the decision sciences field, incl contemporary research findings and case studies of decision sciences in business and other organizations.

499 (formerly BUAD 499) Independent Study in Decision Science (1-3:3:0). Prereq DESC majors with at least 9 upper-level cr hr incl two DESC courses beyond DESC 301. A research proposal arranged with instructor and approved by the department chair. Investigation of a business problem according to individual interest, utilizing state-of-the-art decision science methodology.


563 (formerly BUAD 563) Seminar in Operations Management (3:3:0). Prereq DESC 301. Aspects of productivity, technology, new processes, materials, products, equipment and facilities. Implications of new technology in managing the operation (production) function are treated. Lecture, discussion, cases and problems.

Economics Courses (ECON)

Economics

Individual courses taken for credit under their former numbers may not be taken again for credit under their present numbers.

103 Contemporary Economic Principles and Issues I (3:3:0). (May be taken after ECON 104). Intro to microeconomics in the context of current problems. Explores how the market mechanism allocates scarce resources among competing uses; uses basic tools of supply and demand and production and distribution theory to analyze diverse problems.


306 Intermediate Microeconomics (3:3:0). Prereq ECON 103 and 104. Basic factors of price and distribution theory, incl analysis of demand, costs or production, and supply relationships, and price and output determination under various market structures.


310 Money and Banking (3:3:0). Prereq ECON 103 and 104 or Pol. Monetary, commercial and central banking systems, with particular emphasis on relationship with American government programs, fiscal policies and controls.

311 Intermediate Macroeconomics (3:3:0). Prereq ECON 103 and 104 or Pol. Aggregate economic accounts, incl the measurement of national income; determinants of levels of income and output; and causes and solutions for problems of unemployment, inflation and economic growth.

316 Economic Growth and Business Cycle (3:3:0). Prereq ECON 310 or 311 or Pol. Factors contributing to sustained economic growth with additional emphasis on business fluctuations and their measurement.

320 Labor Problems (3:3:0). Prereq ECON 103 and 104 or

321 Economics of Labor (3:3:0). Prereq ECON 306. Factors that determine levels of wages and employment and economic consequences. Attention is directed to recent developments in unionism, collective bargaining and industrial technology.

322 Economics of Income Distribution (3:3:0). Prereq ECON 103 and 104. Theoretical models of functional and personal distribution of income with emphasis upon human capital welfare considerations and screening, and other aspects of income.

330 Public Finance (3:3:0). Prereq ECON 306 or Pol. Intergovernmental financial relationships, types, incidences and consequences of taxation, other sources of governmental income, governmental expenditures and their effects, public economic enterprises, public borrowing, debt management and its economic effects.


350 Regional and Urban Economics (3:3:0). Prereq ECON 306 or Pol. Regional development and metropolitan growth, locational decisions of households and firms and problems associated with high-density urban economic activity.

360 Economics of Developing Areas (3:3:0). Prereq ECON 103 and 104 or Pol. Economic growth characteristic of developing countries, economic development, obstacles to development, policies and planning.

361 Economic Development of Latin America (3:3:0). Prereq ECON 104 or Pol. Economic development, institutions and problems of Latin America.

365 Topics in Economic History (3:3:0). Prereq ECON 103 and 104. Topics vary exemplifying ancient, medieval, modern European, and American economic history, using econometric analysis as necessary. May be repeated once for cr with Pol.


375 Economics of Transportation (3:3:0). Prereq ECON 103 and 104. Transportation industry in the U.S. Structure and economic problems of the competing types of transportation.


403 Austrian Economics (3:3:0). Prereq ECON 306 and 311. Microeconomic and macroeconomic models and the misallocation of resources. Alternative economic tools from the unique a priori and subjectivist approach of noted Austrian economists.

481 The Development of Economic Thought (3:3:0). Prereq ECON 306 and 311 or Pol. Developments in economic thought from 1560 to the present. Emphasis on historical origins, impact on contemporary economics, and theoretical validity.

496 Special Topics in Economics (3:3:0). Prereq ECON 306, 311, or Pol. Subject matter varies. May be repeated for cr.

497 Economic Research Workshop (3:3:0). Prereq ECON 306 and 311, MATH 109. Individual research projects proposed by instructor or in conjunction with other departmental courses, incl research design, data collection, use of program packages, data processing and analysis, culminating in the preparation of a substantial paper.


499 Independent Study (1-3:0:0). Prereq Open only to economics majors with 84 hr and PoD and Pol. Individual study of a selected area of economics. Directed research paper req.

Departmental Course Prereq

ECON 306 and 311, or equiv, are prereq for all grad courses except ECON 600 (500) and 602 (502). Additional prereq are noted. With permission of instructor, prereq may be waived.


523 American Economic History (3:3:0). Growth and development of the American economy as well as the evolution of economic institutions.

530 Mathematical Economics I (3:3:0) F. Topics incl set theory, function, differential calculus, integration, series, and matrix algebra, with the special emphasis on the economic applications.

537 Econometrics I (3:3:0). Prereq MATH 109, DESC 202 or Pol. Techniques of estimating relationships among economic variables. Intro to multiple regression and problems associated with the single equation model—autocorrelation, multicollinearity, and heteroscedasticity.


Education Courses (EDUC)

Education

Courses numbered through the 400 series constitute the undergraduate program. Courses in the 300 series are open to all undergraduates. The 400 series, with the exception of EDUC 490, is open only to students admitted to a Teacher Education Program. Students may not receive degree credit for more than one of the comparable courses relating to early and middle education. For example, students taking EDUC 407 may not receive degree credit for EDUC 408.

Undergraduates may enroll in grad courses only after completing all the upper-level undergraduate courses relevant to their educational objectives and upon demonstrating a level of maturity required for grad level courses. In these circumstances undergraduates may, with the written permission of the course instructor and the chairperson of the department offering the course, register for grad courses (those numbered 500) and apply the credit earned toward the undergraduate degree. Undergraduate students electing this option must have completed all prereq hours and courses for the grad course in which they wish to enroll.

300 Foundations of Elementary Education (3:3:0). Introduces early and middle education majors to the teaching profession through an examination of the role of a teacher, the nature of American schools and the student's
potential contributions to the profession. Field experience req. (Open also to students in music, health and physical education.)

302 Human Growth and Development (3:3:0). Introduces human development from conception through adolescence. Topics incl major theories and hazards of development, also studies of cognitive, intellectual, physical, social, emotional, psychological, and language development. Field experience req.

305 Children’s Literature (3:3:0). Prereq 9 hr of English. The historical development, types, representative authors, and illustrations of children’s literature suitable for the elementary school are studied. Topics incl critical analyses of selected works, techniques of storytelling and presentation of literature to children.

306 Teaching Language Arts in the Elementary School (3:3:0). Prereq 54 hr and EDUC 305. Rec coreq EDUC 403 or 404. A study of the processes, methods, practices and materials involved in the teaching of language arts in the elementary school. Emphasizes an integrated approach to the four areas of speaking, listening, writing and reading. Field experience in public schools req.

308 History and Philosophy of Technical Education (3:3:0). Intro to the historical and philosophical background of technical education and its effects upon the industrial and business community. Includes an overview presentation of vocational offerings in all levels of secondary and postsecondary education with an analysis of future technology changes and their technical implications for education and the worker.

313 Educational Psychology (3:3:0). Principles and applications of psychology to teaching. Incl learning theory, various aspects of the learning process, individual differences, motivation and adjustment. Field experience req.

320 Introduction to Tests and Measurements (3:3:0). Introduces basic principles, techniques, and tenets used in the quantification of measuring devices. Interpretation of standardized tests. Emphasis on construction and interpretation of measuring devices used in the classroom.

325 Utilization of Instructional Media and New Technology (3:3:0). A study of instructional media utilization, selection and evaluation, and equipment operation. The role of new and emerging technology of instruction will be examined.

340 Microcomputers and Elementary School Mathematics (3:3:0). Prereq Mathematics Competency Examination. An intro course in the utilization and programming of microcomputers in elementary school mathematics. The primary programming language is BASIC. Application of microcomputers to the solution of consumer mathematics problems will be made.

344 Problem Solving in School Mathematics (3:3:0). Prereq Pol. Students will learn how to solve problems in logic, geometry, algebra and number theory using heuristics based on the work of G. Polya.

359 Industrial Arts for the Elementary School (3:3:0). Designed for teachers who want to use construction activities as a teaching method for reinforcing the elementary school curriculum. Students use the same tools, materials, and activities as children to develop psychomotor skills and study technology.

364 Graphics Technology (3:0:3). Projects and experiments are used to study aspects of graphics, drawing, photography, reproduction printing and modern technology in communications.

365 Manufacturing Technology (3:0:3). Combines experiences of manufacturing technology with appropriate teaching techniques. Organizational techniques, projects and activities from several resources are tried and adapted by class members for use in teaching manufacturing.

366 Construction Technology (3:0:3). This course is a study of the practical application of materials and processes in building residential and commercial structures. Topics include designing, framing and assembling buildings. The skill areas covered will incl carpentry, masonry, concrete, roofing, finishing and practical laboratory experiences associated with current construction techniques and stress teaching methodologies.

367 Power and Transportation Technology (3:0:3). Overview of the field of power and transportation industries. Combines technical experiences involving engines, power sources, and controls with appropriate teaching techniques. Projects are developed, experiments performed, and revisions made with power devices or vehicles.


370 Wood Technology (3:0:3). Emphasis on basic skills and fundamental knowledge needed to teach woodworking. Materials, processes, techniques, occupations and problems of the woodworking industry are studied via lecture-demonstrations, product analysis/planning and actual construction of projects.

371 Metal Technology (3:0:3). Emphasis on basic skills and fundamental knowledge needed to teach metalworking. Materials, processes, techniques, occupations and problems of the metals industry are reviewed via lecture-demonstrations, product analysis/planning, and actual construction of projects.

372 Plastic Technology (3:0:3). Emphasis on basic skills and fundamental knowledge needed to teach plastics technology. Materials, processes, techniques, occupations and problems of the plastic industry are studied via lecture-demonstration, product analysis/planning and actual construction of projects.

373 Electricity/Electronics Technology I (3:0:3). A laboratory course with emphasis on acquisition of basic skills and fundamental knowledge needed to teach electricity and electronics. Topics include components, processes, techniques, concepts, occupations and problems of modern electrical/electronic technology will be studied via lecture-demonstrations, experimentation, product analysis/planning and actual construction of projects. Safe, effective instrument operation, tool utilization and teaching strategies will be stressed throughout the course.

374 Drafting Technology (3:0:3). Emphasis on fundamental knowledge and skills needed to teach drafting. Equipment, techniques, occupations and types of drawings typical in modern technical drawing are studied via lecture-demonstrations, exercises, and completion of mechanical drawings and sketches.

377 Electronics Technology II (3:3:0). A laboratory course with emphasis on acquisition of skills needed to teach electronics technology. Concepts and principles of electronic and digital logic circuits and systems will be studied via lecture-demonstrations, experimentation and construction of projects. Safe, effective instrument operation, tool utilization and teaching strategies will be stressed throughout the course. Suggest co-requisite EDUC 373.

386 Construction Technology: Energy Systems (3:3:0). Study of the practical application of energy systems in residential and commercial construction. Topics incl design, installation, service and analyzing of systems involving plumbing, electrical wiring, motors, climate control, communications and mechanical functions. The course provides practical laboratory experiences associated with current installation and maintenance technologies and stresses techniques for teaching these technologies.

400 Inservice Educational Development (2-6:0:0). Prereq Employment in a professional capacity by sponsoring school division or educational agency, acceptability to the University, or PoD. Offered upon request of a school division or other educational agency, or upon establishment of a need on the part of a group of educational personnel. Provides an opportunity for instruction in various educational areas, such as learning theory, curriculum,
course in the approved program; admission to, and good standing in, the Teacher Education Program. An intensive, supervised clinical experience of a full sem in approved schools in Virginia. Experiences in both elementary and secondary school settings.

417 Student Teaching in Vocational Education (9–12). Prereq Completion of all courses in the approved program; admission to, and good standing in, the Teacher Education Program. An intensive, supervised clinical experience of a full sem in approved schools in Virginia, and a seminar series taught on campus by University faculty/supervisors. Experiences in both middle and secondary school settings.

418 Student Teaching in Music Education (9). Prereq Completion of requirements for admission to the Music Education concentration; admission to, and good standing in, the Teacher Education Program. An intensive, supervised clinical experience in approved schools in Virginia, and appropriate supplemental course work dependent upon the student’s area of concentration (vocal/choral or instrumental). Experiences in elementary and/or secondary school settings.

431 Student Teaching in Early Education (9–15:0:0). Prereq Completion of all courses in the approved program; admission to, and good standing in, the Teacher Education Program. An intensive clinical experience of a full sem in an approved school in Virginia and a seminar series conducted on campus by University faculty/supervisors. Experiences in kindergarten and grades 1, 2, 3, or 4 must be included.

432 Student Teaching in Middle Education (9–15:0:0). Prereq Completion of all courses in the approved program and admission to, and good standing in, the Teacher Education Program. An intensive clinical experience of a full semester in an improved school in Virginia, and a seminar series conducted on campus by university faculty/supervisors. Experiences in grades 4, 5, 6, 7, or 8.

438 Vocational Education, Trade Area Technical Certification (30 sem hr). Prereq Teacher of Vocational Education. Advanced placement cr given to vocational teachers for certain teaching experience, completion of approved competency testing programs, or technical in–service training. Requests for approved cr must be submitted to the office of Vocational Education and students must meet University admission req.

439 Internship in Vocational Education (3:3:0) or (6:0:0). Prereq Admission to Teacher Education Program. Opportunity to meet the work experience req and state certification req in non–trade and industrial education and to work in industry or at a technical occupation.

440, 441, 442 Independent Study in Education (1–3:0:0). Prereq Admission to Teacher Education Program and PoC and Pol. Students repeating the course reqs for EDUC 441 or 442, as appropriate. By arrangement. Various subjects, principally by directed study, discussion and research. Subject areas incl: elementary science, reading, the slow learner, mathematics, English, social studies, arts and crafts, health, secondary science, language arts, child growth and development, the culturally deprived, music, learning disabilities, guidance, the mentally retarded and social foundations.

460 Organizing and Counseling Vocational Youth Groups (3:3:0). Prereq Admission to Teacher Education Program. Prepares the student to organize, manage and advise school chapters of vocational youth groups. Emphasis on methods of making youth groups an integral part of the instructional program. The goals, activities and contributions of youth groups are studied as students work with or observe actual chapters executing typical events. Field experience req.

463 Vocational and Technical Teaching Methods (3:0:3). Prereq Admission to Teacher Education Program. Emphasis on methods of teaching industrial arts: unit methods, group method, line production, seminar, demonstration, and project method. Students complete activities in each method and/or provide instructions to others. Content developed through lab activities. Work completed is evaluated in relation to goals and student needs.
466 Competency-Based Instruction in Trade and Industrial Education (3:3:0). Prereq Admission to Teacher Education Program. Combines practical and theoretical components of the competency-based programs in trade and industrial education in Virginia with methods and strategies for implementation. Field experiences req.

467 Curriculum Development in Technical Education (3:3:0). Prereq Acceptance into Teacher Education Program. Principles of instructional methods as applied to secondary technical education; preparation of lesson plans and courses of study; demonstration teaching in lab environment; curriculum construction emphasizing high technology changes; classroom management techniques incl competency based instructional systems.

469 Vocational and Technical Facility Management (3:0:3). Students plan and organize lab facilities for instruction. Systems for personnel, tool storage, supply purchase, maintenance, and recordkeeping are developed and tested. Selected labs are examined and rec are made for improvement of organization, management or safety.

490 Selected Topics in Education (1–3:0:0). Examines special topics in education of interest to students, faculty and the educational community. Topics vary. No more than 6 hr from EDUC 490, 440, 441, and 442 may be applied to the degree.

500 In-Service Educational Development (1–6:0:0). Prereq Employment in professional capacity by sponsoring division or agency at request of school division or other educational agency. Content varies. May be repeated.

502 History of Education in the U.S. (2:2:0). Prereq Admission to Grad School or Pol. A history of ideas about learning in the U.S., analyzed from the perspective of what can be accomplished for determining the future.

503 Philosophy of Education (2:2:0). Prereq Admission to Grad School or Pol. A critical analysis and examination of ancient and contemporary educational philosophies and their impact upon educational thought and practice. The method of instruction is primarily lecture.

504 Issues in Comparative Education (2:2:0). An overview of national systems of education from the perspective of their similarities to and differences from education in the U.S., with special focus on the countries of recent immigrants to the Northern Virginia–D.C. metropolitan area.

506 Education and Cultural Transmission (3:3:0). Prereq grad stdg in the Education Department or Pol. Examination and application of studies in educational anthropology, with focus on the process of cultural transmission in the U.S. through formal and informal institutions. Analysis of U.S. values, cultural discontinuity, hidden transmission of values in schools, U.S. schools' response to cultural pluralism, cultural transmission in educational systems within other countries, school as an interface institution between cultures, biculturalism in schools.

508 Human Relations for Educators (3:3:0). Helps students develop an awareness of self and self-concept, learn communication skills for improving interpersonal relations, and create a nondiscriminatory school environment.

509 Human Development: Infancy to Middle Childhood (2:2:0). Prereq None. An advanced course in the physical, psychological, cognitive and personality development of the child from birth to age 12. Emphasis is on the critical review of contemporary theories of human development and their relevance to educational practice.

510 Human Development: Adolescence Through Adulthood (2:2:0). Prereq None. An advanced course in the physical, psychosocial and cognitive development of the adolescent from pubescence to adulthood, as well as the study of adulthood from a developmental perspective. Emphasis is on the examination of the principal contemporary theories and conceptualizations of adolescence and adulthood and their practicality in contemporary educational settings. The relationship between development and learning will also be emphasized.

515 (formerly 684) History and Philosophy of Vocational Education (3:3:0). Prereq Completion of undergrad degree or appropriate educational req. Study of historical, philosophical, and societal backgrounds of vocational education. Speciality areas of vocational education and their relationship to general education. Students study current trends in their own areas of specialty with attention to the backgrounds of those trends.

521 Foundations of Education (2:2:0). Prereq grad stdg in the Education Department or Pol. An overview of the various ways of educating and of the socialization processes operating within American educational institutions and other organizations. Current educational practices analyzed in terms of history, philosophy, psychology and sociocultural factors of formal and informal learning. Emphasis on trends, issues, alternative futures.

522 Introduction to Secondary Education (3:3:0). Prereq Admission to grad school or PoD. Analysis of the philosophical assumptions, curriculum issues, learning theories and history associated with current teaching styles. Emphasis on application of secondary school or Pol. Education courses.

523 The Exceptional Child in American Education (2:2:0). Prereq grad standing in the department or Pol. This course will introduce the regular classroom teacher to the psychological, sociocultural, educational and physical aspects of the exceptional child. Emphasis will be given to the integration of the exceptional child in the regular classroom. Lectures, simulations, films and other modes of instruction will be utilized.

524 Learning Theory (2:2:0). Prereq Admission to the grad school or PoD. Examination of the relationship between learning theory, motivation, personality development, social and emotional behavior and student attitudes. Emphasis on putting theory into practice.

529 Pluralism in U.S. Education (2:2:0). Prereq None. An examination of cultural pluralism in American education, with a focus on the nature of linguistic and cultural diversity in public schools, incl special education settings, the relationship between nonverbal communication and language systems, and interpersonal skills needed for encouraging harmony between the dominant culture and culturally and linguistically-diverse communities in the United States.

530 Contemporary Social Issues in Education (2:2:0). Prereq None. An examination of selected social issues in education. Uses concepts and information from social sciences to understand the social issues and suggest possible remedies through practice and policy.

531 Educational and Psychological Measurement (3:3:0). Emphasis on techniques and principles used in the construction, administration and quantification of measuring devices for evaluation purposes; interpretation of standardized tests of ability, aptitude, achievement, interest, and personality.

532 Bilingualism and Language Acquisition Research (3:3:0). An examination of research in first and second language acquisition, including the interaction of a bilingual's two languages, with implications for the classroom.

565 Production of Instructional Materials (3:3:0). Prereq Course in instructional media. Prepares teachers with basic knowledge needed to produce inexpensive teaching materials. Emphasizes planning, production techniques and evaluation standards. Students are given an opportunity to work on individual projects in their own subject field.

571 Role and Function of the School Psychologist (3:3:0). Surveys roles and functions of the school psychologist within the educational environment. Considers certification and ethical standards of the school psychologist with current issues and trends.

579 School Psychologist Practicum (3:3:0). Prereq PoD. Field
work with a practicing school psychologist in a school division two days per week.

581 Cooperative Work Study Programs (Curriculum and Methods) (3:3:0). Prereq Completion of proper undergrad req in Vocational Education for industrial cooperative instructors. Prepares teachers to develop curriculum material for cooperative work-study courses. Opportunity to gain proficiency in the techniques of planning and teaching generally related and directly-related curriculum materials.

586 Competency-Based Instruction in Vocational Education (3:3:0). Intro to practical and theoretical components of the competency-based programs in vocational education in Virginia. Incl methods and strategies of implementation for specific areas of vocational education, industrial arts, trade and industrial education, home economics, business and office education, health occupations, and cooperative programs.

587 Administration and Coordination of Cooperative Work Programs (ICT) – (COE) (3:3:0). Prereq Completion of undergrad req in Vocational Education for industrial cooperative instructors. This course will prepare teachers in developing and selecting cooperative work stations. Teachers will obtain proficiency in planning and working with advisory groups. Course incl materials related to employment opportunities, rules and regulations of employment, and design and completion of necessary documentation. State certification for cooperative ICT instructors requires completion of this course. The course is the second in the req sequence for certification.

589 Materials and Processes Technology (Variable). An advanced laboratory course centering on the implementation of new technological methods of manufacturing and testing materials and products. Students will build, research, and test individual products and ideas including the strategies required for classroom implementation.

590 Education Research (3:3:0). Development of skills, insights, and understandings basic to performing research, with emphasis on interpretation and application of research results. Critique of research and use of findings in educational settings.

591 Education Statistics (3:3:0). Intro to practical and applied aspects of statistics in education. Incl selected descriptive and inferential statistics, also statistical data processing.

593 (625) Utilization of Instructional Technology (3:3:0). Effective utilization of educational technology in the teaching–learning situation.

598 Directed Reading, Research, and Individual Projects (1–6:0). Prereq Admission to a degree program and PoD. Various subjects and projects, principally by directed study, discussion, research, and participation under the supervision of a member of the grad faculty. May be repeated. No more than 6 hr of EDUC 598 (may also be listed as EDAS, EDGC, EDRD, or EDSE), and/or 600 may be applied to degree cr.

**Elementary/Secondary (EDCI)**

500 – See EDUC 500 507 Internship in Applied Linguistics (3:3:0). Prereq grad stgd in the Education or English Department and EDCI 519 or ENGL 521 (ESL methods course). Internship requires 100 hours completed over at least a five–week period for three hours of credit. Internship provides practical experience in the field of English as a Second Language and Applied Linguistics as, e.g., teacher, administrator, counselor, or researcher. For placement, consult instructor before semester starts.

511 Preparing the Pre–Elementary Environment (3:3:0). Study of procedures, materials and organization of environments for young children (infancy–kindergarten). Field experiences req for students without previous teaching or administrative experience at the pre–elementary levels.

512 Home–School Relations in Pre–Elementary Education (3:3:0). Examination of patterns and problems of family life for the purpose of improving communication between teachers and parents.

513 Play as a Growth Process in Pre–Elementary Education (3:3:0). Focus on play as an approach to teaching and learning; examined as an intellectual, social and emotional function in children’s development.

514 Administering and Supervising Pre–Elementary Education (3:3:0). Examines programs and techniques relating to the administration and supervision of pre–elementary education programs. Emphasis on the director’s role in staff recruitment, hiring, development and evaluation. Leadership and management techniques.

515 Practicum in Secondary Education (12:0:12). Prereq Admission to and completion of all additional course work in the secondary education certification program, admission to and good standing in the Teacher Education Program and/or permission of instructor and adviser. An intensive, supervised clinical experience of a full semester in an approved school in Virginia. Experience at the secondary level. Participation in scheduled group sessions req.

517 Introduction to Bilingual Education (3:3:0). Analysis of concepts, principles, and issues of bilingual education; its present status, and its future direction. Focus on current programs and their relationship with curricula in English as a second language.

518 Introduction to Multicultural Education (3:3:0). A survey of multicultural education that examines problems faced by an individual in an alien culture, the realities of bilingual/ multicultural education, relationships between nonverbal communication and language systems, and interpersonal skills needed for encouraging harmony between our dominant culture and minority ethnic communities.

519 Methods of Teaching in Bilingual/English as a Second Language Settings (3:3:0). Examination of past and current methods and techniques for teaching English as a Second Language (ESL) class; bilingual/ESL class. Students analyze all program models and methods of instruction for students of limited English proficiency; practice teaching strategies based on recent second language acquisition research; and examine materials, textbooks, and resources available in the field. This course includes a field experience component and meets Virginia certification requirements for ESL teachers.

520 Assessment and Curriculum Development in Bilingual/ English as a Second Language Settings (3:3:0). Examination of issues in testing students of limited English proficiency and development of curricular materials for bilingual/English as a Second Language classrooms. Analysis of testing for placement, diagnosis, entry–exit criteria and evaluation; and examination of sources and models of curriculum development for bilingual/ESL classrooms.

530 Programming Microcomputers in BASIC for Instructional Applications (3:3:0). Prereq None. Students will learn the fundamentals of operating a microcomputer. The major focus of the course will be learning to use the BASIC language to program microcomputers for instructional applications.

532 Programming Microcomputers in LOGO for Instructional Applications (3:3:0). Prereq EDCI 530 or Pol. Students will learn how to write and use programs in LOGO, an interactive programming language used in schools. They will create microcomputer activities which develop problem solving skills and programming skills.

550 (formerly EDUC 450) Teaching Foreign Languages in the Secondary School (3:3:0). Study of theories and methods of foreign language teaching, with practical application to the classroom. Field experience req for those seeking initial teacher certification. Fall semester only.

schools. Field experience req for those seeking initial teacher certification. Spring sem only.


Education Courses Reading (EDRD)

500 – See EDUC 500

559 Teaching Developmental Reading in the Elementary School (3:3:0). Advanced course. Study of foundations of reading; principles, techniques and materials for developmental reading programs.

Education Courses Special Education (EDSE)

500 – EDUC 500

541 Survey of Special Education (3:3:0). Emphasis on historical developments of definitions, characteristics, identification, incidence and legislation related to special education. Field observations and volunteer experiences req.

543 Sociocultural Aspects of Disabilities (2:2:0). Primarily a lecture course designed to explore the sociological, anthropological and linguistic aspects of handicapping conditions in multicultural and bilingual environments.

544 Vocational and Continuing Educational Aspects of the Academically Handicapped (1:1:0). Prereq. None. Primarily a lecture course designed to explore factors for developing vocational independence in individuals with disabilities and limited English proficiency.

550 (formerly 650) Precision Teaching: Individual Instructional Procedures (2:2:0) or (3:3:0). Focus on identifying, recording, changing and evaluating social and academic behaviors. Development of individual education programs emphasized. Field experiences required.

552 (formerly 652) Language Development and Disorders (3:3:0). Examines influence of conflicting theories concerning language acquisition; analysis of verbal and non-verbal communication; techniques of language assessment; and strategies for language intervention.

553 (formerly 653) Teaching Remedial Mathematics (2:2:0) or (3:3:0). Study of techniques for assessing and remediating difficulties in mathematics.

554 Adaptive Methods in Education (2:2:0). Prereq. EDSE 541. Students apply theory to practice as they adapt different levels of general education course content to accommodate various learning styles. Emphasis is placed on adaptation of materials, intervention methods and the development of an on-going system for evaluation of student progress. Teacher/parent/student communication is highlighted.

Engineering Courses (ENGR)

Electrical and Computer Engineering


110 Engineering Computations (3:3:0). Coreq. MATH 113 or Pol. Study of computational processes as algorithms. Simulation of engineering problems and their implementation on computers. Techniques for the representation of algorithms by the use of FORTRAN language. Experience with this language in writing and running programs to solve problems from an engineering point of view. The use of BASIC language is summarized.


209 Material Science (3:3:0). Prereq. CHEM 211. Intro to microscopic structure of engineering materials and effects on macroscopic properties. Topics: crystalline and amorphous structures and defects, semiconductors, ceramics, metals and polymers.

240 Introduction to Microcomputer Applications (3:3:0). Intro to hardware and software fundamentals of a typical microcomputer system. Topics: Programming techniques, hardware considerations in various research applications, case study of microcomputer implementation, computer graphics, real-time man-machine interaction, word processors and how to choose a microcomputer system. (Not intended for those majoring in Computer and Electronics Engineering.)


301 Digital Electronics (3:2:2). Intro to digital systems, circuits and computers. Topics: binary systems and codes, digital logic gates and circuits, microelectronics and integrated circuits, coding and multiplexing, multivibrators, shift registers, counters, A/D converters, elementary computer architecture. (Not intended for those majoring in Computer and Electronics Engineering.)
302 Electronics (4:3:3). Prereq PHYS 342 or 351 or Pol. Lecture and laboratory course in electronics, semiconductor physics, electronic devices and circuits, feedback, design and operational characteristics of power supplies, amplifiers and oscillators. (Not intended for those majoring in Computer and Electronics Engineering.)

305 Electromagnetic Theory (3:3:0). Prereq PHYS 352 and MATH 304. Static and time varying electric and magnetic fields, dielectrics, magnetization, EM waves, intro to transmission lines and antennas. This course uses vector calculus and complex algebra.

307 Engineering Thermodynamics (3:3:0). Prereq MATH 213, PHYS 250. Classical concepts of energy and temperature, first and second laws and their application to closed and open systems and properties of pure substances, equation of state, analysis of thermodynamic processes and systems. Application to engineering systems.

308 ENGR Fluid Mechanics (3:3:0). Prereq ENGR 206, MATH 213. Principles of fluids in equilibrium and in motion. Topics include hydrostatic pressure; continuity, Bernoulli and momentum equations; viscosity flow problems; measuring instruments; and applications to closed conduits and open channels.

311, 312 Mathematical Methods in Physics and Engineering (3:3:0). Prereq PHYS 311 or MATH 311 or 312 or equiv. Topics: vector calculus, linear algebra, complex variables, and applications.

313 Digital Electronics and Logic Design (3:3:0). Prereq ENGR 333 or Pol. Principles of operation and application of digital devices and circuits. Topics: number systems, switching circuitry, logic fundamentals, logic circuit families, flip-flops and latches, counters, registers, memories, arithmetic circuits, A/D and D/A conversion and elementary computer architecture. Engr 332 is normally taken concurrently with ENGR 331. Cr may not be received for ENGR 301 and 331.

314 Digital Electronics and Logic Design Lab (1:0:3). Prereq ENGR 301 or Pol. Coreq ENGR 331. Lab associated with ENGR 331. Offered in conjunction with ENGR 331. A second digital electronics course with emphasis on advanced digital circuit and system theories and their applications. Topics: sequential circuits – principles and realizations, tabular minimizations; logical switching circuit design using MSI, timing analysis, digital systems case studies, code conversions, pulse–mode and level–mode circuit design.

315 Linear Electronics II (3:3:0). Prereq ENGR 333. Engr 433 is normally taken concurrently. A second course in linear electronics covering the following topics: power amplifiers, feedback amplifier frequency response, operational amplifier systems, oscillators, wide band and microwave amplifiers and computer aided design.

316 Digital Electronics II Laboratory (1:0:3). Prereq ENGR 334. Engr 434 is normally taken concurrently. A second lab course in linear electronics involving analysis and design of the following topics listed in ENGR 433.

317 Digital Circuits and Systems Design (3:3:0). Prereq ENGR 331 or 301. A second digital electronics course with emphasis on advanced digital circuit and system theories and their applications. Topics include sequential circuits – principles and realizations, tabular minimizations; logical switching circuit design using MSI, timing analysis, digital systems case studies, code conversions, pulse–mode and level–mode circuit design.

318 Engineering Economy (3:3:0). Prereq ENGR 107 and ENGR 205. Intro to economic decision process in engineering design and analysis. Topics include methodology for selection of alternatives, measures of investment worth, income and cost evaluation, depreciation methods, benefit–cost and cost–effectiveness techniques and applications of decision trees to capital investment.


429 Control Systems Lab (1:0:3). Coreq ENGR 421. Lab associated with ENGR 421.


431 Digital Circuits and Systems Design (3:3:0). Prereq ENGR 331 or 301. A second digital electronics course with emphasis on advanced digital circuit and system theories and their applications. Topics include sequential circuits – principles and realizations, tabular minimizations; logical switching circuit design using MSI, timing analysis, digital systems case studies, code conversions, pulse–mode and level–mode circuit design.

433 Linear Electronics II (3:3:0). Prereq ENGR 333. Engr 433 is normally taken concurrently. A second course in linear electronics covering the following topics: power amplifiers, feedback amplifier frequency response, operational amplifier systems, oscillators, wide band and microwave amplifiers and computer aided design.

434 Digital Computer Structure, Programming and Applications (3:3:0). Prereq ENGR 331 or 301. Coreq ENGR 341 or CS 365 or equiv. Digital computer internal structure, memory organizations, programming techniques and program structures, micromachine and microprogramming, real–time interacting computing, Input/Output organization and programming, examples and applications. The course is based on a hardware description language (APL or AHPL).

441 Digital Computer Design and Interfacing (3:3:0). Prereq ENGR 331 and 332 or 301 or equiv. Design of digital computers, microprocessor systems and interfacing techniques. Digital logic circuits, flow diagrams, memory systems, I/O equipment.

445 (formerly 341) Computer Organization I (3:3:0). Prereq ENGR 331 or 301. Detailed computer design. Topics: ENIAC computer, bit serial processing, stored program computers, control system hardware design, jump instruction hardware, flags, ports, bidirectionality, page–paragraph concepts, stacks, control computers, microprogramming (hardware concepts including program stacks), simulation and emulation, the 8086, specialization of units.


448 Computer Architecture Laboratory (1:0:3). Coreq ENGR 441, 445. Design and prototyping of computer circuits, such as accumulators, ALUs, multipliers and micro–programmed processors.

451, 452 Energy Conversion I, II (4:3:3). 4:3:3). Prereq ENGR 305 or Pol. Study of energy needs, sources, conversion and use. Electric power generation, transmission and use. Electromechanical, electro magnetic, nuclear and
nonconventional energy conversion and transmission methods. Synchronous machines and generators, solar cells, thermionic converters, fuel cells, batteries.


461 Communication Engineering Laboratory (1:0:3). Prereq ENGR 333, Coreq ENGR 460. Lab experiments for the topics from analog and digital communication covered in ENGR 460.

462 Data and Computer Communications (3:3:0). Prereq ENGR 460. Introduction to modern data and computer communications systems. Topics include transmission links, modem and codec design, packet switching, computer networks and protocols, satellite broadcasting, optical-fiber wide area networks, data link control, multiplexing concentrator design, error-control coding, examples of computer networks.

490 Advanced Design Project (3:0:0). Prereq 84 hr. A design project to be conceived, designed, constructed (as appropriate) and tested. Final oral and written reports are req at the completion of the project.

491 Engineering Seminar (1:1:0). Prereq 84 hr. Engineering ethics, professionalism, the role of the engineer in society, current topics, employment opportunities.

511 Microprocessors, Microcomputers and Applications I (3:3:0). Prereq Undergrad course in electronics. Introduction to microprocessors and microprocessor-based computer systems. Analyzing and understanding microprocessors from the scientist's and engineer's point of view with their applications. The course requires some hands-on experience with microcomputer systems.

512 Microprocessors, Microcomputers and Applications II (3:3:0). Prereq ENGR 511 or equiv. Emphasis on microcomputer controlled systems, interfacing techniques and related subjects. Topics include basic input-output, interfacing the peripherals analog circuitry, multiplexers, POS systems, process control with microcomputers, microcomputers for communications, 16-bit microcomputers.

513 Applied Electromagnetic Theory (3:3:0). Prereq ENGR 305, MATH 313 or equiv. Classical electromagnetic theory with applications. Topics include electostatics, magnetic fields and materials, electromagnetic wave propagation, wave guides, transmission lines, radiation and antennas.

516 Sixteen-Bit Microprocessors (3:3:0). Prereq ENGR 511, ENGR 512 or equiv. A study of the most popular 16-bit microprocessors, such as the Motorola 68000, Intel 8086, Zilog Z8000. Topics covered will include internal architecture, data paths, busses, instruction sets, input/output, interfacing.

520 Electronic Systems Analysis (3:3:0). Prereq ENGR 331, 333, MATH 313 or equiv. A study of basic and advanced methodologies for analyzing electric circuits and systems. Topics include continuous and discrete time systems, Laplace, Fourier and Z-transform techniques, continuous and discrete convolution, feedback analysis, stability concepts, frequency response techniques and state variables.

521 Modern Control Theory (3:3:0). Prereq ENGR 421 or equiv. Analysis and design of control systems using state-space approach. Stability, controllability, and observability of linear and nonlinear control systems. Introduction to optimal control and system identification.

522 Computer Control Systems (3:3:0). Prereq ENGR 421, 520 or Pol. This course presents the theory and industrial applications of the use of computer analysis, design and implementation of feedback control systems. Topics include modeling of systems and signals, computer aided design, optimal design methods, digital controllers, adaptive control and intro to computer aided manufacturing and robotics.

528 Random Processes in Electrical and Computer Engineering (3:3:0). Prereq ENGR 460, MATH 351, or equiv. Topics include random signals and noise in communications, stationary and ergodic random processes, spectral analysis, Gaussian processes, Brownian motions, mean square estimation, Kalman and adaptive filtering, Markov processes and Poisson processes. Applications are drawn from computer, communication, control, and signal processing.


540 Computer Engineering: Design Principles, Operating Systems, and System Development (3:3:0). Prereq ENGR 441, 445, CS 311, or equiv. A study of general design principles of computer systems, the operating system of various types of computers such as PDP-11, CDC Cyber, etc., selected topics of software engineering, the design of systems with specific applications, microprogramming and computer networks.

541 Computer System Architecture (3:3:0). Prereq ENGR 540. Theories of operating systems and evaluation and measurement of computer systems. Topics: controlled sharing, enforced separation, interrupt processing, virtual memory, virtual machines, measures and parameters of performance, bandwidth utilization, stochastic models, simulation models, evaluation of operations computer systems.

542 Computer Network Architectures and Protocols (3:3:0). Prereq Graduate standing or Pol. Introduction to the architectures and protocols of computer networks and the concept of packet switching. Topics include ISO standard layer model, physical interfaces and protocols, data link control, multiaccess techniques, packet switching, routing and flow control, network topology, data communication subsystems, error control codings, local area network, satellite packet broadcasting, packet radio, interconnection of packet-switching networks, network security, and various examples of computer networks.

560 Introduction to Robotics I (3:3:0). Prereq ENGR 521. An introduction to the science of robotics from an electrical engineering hardware standpoint. Subjects such as machine vision, sensing, mobility will be taught.

563 Microwave Theory (3:3:0). Prereq ENGR 513 or Pol. Study of the generation, control, and propagation of microwave signals. Topics include: transmission lines, waveguides, resonators, scattering parameters, Smith charts, measurement techniques, instrumentation, and microwave devices.

565 Optical Information Systems (3:3:0). Prereq PHYS 352, 305, and either ENGR 286 or MATH 313. An intro to optical systems for information gathering, transmission, storage, and processing. Topics include introduction to lasers, solid-
state detectors, and optical fibers; variety of optical sensors, imaging and non-imaging; optical data storage techniques and optical signal processing; optical communications.

571 Network Analysis (3:3:0). Prereq ENGR 520 or Pol. A study of linear active and passive networks. Topics include graph theory, network properties, scattering parameters, frequency and time domain representation, sensitivity measures, Tellegen's theorem, and computer-aided design.

584 Solid-State Device Theory I (3:3:0). Prereq ENGR 430 or Pol. A study of the theory of semiconductor devices based on solid-state physics. Topics include fundamentals of quantum and statistical mechanics, free electron gas, band theory of solids, conduction by electrons and holes, bipolar and field-effect transistors.

586 Digital Integrated Circuit Analysis and Design (3:3:0). Prereq ENGR 331, ENGR 430, or Pol. A study of the devices and circuit topologies used in digital integrated circuits. Topics include large signal active device models, MOS and BJT gates, regenerative logic circuits, semiconductor memories, LSI and VLSI circuits.

587 Analog Integrated Circuit Analysis and Design (3:3:0). Prereq ENGR 333, ENGR 430, or Pol. A study of the devices and circuit topologies used in analog integrated circuits. Topics include active device models, fabrication technology, operational amplifiers, frequency response, noise, and computer-aided design.

590 Selected Topics in Engineering (3:3:0). Prereq grad stdg or PoD. Selected topics from recent developments and applications in engineering. This course is designed to satisfy the needs of the professional engineering community to study current developments in various engineering disciplines.

English Courses (ENGL)

English
ENGL 101 is the usual prereq for ENGL 102. With the PoD, international students may use ENGL 100 instead of ENGL 101 as the prereq for ENGL 102. Students may not receive cr for both ENGL 100 and ENGL 101.

100 Composition for Foreign Students (4:4:0). For non-native speakers of English with limited proficiency in the language. Principles and practice of expository writing with intensive drill in grammar, vocabulary, and principles of organization. Students must attain a minimum grade of C to fulfill degree req.

101, 102 Composition and Introduction to Literature (3:3:0). (3:3:0). Prereq ENGL 101 (or 100) is prereq to ENGL 102. Expository writing, ranging from paragraphs to essays of some length and complexity. Study of the logical, rhetorical and linguistic structure of expository prose. The methods and conventions of preparing research papers, intro to analysis and appreciation of major literary types. Students must attain a minimum grade of C to fulfill degree req. *3 to 6 cr hr of 100-level English courses are prereq for all 200-level courses; 3–6 cr hr of English in 100-level courses and 6 cr hr of English in 200-level courses are ENGL for all ENGL 300- and 400-level courses. CAS majors must fulfill the composition requirement with ENGL 101 and ENGL 302.

Any 2 English courses on the 200 level, taken in any order, may be used to fulfill the general degree req in literature.

203, 204 Western Literary Masterworks (3:3:0). (3:3:0). Great works of Western Civilization. 203: Writers such as Homer, Sophocles, Euripides, Dante, Cervantes, Machiavelli, and Montaigne. 204: Writers such as Racine, Moliere, Flaubert, Dostoevski, Tolstoy, Mann, Malraux, Ionesco, and Beckett. All readings in modern English.

205, 206 Readings in English and American Literature (3:3:0). (3:3:0). English and American literature by types. ENGL 205 focuses on selected English and American poetry and drama by such writers as Marlowe, Shakespeare, Shaw, O'Neill, Albee, Donne, Keats, Whitman, Frost, Eliot, and Auden. ENGL 206 focuses on selected English and American novels, short stories and essays by such writers as Lawrence, Hemingway, Faulkner, Melville, Crane, E. Bronte, Fitzgerald, and Barth.

207, 208 Literature and Society I, II (3:3:0), (3:3:0). A study of the ways in which literature has explored questions of continuing primary importance. Works will be selected principally from English and American literature and a variety of genres will be considered. ENGL 207 will address a complex of related issues to be found in such topics as individuality, community, gender relationships, technology, social conflict, or war as explored in the literature of at least two historical periods before the present. Each section of ENGL 208 will deal intensively with a single topic as represented in the literature of a single historical moment.

251, 252 Survey of English Literature (3:3:0), (3:3:0). Major literary movements and works of English literature, focusing on the writings of such authors as Chaucer, Spenser, Shakespeare, Donne, and others.

253 Survey of American Literature I (3:3:0). Major literary movements and works of American literature to 1877, focusing on the writings of such authors as Franklin, Poe, Emerson, Whitman, Hawthorne, Melville, Dickinson, Stowe, and others.

254 Survey of American Literature II (3:3:0). Major literary movements and works of American literature after 1877, focusing on such writers as Twain, Chopin, O'Neill, Frost, Faulkner, Stevens, Miller, Olsen, and others.

302 Advanced Composition (3:3:0). Prereq Completion of 45 cr hr, 3 cr hr of composition, 6 hr of literature of which 3 hr may be taken concurrently. Intensive practice in writing and analyzing such expository forms as the essay, article, proposal and technical or scientific report. The Schedule of Classes designates particular sections of ENGL 302 in the following broad areas: business, health sciences, humanities, natural sciences, social sciences. CAS majors must fulfill the composition requirement with ENGL 101 and ENGL 302.

309 Independent Writing (3:3:0). Practice in analyzing and writing such expository forms as the essay, memo, article, and technical and scientific reports, depending upon the needs of the individual student. (Not a remedial course.)

325 Dimensions of Literature (3:3:0). An intensive study of the basic concepts, questions and assumptions of the study of literature. All sections will address the study of genre and of literary history. Other issues such as author, region, ethnic, racial and sexual groups, and oral and popular culture will also be addressed in various sections of the course. Open to all majors; req of all English majors.

332 (300) Introduction to Film (3:3:0). Intro to film medium as an art form. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 300.

333 (330) American Folklife (3:3:0). Topics include folktales, personal narratives, legends, proverbs, jokes, folk songs, folk art, folk craft and folk architecture. Consideration of American ethnicity, community, family, festival, folklife in literature and oral history. Discussion of traditions in students’ own lives. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 330.

334 (331) Literary Approaches to Popular Culture (3:3:0). Emphasis on popular fiction and adaptation of popular prose genres to media which have strong verbal and visual elements. Relationship between verbal and nonverbal elements of such media as film, comics, and radio. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 331.

335, 336 (351,352) Shakespeare (3:3:0), (3:3:0). Twenty selected plays: first sem emphasizes histories and comedies; second sem, tragedies and romances. This
course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 351, ENGL 352.

337 Myth and Literature (3:3:0). A study of the ways in which the traditional mythologies have been reflected in American and English literature as themes, motifs, and patterns.

347 (314), 348 (315), 414, 415 Special Studies in English I, II, III, IV (3:3:0), (3:3:0), (3:3:0), (3:3:0). Prereq PoD. Seminar sequence primarily, but not exclusively, for candidates for grad with Distinction and Recognition in English, ordinarily to be taken in order. A systematic consideration of the nature and implications of literary understanding. What is involved in "understanding" a text, an author's style, a genre? What do we mean by "literary history"? Specific texts and contexts from different periods of English and American literature are studied in order to consider the virtues and limitations of various perspectives on literary experience, and their relation to other areas of humanistic learning.

Special Studies I:
A Single major work, studied systematically in several different ways. Emphasis on multiple critical perspectives, what each reveals or fails to account for.

Special Studies II:
The career of a major author: the gradual assumption of authority, development of themes and techniques, interaction of life and work, adjustment of artistic vision to cultural change.

Special Studies III:
An interdisciplinary cross-section of a particular historical moment: relations between literature and fine arts, theology, philosophy, social and political history, and scientific thought.

Special Studies IV:
A single theme or motif traced through many literary periods and in a variety of genres. Literary history as the evolution of the ways fundamental questions have been articulated.

360 (307), 363 (308) Special Topics in Literature (3:3:0), (3:3:0). A Study of literature by topics, such as women in literature, science fiction and literature of the avant garde. Topic changes each time the course is offered. May be repeated with PoD.

364 (303) Significant Authors (3:3:0). One or two major authors, such as Shakespeare, Dickens, Hardy, or Tolkien and C. S. Lewis, as announced. May be repeated with PoD.

366 (383) Jewish American Writers (3:3:0). Major Twentieth-century American Jewish writers, incl works by such authors as Roth, Singer, Friedman, Malamud, and Bellow. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 383.

367 (384) Literature of the Modern South: 1920 to the Present (3:3:0). Novels, short stories, drama, poetry, and essays of the American South, from post-War I to recent times; the work of Southern writers, incl Faulkner, Warren, Tate, Wright, Porter, McCullers, Styron, and O'Connor. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 384.

368 (386) Literature of Black America (3:3:0). Significant works of poetry, fiction, drama, and autobiography written by American black writers in the twentieth century, reflecting the black experience. Works by such authors as Toomer, Hughes, Wright, Brooks, Ellison, Baraka, and Bullins. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 386.

369 Women and Literature (3:3:0). An exploration of the experience of women as both authors of and subjects in imaginative literature. May be repeated once for cr when subtitle is different with PoD.

380 Recent American Fiction (3:3:0). American short story writers and novelists from World War II to the present, with emphasis on Mailer, Barth, Hawkes, Cheever, Oates, Gass, Kosinski, and others.

390 Recent American Poetry (3:3:0). Major American poets from World War II to the present, with emphasis on the work of such poets as Roethke, Wilbur, Dickey, Lowell, Merwin, Kinnell, and Ammons.

397 Introduction to Poetry Writing (3:3:0). Intro to the theory and practice of poetry writing. Original student work is read and discussed in class and in conferences with the instructor. Incl technical exercises in the craft of poetry and may incl reading assignments. Individual students may do some work in fiction or drama, but the course concentrates on poetry.

398 Introduction to Fiction Writing (3:3:0). Intro to theory and practice of fiction writing. Original student work is read and discussed in class and in conferences with the instructor. Incl technical exercises in the craft of fiction and may incl reading assignments. Individual students may do some work in poetry or drama, but the course concentrates on fiction. (Students who have taken ENGL 396 may not take this course.)

400 (342) Literature of the Middle Ages (3:3:0). Selected English narrative, dramatic and homiletic literature written between 1300 and 1500, exclusive of Chaucer. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 342.

401 (345) English Poetry and Prose of the Sixteenth Century (3:3:0). Poetry and prose of the early Renaissance in England. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 345.

402 (354) English Poetry and Prose of the Seventeenth Century (3:3:0). English poetry and prose from 1603 to 1688, excluding Milton. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 354.

404 (357) The Augustan Age (3:3:0). English literature from the late 17th century to the middle of the 18th century; emphasis on works of Dryden, Swift and Pope. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 357.

405 (358) The Age of Johnson (3:3:0). English literature of the late 18th century; readings from Dr. Johnson and his contemporaries with attention to the pre-Romantics. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 358.

406 (361) English Poetry of the Romantic Period (3:3:0). Works of the major poets of the Romantic period: Blake, Wordsworth, Coleridge, Byron, Shelley and Keats. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 361.

407 (362) English Poetry of the Victorian Period (3:3:0). Works of Tennyson, Browning, Arnold, Hopkins, Swinburne and the Pre-Raphaelites. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 362.

408 Special Topics: British Literary Periods (3:3:0). An in-depth study of a selected period of British literature. In addition to literary examples, materials may be chosen from the art, philosophy or popular culture of the time. May be repeated once for cr when subtitle is different, with PoD.

410 Technical and Report Writing (3:3:0). Prereq six cr of composition, including ENGL 302, and six cr in literature; or permission of the Division of Continuing Education. Intensive study and practice in various forms of technical writing, including formal and informal reports, proposals and technical correspondence. Emphasis on writing for a variety of audiences, both lay and informed, and on writing within various professional and organizational contexts.

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This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 381.

425 (382) Literature of the American Renaissance (3:3:0).
Major writers of the American Renaissance (1830–1865), with emphasis on the works of Emerson, Thoreau, Hawthorne, Melville, Whitman and Poe. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 382.

429 Special Topics: American Literary Periods (3:3:0). An in-depth study of a selected period of American literature. In addition to literary examples, materials may be chosen from the art, philosophy and popular culture of the time. May be repeated once for cr when subtitle is different, with PoD.

431 Medieval Intellectual Topics (3:3:0). (Same as HIST 431 and FRAN 431.) May be taken for cr by English or history or area studies majors. Examination of a selected topic in the intellectual history of the Middle Ages. Specific topic may vary. The primary emphasis is literary or historical, depending on the discipline of the instructor. Relevant material drawn from philosophy, theology, and art may be considered.

432 (393) Selections from the Literature of the Indian Subcontinent (3:3:0). Selected literary masterpieces in translation from the ancient and modern literature of the Indian continent, incl romances, plays and poetry from Sanskrit, Hindi, Tamil, Urdu and other literatures. (Course cr is accepted for the B.A. non-W req but may not be counted toward the req for the English major.) This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 393.

433 (394) Japanese Literature in Translation (3:3:0). Selected literary masterpieces in translation from ancient and modern Japan, incl romances, plays and poetry from The Tale of Genji, essays (The Pillow Book), classical poetry, noh and Bunraku plays, haiku poetry and modern fiction. Review of the genres and traditions represented by those masterpieces. (Course cr is accepted for the B.A. non-W req but may not be counted toward the req for the English major.) This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 394.

434 (395) Chinese Literature in Translation (3:3:0). Selected masterpieces of Chinese literature in translation, incl the Confucian Classics, ancient songs and poems, T’ang and Sung poetry and prose, Yuan and Ming plays, novels and short stories. (Course cr is accepted for the B.A. non-W req but may not be counted toward the req for the English major.) This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 395.

436 (377) Selected Continental Novels in Translation (3:3:0). (3:3:0). Selected European novels in translation. ENGL 436 concerns the continental novel from the 18th century to the end of the 19th century, and incl works of such writers as Balzac, Gogol, Stendhal, Turgenev, Flaubert, Dostoevski, Tolstoy and Galdos. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 377.

437 (378) Selected Continental Novels in Translation (3:3:0). ENGL 437 deals with the continental novel from the beginning of the 20th century to the present and incl such writers as Proust, Mann, Gide, Silone, Kafka, Sartre, Cela, Moravia and Grass. Attention to the influence of this literature on the novel in English. (Offered in cooperation with the Department of Foreign Languages and Literatures.) This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 378.

439 Special Topics: Non–British or American Literature (3:3:0). Study of selected topics, periods, genres or authors in Commonwealth or in Oriental literatures. May be repeated once for cr when subtitle is different, with PoD.

440 (353) English Renaissance Drama (3:3:0). Major dramas and dramatists of the English Renaissance, exclusive of Shakespeare. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 353.

443 (356) Restoration and Eighteenth–Century Drama (3:3:0). Restoration comedy of manners, sentimental comedy, neoclassical and bourgeois tragedy. Theories of drama and staging and on parallel developments in opera. Such writers as Wycherly, Farquhar, Etherege, Congreve and others. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 356.

444 (374) English and Irish Drama of the Twentieth Century (3:3:0). English and Irish drama from Yeats to Pinter. Plays by such authors as O’Casey, Synge, Eliot, Frye, Osborne, Wesker, Behan, Delaney and Pinter. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 374.

447 (389) American Drama of the Twentieth Century (3:3:0). American drama of the 20th century, with special attention to the plays of Eugene O’Neill, Thornton Wilder, Arthur Miller, Tennessee Williams and Edward Albee. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 389.

448 (375) Contemporary Drama (3:3:0). Representative plays of contemporary dramatists of Europe and America, with emphasis on dramatic styles such as realism, expressionism, and existentialism. In alternate semesters, authors such as Ibsen, Strindberg, Hauptmann, Shaw, O’Neill, O’Casey and others may be studied. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 375.

449 Special Topics in Drama (3:3:0). Study in depth of selected topics, periods or playwrights. May be repeated once for cr when subtitle is different with PoD.

450 (370) English Novel of the Eighteenth Century (3:3:0). The English novel from its beginnings through the turn of the 19th century. Works by such authors as Defoe, Richardson, Fielding, Sterne, Smollett, Scott and Austen. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 370.

452 (387) Development of the American Novel to 1914 (3:3:0). Major American novels of the pre–World War I period with emphasis on the works of Twain, Cooper, Hawthorne, Melville, Twain, Howells, James, Crane, Dreiser, Norris and others. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 387.

453 (371) English Novel of the Nineteenth Century (3:3:0). The English novel of the 19th century. Works by such authors as Dickens, Thackeray, Bronte, Trollope, Meredith and Hardy. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 371.

454 (388) Development of the American Novel since 1914 (3:3:0). The American novel from the end of World War I to the present, incl works by such authors as Fitzgerald, Hemingway, Faulkner, Dos Passos, Wolfe, Bellow and Nabokov. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 388.

456 (372) English Novel of the Twentieth Century (3:3:0). The English novel from the beginning of the 20th century to the present. Works by such authors as Conrad, Ford, Bennett, Forster, Lawrence, Joyce, Woolf, Huxley, Greene and others. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 372.

458 (465) Fiction Writing Workshop (3:3:0). Prereq ENGL 397 or 398 or equiv and Pol. Students must submit a typed manuscript at least one week before they intend to register.
For specific guidelines, consult the department's Course Description Booklet, the instructor, or the department secretaries. A workshop course: intensive practice in creative writing and study of the creative process. The course concentrates on a specialized literary type other than the short story or poetry (for example, playwriting, screenwriting, children's literature, travel literature, autobiography, the gothic novel, translation) and the concentration is announced in the department's Course Description Booklet before preregistration. Intended for students already writing original creative work. (By Pol, may be taken a second time for cr; the additional 3 hr, however, may not be counted toward the req for the English major. No more than a combined total of 9 hr may be taken in ENGL 464, 458 (465), 497 (466). Students who have taken ENGL 469 may take 464, 458 (465), or 497 (466) up to a combined total of 9 hr in all 4 courses.)

459 Special Topics in Fiction (3:3:0). Study in depth of selected topics, periods, or authors. May be presented once for credit when subtitle is different, with PoD.

462 (365) English Poetry of the Twentieth Century (3:3:0). English poetry from 1900 to present; emphasis on work of Hardy, Yeats, Lawrence, Graves, Auden, Thomas and Hughes. A work of fiction which employs poetic techniques, such as Joyce's Ulysses, may also be studied. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 365.

463 (385) American Poetry of the Twentieth Century (3:3:0). Emphasis on the work of Robinson, Frost, Stevens, Williams, Pound, Crane, Eliot and Lowell. A work of fiction employing poetic techniques, such as Faulkner's The Sound and the Fury, may also be studied. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 385.

464 Poetry Workshop (3:3:0). Prereq ENGL 397 or equiv and Pol. Students must submit a typed manuscript at least one week before they intend to register. For specific guidelines, consult the department's Course Description Booklet, the instructor, or the department secretaries. Intensive practice in the craft of poetry and study of the imagination in the creative process. Intended for students already writing original poetry. At the discretion of the instructor, technical exercises and assigned reading may be required. (By Pol, may be taken a second time for cr; the additional 3 hr, however, may not be counted toward the req for the English major. No more than a combined total of 9 hr may be taken in ENGL 458 (465), 464, 497 (466). Students who have taken ENGL 469 may take 458 (465), 464, or 497 (466) up to a combined total of 9 hr in all 4 courses.)

468 Special Topics in Poetry (3:3:0). Study in depth of selected topics, periods, or poets. May be repeated once for cr when subtitle is different with PoD.

471 (341) Chaucer (3:3:0). The major works of Chaucer, with emphasis on The Canterbury Tales. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 341.

472 (346) Spenser (3:3:0). Poetry of Edmund Spenser, with central emphasis on The Faerie Queene. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 346.

473 Special Studies in Shakespeare (3:3:0). Study in depth of one aspect of Shakespeare's art or critical issues surrounding his work. May be repeated once for cr when subtitle is different, with PoD.

474 (355) Milton (3:3:0). Milton's major poetic works, with emphasis on Paradise Lost. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 355.

477 Special Topics: British Authors (3:3:0). Study of one or two major figures in British literature. May be repeated once for cr when subtitle is different, with PoD.

478 Special Topics: American Authors (3:3:0). Study of one or two major figures in American literature. May be repeated once for cr when subtitle is different, with PoD.
503 Theory and Practice of Editing (3:3:0). Prereq 6 hr of English courses numbered above 300, incl one advanced writing course—309, 310, 397, 398, 458, 464, 489, 497—or PoD. Instruction in revising, editing and preparing specialized writing for printing. Emphasis on methods of achieving clarity, accuracy, and completeness. Lecture and discussion on editing and printing techniques, practical exercise in revision, layout and production.

504 Internship in Writing and Editing (3:0:0). Prereq Open to senior English majors and grad students pursuing the M.A. in English or the M.F.A. Contact the English Department one sem prior to enrollment. Internships are approved work-study positions in writing or editing established by the English Department with specific employers. Variable cr. Variable prereq.

507 Internship in Applied Linguistics (3:0:0). Prereq ENGL 582 and either ENGL 521 or EDCI 519. Contact the English Department one sem prior to enrollment. Internships provide experience working in a language teaching program or an educational research organization.

511 Styles and Modes in Literary History (3:3:0). An historical consideration (not a survey) of some of the principal styles, in prose and poetry, of English and American Literature.

513 Advanced Special Topics in English (3:3:0). Prereq 15 hr of advanced undergrad English courses and PoD or possession of the baccalaureate degree. An intensive study of selected topics in English and American literature.

520 (620) Descriptive Linguistics (3:3:0). An intro to the terminology and methodology of modern linguistic science, and a detailed structural analysis of English phonology, morphology and syntax. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 620.

521 (621) Applied Linguistics: Teaching English as Foreign Language (3:3:0). Prereq Linguistics (descriptive or historical, grad or undergrad). Theories and basic principles of the acquisition of a second language, especially as they relate to the English language, supplying students with methods of teaching English to speakers of other languages. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 621.

522 Modern English Grammar (3:3:0). Prereq A or B in ENGL 391, 485, or 520 or equiv. Overview of the structure of Modern English beginning with word classes and ending with transformational analyses of complex sentences. Most topics are introduced as problems of language description; in solving them, principles of syntactic argumentation are demonstrated as well. Students learn to tap their own intuitions about English in order to analyze grammatical structure.

551 Literary Criticism (3:3:0). Studies of major critical theories and techniques with emphasis on the 20th century.

556 (555) Literary Style (3:3:0). Theory and practical analysis of English literary style. Several methodologies, incl impressionistic, rhetorical and linguistic, are examined and applied to the language of various literary texts, incl essays, poems and novels.

557 Old English (3:3:0). Study of Old English language, incl its phonology, morphology, syntax, and lexis, aimed at preparing students to read Anglo–Saxon literature in its original form. Accompanied by reading from Anglo–Saxon prose and poetry of the 7th through the 11th centuries. Selections from The Anglo–Saxon Chronicle, Aelfric’s Homilies, The Legend of St. Andrew, and other prose works, as well as such verse as The Dream of the Road, The Seafarer and Judith, are read and translated.

564 Form of Poetry (3:3:0). Prereq ENGL 464 or equiv and Pol. Students must submit a typed manuscript of original poetry at least one week before they intend to register. For specific guidelines, consult the department’s Course Description Booklet, the instructor, or the department secretaries. Intensive study of and practice in the formal elements of poetry through the analysis of models and weekly or biweekly writing assignments. Intended for students already writing original poetry. Students study rhyme, meter, rhythm and other musical elements of poetry, lineation, stanza pattern, traditional and experimental forms, free verse and open form composition, lyric, narrative and dramatic modes.

566 (565) Form of Fiction (3:3:0). Prereq ENGL 465 or equiv and Pol. Students must submit a typed manuscript of original fiction at least one week before they intend to register. For specific guidelines, consult the department’s Course Description Booklet, the instructor, or the department secretaries. Intensive practice in the formal elements of fiction, through the analysis of models and weekly or biweekly writing assignments. Intended for students already writing original fiction. Students study description, narration, plot, dialogue, voice, point of view, style, epiphany and anti-fiction techniques.

581/PSYC 581 Psycholinguistics (3:3:0). Prereq An introductory linguistics or psychology course or Pol. Study of mental and psychological aspects of human language, incl aphasia, association, autism, language acquisition, verbal concept formation, and perception.

582 (580) Applied Linguistics (3:3:0). Prereq A or B in ENGL 391, 485 or 520 Pol. Study of the applications of linguistic science to the teaching of English language and literature. Attention is given to linguistic foundations of teaching English as a second language, findings of linguistics with regard to composition instruction, and ways in which linguistics can support the teaching of literature and literary style.

592 (392) History of the English Language (3:3:0). Intro to the history and development of the English Language, incl study of the Indo–European language family and various stages of the English language from Old and Middle English to Early and Recent Modern English and American English; emphasis on historical principles and theory of language change as it affects phonology, morphology, syntax and semantics.

European Studies Courses (EUST)

Area Studies

300 Foundations of European Civilization (3:3:0). Prereq 24 hr or Pol. An examination of Greek, Roman, and Judeo–Christian origins of Europe’s intellectual and cultural traditions, concentrating upon those political ideas, philosophical precepts, and cultural values basic to European thought.

350 Classicism and Romanticism (3:3:0). Prereq EUST 300 or Pol. An examination of Classicism and Romanticism through literary and other cultural forms of expression in 17th, 18th and 19th-century Europe.

400 The Arts in Modern European Culture (3:3:0). Prereq EUST 300 or Pol. An examination of how the arts interact in reflecting historical, intellectual, and aesthetic aspects of 19th and early 20th-century European culture. Representative examples from music, theater, dance, architecture and the visual arts.

450 The Twentieth Century in Europe (3:3:0). Prereq EUST 300 or Pol. An examination of the main currents of European life and thought in the 20th century. Study of the principal influences and events of the period, culminating in an assessment of contemporary European problems and values.

Finance Courses (FNAN)

School of Business Administration

If a student takes noncore, upper–level business administration courses prior to acceptance to junior standing, those courses will not count on an undergraduate
degree application for any major in the School of Business Administration (except as general elective credit).

301 Financial Management (3:3:0). Prereq ECON 103, 104, ACCT 201, 202, DESC 202. An intro to the management of a firm's financial resources given wealth maximization decision criteria. Incl working capital management, fixed-asset investment, cost of capital, capital structure, and dividend decision analysis. Lecture, problems and discussion.

311 Principles of Investment (3:3:0). Prereq FNAN 301. An introduction to the analysis of the valuation of equity and debt securities given modern capital market theory. Also included is a discussion of portfolio analysis as related to the valuation of securities. Lecture, discussion and computer-assisted research.

321 Financial Institutions (3:3:0). Prereq FNAN 301 and ECON 310. A discussion of the basic objectives of financial institutions in light of industry structure and regulatory environment, and the decision variables which management should concentrate upon in achieving its objectives. Incl the role that financial institutions play in the allocation of funds within the financial markets. Lecture, discussion and computer-assisted research.

401 Advanced Financial Management (3:3:0). Prereq FNAN 301. An analysis of decision-making within the firm emphasizing the conceptual structure of problems and the use of advanced analytic techniques. Specific topics covered incl current asset management, capital budgeting, capital structure, portfolio selection and dividend policy, long-term financing, mergers and corporate planning models. Lecture, discussion, case analysis.

411 Investment Analysis and Portfolio Management (3:3:0). Prereq FNAN 311. An analysis of the modern techniques of portfolio management incl the evaluation of standards for the selection of individual securities for inclusion in or deletion from portfolios. Risk-return analysis for portfolios and portfolio performance measures are presented. Lecture, discussion, computer-assisted research.

412 Futures Markets (3:3:0). Prereq FNAN 311 or Pol. An intro to options markets, commodity markets and financial futures markets as they function to provide pricing mechanisms and alternative investment vehicles. Lecture, discussion, computer-based research.

421 Money and Capital Markets (3:3:0). Prereq FNAN 301 and ECON 310. A discussion of how financial markets are organized, their role in the allocation of funds to various market segments, and the interaction between markets. Topics covered incl aggregate flow of funds analysis as well as money markets, government markets, corporate markets, and mortgage markets. Lecture, discussion, computer-assisted research.

491 Seminar in Finance (3:3:0). Prereq FNAN 311 and 321 or 401. A seminar in contemporary developments in finance, including financial management, financial institutions, financial markets and investment management. Lecture, discussion, simulation, computer-assisted research.

499 (formerly BUAD 499) Independent Study (1-3:0:0). Prereq Finance majors with at least nine upper-level Finance cr hr. Research and analysis of selected problems or topics in Finance. Must be arranged with an instructor and receive written approval of chair before registration. Written report required. May be repeated to a maximum of six hr if topics vary.

Relevant material drawn from philosophy, theology and art may be considered.

510 Materials and Methods of Scholarly Research (3:3:0). Prereq Grad stdg or PoD. Use of basic bibliographical tools and methodologies necessary to do scholarly research in French, German and Spanish. Taught in cooperation with the University library staff. Conducted in English.

French Courses (FREN)

Foreign Languages and Literatures


101 Elementary French I (3:3:1). Designed for students with no knowledge of French. Intro to French, incl elements of grammar, vocabulary, oral skills, listening comprehension and reading. Lab work req.

102 Elementary French II (3:3:1). Prereq FREN 101 or PoD. Continuation of FREN 101. Lab work req.

105 Review of Elementary French (3:3:1). Prereq Appropriate placement score or PoD. Review for students who have studied French previously. May not be taken for cr in combination with 101, 102 or 109. Lab work req.


201 Intermediate French I (3:3:1). Prereq FREN 102, 105 or 109, or appropriate placement score, or PoD. Further development of skills in listening, speaking, reading and writing. FREN 201 and 202 must be taken in sequence. Lab work req.

202 Intermediate French II (3:3:1). Prereq FREN 201, or appropriate placement score, or PoD. Application of language skills to reading, composition and class discussion. Lab work req.

209 Intensive Intermediate French (6:6:2). Prereq FREN 102 or 105 or 109, or appropriate placement score, or PoD. Equiv to FREN 201 and 202, taught in a single sem. May not be taken for cr in combination with FREN 201 or 202. Lab work req.


300 Study Tour in France (1-6:0:0). Prereq FREN 202 or Pol. Directed study tour of cultural and literary points of interest in France. Briefing sessions and a reading selection are given before the trip. All papers and examinations req for cr are due by the end of the Summer Session.

325 Major French Writers (3:3:0). Prereq ENGL 101 or equiv or Pol. Study of the works of major French writers. Writers to be studied vary. Course work in English. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr with PoD.

329 Problems of Western Civilization in French Literature (3:3:0). Prereq ENGL 101 or equiv or Pol. Basic philosophical, moral, social and political dilemmas reflected in the literature of major French writers. Course work in English. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr with PoD.


353 Advanced Composition and Conversation (3:3:0). Prereq FREN 252 or 351 or Pol. Development of speaking and writing skills. Oral and written reports on current events.


Foreign Language Courses (FRLN)

Foreign Languages and Literatures

431/ENGL 431 and HIST 431 Medieval Intellectual Topics (3:3:0). May be taken for cr by English, history, or area studies majors. A topic in the intellectual history of the Middle Ages. Specific topic varies. Emphasis is literary or historical, depending on the discipline of the instructor.

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Practice in discriminating French phonemes and allophones and in transcribing in phonetic symbols. Recitation of poems and rhythmic prose. Enrollment limited to 15.

356 Interpretation (3:3:0). Prereq FREN 202 or Pol. Initial orientation and practice in the techniques of simultaneous, consecutive, and contract interpretation. Rec for students who wish to improve language skills or intend to use them professionally.

357 Translation of Texts in Specialized Fields (3:3:0). Prereq FREN 202 or Pol. Translations from French to English, English to French, of texts selected from current periodicals and newspapers in various fields. Rec for students who wish to improve language skills.

375 French Civilization: From Ancient Gaul to the French Revolution (3:3:0). Prereq FREN 202 or Pol. Study of contributions of France to world civilization; emphasis on development of ideas, arts, sciences and institutions. Offered in alternate years.

376 French Civilization: From the Revolution to Contemporary France (3:3:0). Prereq FREN 202 or Pol. See FREN 375.

377 Survey of French Literature: Middle Ages to 1800 (3:3:0). Prereq FREN 202 or Pol. French literature through the centuries, with reading and analysis of representative texts of the major authors. Offered in alternate years. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.


381 Explication de Textes (3:3:0). Prereq 15 sem hr of French or Pol. A structured approach to the reading and analysis of French literary texts.

391 French for the Business World I (3:3:0). Prereq 15 sem hr or Pol. Intro to style of use in commercial, private and official formats in correspondance and various common business documents. Emphasis on written exercises. Designed to satisfy the needs of students equipping themselves for multinational business and foreign service.


405 French Literature of the Renaissance (3:3:0). Prereq 15 sem hr of French or Pol. Development of the humanistic tradition in France during the 16th century, especially as reflected in the works of Rabelais and Montaigne. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

413 French Literature of the Seventeenth Century: Classical Drama (3:3:0). Prereq 15 sem hr of French or Pol. Study of the dramatic literature of the 17th century. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

414 French Literature of the Seventeenth Century: Prose and Poetry (3:3:0). Prereq 15 sem hr of French or Pol. Reading and analysis of representative texts of the major authors. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

421 French Literature of the Eighteenth Century: Montesquieu and Voltaire (3:3:0). Prereq 15 sem hr of French or Pol. Study of Montesquieu, Voltaire and other writers of the first half of the century. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

422 French Literature of the Eighteenth Century: Diderot and Rousseau (3:3:0). Prereq 15 sem hr of French or Pol. Study of Diderot, Rousseau and other writers of the second half of the century. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.


432 French Literature: 1850-1900 (3:3:0). Prereq 15 sem hr of French or Pol. The poetry, theatre, and novel of the Realist, Naturalist and Symbolist movements. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

441 Twentieth-Century Prose Fiction (3:3:0). Prereq 15 sem hr of French or Pol. Principal literary trends in contemporary French literature; emphasis on evolution of the novel from Proust and Gide to Beckett and the “Nouveau Roman.” May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

442 Twentieth-Century Drama and Poetry (3:3:0). Prereq 15 sem hours of French or Pol. French drama from Surrealism to the “Nouveau Theatre.” French poetry from Symbolism to contemporary poets. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

451 Writers of French-Speaking Africa and the Caribbean (3:3:0). Prereq 15 sem hr of French or Pol. Study of selected poems, plays, tales and novels expressing the culture and aspirations of the peoples of Africa and the Caribbean. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May also be taken to meet the non-W req.

452 French-Canadian Literature (3). Prereq 15 sem hr of French or PoD. A study of the Francophone literature of Canada with emphasis on contemporary works. May be taken toward fulfillment of the general req in literature for baccalaureate degree.


480, 481 Special Topics (3:0:0), (3:3:0). Prereq 15 sem hr of French or Pol. Study in depth of a selected literary theme, topic, period or genre. May be repeated for cr with PoD.

490, 491 Independent Study (1-3:0:0), (1-3:3:0). Prereq 84 hr as a major in French and PoC. Research and analysis of a selected problem in literature or linguistics in consultation with a member of the department. Only 6 hr of independent study may be applied to fulfillment of req in the major.

497, 498 Senior Honors Tutorial (3:0:0), (3:3:0). Prereq 84 hr as a major in French, with GPA of 3.000 and 3.000 in the major field. Students who meet these req are admitted to candidacy upon submission of a letter of application to the departmental Honors Committee in the second half of the junior year, supported by a faculty rec and an interview by and with the approval of the Honors Committee. In the first sem, weekly meetings with a faculty member to discuss readings from a comprehensive list prepared by the French faculty. In the second sem, independent research and completion of an honors essay under the supervision of a member of the French faculty.

515 Medieval French Literature (3:3:0). Intensive study of the outstanding literary works of the Middle Ages. Course work in French.


518 Studies in Eighteenth-Century Literature (3:3:0). Selected writers, works, themes or trends of French Literature in the 18th century. Content varies. Course work in French. May be repeated for cr with PoD.

519 Studies in Nineteenth-Century Literature (3:3:0). Selected works, themes, genres and authors of 19th century
525 Studies in Modern French Literature (3:3:0). Selected writers, works, themes or trends of French literature in the modern era. Content varies. May be repeated for cr with PoD. A maximum of 6 hr of cr may be earned. Course work in French.

550, 551 Special Topics (3:3:0), (3:3:0). Specialized topic relating to French culture and literature. Content varies. Course work in French.


561 Old French (3:3:0). Study of Old French phonology, morphology, syntax and lexicon, aimed at preparing students to read medieval French literature in original versions. Linguistic study complemented by reading of Old French verse and prose texts from the 9th through the 13th centuries.


576 Advanced Translation (3:3:0). Advanced work in translation of topics selected from the humanities, the social and political sciences. Comparative terminology, sight translation and precis writing. The importance, function and techniques of documentation in translation. Translations from French to English and English to French.


Also see FRLN listing.

Geographic and Cartographic Sciences Courses (GECA)

Public Affairs

520 Geography for Teachers (3:3:0). Prereq Grad stdg or PoD. Emphasis on problems and techniques in teaching geography and current developments in research, methodology, and philosophy in the discipline.

540 Medical Geography (3:3:0). Prereq Grad stdg or PoD and a course in statistics. Spatial approaches to the study of health and disease. Topics covered include disease ecology, disease diffusion, and geographical perspectives on improved health care delivery.

551 Thematic Cartography (3:3:0). Prereq Grad stdg or Pol. Analysis of the nature of perceptual organization and visual systems in thematic map communication portrayal, graphic handling, and analysis of data.

553 Geographic Information Systems (3:3:0). Prereq Course in computer science and grad stdg, or PoD. Sources of digital geographic information, methods of storage and processing for cartographic display, and geographical analysis.

554 History of Cartography (3:3:0). Prereq Grad stdg or PoD. History of cartographic portrayal of the earth from ancient times through the 19th century, with emphasis on the interrelation of human culture, technological development, and geographical knowledge as reflected in maps.

562 Analytic Photogrammetry (3:3:0). Prereq GEOG 414, a course in matrix algebra and grad stdg, or PoD. Analytic treatment of photogrammetric problems, incl least squares adjustments, image orientation refinements, collinearity equation, resection, relative orientation, and analytic aerotriangulation.

579 Remote Sensing (3:3:0). Prereq Course in physical geography or geology and course in aerial photo interpretation or Pol. Analysis of the nature of electromagnetic radiation, principles and operations of sensors, techniques and systems of correction, enhancement, and production of imagery. Interpretation and applications in geomorphic, atmospheric, hydrologic, vegetation, land use and regional analysis.

583 Spatial Dynamics of Political Systems (3:3:0). Prereq Grad stdg or Pol. Topics incl territoriality, reapportionment, spatial allocation of public facilities, perception of boundaries. Emphasis on the spatial impact of political process upon land use.

Geography Courses (GEOG)

Public Affairs


102 Physical Geography (3:3:0). Interrelated process affecting the global distribution and character of climate, soils, vegetation, hydrology, and landforms; elements of mapping.

103 Cultural Geography (3:3:0). Study of relationships between geography and human population distribution, cultural patterns, and economic development.

110 Maps and Map Reading (3:3:0). Reading, interpretation, and analysis of a broad variety of maps.

280 Geography of Virginia (3:3:0). Natural and cultural forces of Virginia. Study of regional makeup and analysis of human and environmental characteristics.

301 Political Geography (3:3:0). Prereq 24 hr. Structures and processes involved in the creation of political space at all levels—city, county, state, national, and international. Emphasizes interrelations between geographical-political units and problems created by overlapping units.

303 Conservation of Resources and Environment (3:3:0). Prereq 24 hr. Analysis of spatial aspects of world resources and problems resulting from their unequal distribution or wise use. Population growth, its implications for resource use, and pollution problems are stressed.

304 Geography of Population: Patterns and Problems (3:3:0). Prereq 24 hr. Spatial distribution of population, its causes and effects, and the changing patterns resulting from population mobility. Emphasis on spatial characteristics of variables such as age, sex, race, education, and income. Population problems such as crowding and poverty are viewed in the spatial context.

305 Economic Geography (3:3:0). Prereq 24 hr. Analysis of the pattern of distribution of world economic activity, the spatial economics behind this pattern, and the influence of this distribution upon other spatial systems.


307 Agricultural Geography (3:3:0). Prereq Combination of 6 hr of geography and economics or Pol. Survey of major agricultural systems, incl production, planning, and distribution, that dominate the food production patterns of the earth. Interaction of man, the land, and the environment that limits and delimits the production of various agricultural products. Intro to nat and cultural constraints on the production of food.
previous course work into a comprehensive disciplinary framework and to do in-depth study of some particular aspect of geography. The format varies but stresses field work and readings in the current literature, history, and research techniques of the discipline.

420 Physiography of North America (3:3:0). Prereq GEOG 102, 3 additional hr of geography or geology, or Pol. Physiographic features of the North American continent, their spatial distribution and their influence on the cultural, demographic, and economic development of the U.S. and Canada.

430 Land Use Geography (3:3:0). Prereq 6 hr of geography to include one physical geography course, or Pol. An analysis of the different categories of land use, the associations and regional distribution of agricultural land uses, the spatial distribution and competition of urban-suburban land uses and the need for an evaluation of land capabilities.

480 Internship (2-5:0:0). Prereq Open only to authorized majors with 84 hr. Internships are approved work-study programs with specific employers. Cr is determined by department. Contact Department one sem prior to enrollment.

499 Independent Study in Geography (1-3:0:0). Prereq Open only to geography majors with 54 hr and Pol and Pol. Individual study of a selected area of geography. Directed research paper is req.

Geology Courses (GEOL)

Geology

101 Physical Geology (4:3:3). Survey of the geological features of the earth. GEOl 101 and 102 may be used to satisfy the lab science requirement for the B.A. degree. Lab may incl field trips.

102 Historical Geology (4:3:3). Prereq GEOl 101 or 111. History and development of the earth as revealed through a sequence of geological events and processes. Subjects incl geological origin of the earth, succession of life forms, geological ages and time. GEOl 101 and 102 may be used to satisfy the lab science requirement for the B.A. degree. Lab may incl field trips.

103 Geology of National Parks (2:2:0). Geological evolution and features of national parks.

104 Introduction to Field Geology (2:0:0). Prereq GEOl 101. Four weekend trips to selected locations in Virginia and adjacent states. Geological trips are preceded by an evening lecture. Students must pay costs (incl transportation fee).


106 Environmental Geology (3:3:0). Prereq GEOl 101. Investigation of geological principles directly related to environmental problems and geological causes and effects of nat disasters, geology of nat resources, geology of land use planning, and geology as related to health problems.

107 Gemstones I. Colored Gemstones (2:1:3). Techniques used in the identification and preparation of colored gemstones, the economic factors which control their production, and the geological processes by which colored gemstones are formed.

108 Field Techniques I (1:0:2). Prereq GEOl 101. Basic use of Brunton Compass and topographic maps for the purpose of location and making geologic measurements.

111 Physical Geology for Science Majors (4:3:3). Survey of the nature of the earth, and the means by which this information is determined. GEOl 111 and 102 may be used to satisfy the lab science requirement for the B.A. degree. Lab may incl field trips.

201 Mineralogy (4:3:3). Prereq GEOl 101, 102.
Crystallographic, optical, chemical, and physical properties of minerals. Lab may incl field trips.

202 Invertebrate Paleontology (3:2:3). Prereq GEOL 101, 102. Classification, evolutionary trends, and distribution of the common invertebrate fossils. Lab incl field collection of fossils, their preparation and identification.

204 Geomorphology (3:2:3). Prereq GEOL 101 or GEOG 102. Study of processes that occur at the earth's surface and the landforms that result. Lab stresses the recognition, description and analysis of landforms from pictures, maps, and aerial photos. Lab may incl field trips.

206 Introduction to Geological Research I (1-3:1-3:0). Prereq GEOL 101. Discussion of many research programs in geology, presented by staff and visiting geologists. Each scientist discusses an unsolved problem, methods now being used to solve the problem, and possible solutions that are being evaluated.

207 Petrology (4:3:3). Prereq GEOL 101, 102, 201. The genesis, classification and recognition of igneous, sedimentary and metamorphic rocks. Lab may incl field trips.

208 Gemstones II. Diamonds (2:1:3). Prereq GEOL 101, 201. Techniques used in the identification and preparation of diamonds and diamond substitutes, the economic factors which control their production, and the geological processes by which diamond deposits and their substitutes are formed.

301 Structural Geology (3:2:3). Prereq GEOL 101, 102, 201; knowledge of high school algebra, plane geometry, and trigonometry; or equiv competency exam req. Igneous and sedimentary rocks in folded, faulted, and metamorphosed terranes. Lab may incl field trips to structurally deformed parts of the Appalachian Mountains.


304 Stratigraphy (3:2:3). Prereq GEOL 101, 102, 201, 207 or 302. Principles of stratigraphic analysis with reference to the geology of various areas. Lab incl analysis of surface and sub-surface stratigraphic data, and a field exercise. Lab may incl field trips.

305 Optical Mineralogy (4:3:3). Prereq GEOL 101, 102, 201, 207. Optical properties of minerals as a means of identification. Minerals are studied as crushed fragments, oriented mineral sections, and rock samples with the polarizing microscope. Intro to use of Universal Stage for three-dimensional rotations of mineral specimens under microscopic examination.


307 Micropaleontology (3:2:3). Prereq GEOL 101, 102, 202. Classification, evolutionary trends, and stratigraphic uses of microfossils. Lab incl identification and interpretation of fossil assemblages, and may incl field trips.


309 Introduction to Oceanography (3:3:0) (same as BIOL 309). Prereq GEOL 101 or 111, BIOL 103 or 104 or 113 or 114 or Pol. Intro to physical, chemical, biological and geological aspects of the oceanic environment. May incl field trip to the Atlantic Coast.

310, 311 Geological Field Studies (2:0:0), (2:0:0). Prereq GEOL 101, 102, 201. One or more field trips totaling 15 to 20 days in an area to be specified in the class schedule. Involves camping out (weather permitting). Students must pay costs (incl transportation fee).

312 Geology of Terrestrial Planets (2:2:0). Prereq GEOL 101, 102; ASTR 103 or 105. Physical and chemical nature of the Earth, the other terrestrial planets and their satellites. Incl discussions of the origin and evolution of the inner planets, with the Earth as a frame of reference.

313 Hydrogeology (3:3:0). Prereq GEOL 101 or GEOG 102; MATH 113; CHEM 211. Geological and hydrologic factors controlling the occurrence, distribution, movement, quality and development of groundwater. Environmental considerations.

314 Sedimentary Facies Analyses (3:3:0). Prereq GEOL 101, 102, 201, 202, 207 or 302. Analysis of modern depositional systems and environments with the purpose of developing analogs for the recognition of ancient sedimentary environments. May incl field trips.

315 Introduction to Geological Research II (1-3:1-3:0). Prereq GEOL 101, 102, 201, 202. Discussions of a particular research program in geology, presented mostly by the teacher. Topic is designated in the class schedule. May incl field trips.

401 Igneous and Metamorphic Petrology (4:3:3). Prereq GEOL 101, 102, 201, 207, 305, CHEM 211–212, or Pol. Origin and evolution of igneous and metamorphic rocks; emphasis on principles of inorganic chemistry applied to crystalline rocks. Lab emphasizes study of rock fabric and role of coexisting minerals in this section. Lab may incl field trips.


403 Geochemistry (3:3:0). Prereq GEOL 101, 102, 201, 207; CHEM 211–212. Stable isotope geochemistry, crystal geochemistry, geochronology, water geochemistry, organic geochemistry, and the geochemistry of rocks.


405 Geology of Mineral and Energy Resources (3:3:0). Prereq GEOL 101, 102, 201, 207, 301. Topics incl metallic and nonmetallic ore deposits, fossil fuels, alternate energy resources, and methods by which each is used. May incl field trips.

406 Introduction to Geological Research III (1-3:1-3:0). Prereq GEOL major with 80 cr hr and PoC. Discussions of a particular research program in geology, presented mostly by the students. Topic is designated in the class schedule. May incl field trips.


408, 409 Practicum for Geology Laboratories (1:1:3), (1:1:3). Prereq GEOL major with at least 80 cr hr and PoC. A study of the techniques used to make the geology lab an effective component in geological education. Discussions of space utilization, equipment selection and maintenance, and the development of testing materials, supplemented by experience in the operation of a lab section of a 100 to 300-level geology course.

410, 411 Special Projects in Geology (2:0:5), (2:0:5). Prereq GEOL majors with 80 cr hr and PoC. Geologic research conducted by the student. Incl a literature search, conferences, and field and/or lab work. Written and oral reports req.

417 Geophysics (3:3:0). Prereq GEOL 101, 102, 201, 301; MATH 113, 114; PHYS 250 or 341. Seismological and gravitational theory and application to understanding the earth's interior.

500, 501 Selected Topics in Modern Geology (1-3:1-3:0) (1-3:1-3:0). Prereq Baccalaureate degree in geology or Pol. Lecture/lab/field trip. Topic is designated in the class schedule.

514 Biostratigraphy and Biofacies Analysis (4:3:3). Prereq Baccalaureate degree in geology or Pol. Use of fossils in correlating and dating rock units in various fields of energy.

http://catalog.gmu.edu
exploration. Relationships between fossils and paleo-environments. May incl field trips.

515 Advanced Structural Geology (4:3:3). Prereq Baccalaureate degree in geology or Pol. The concepts of stress and strain in rock materials, and the application of this theory to understanding complex three-dimensional structures in deformed rocks. Emphasis is placed on a quantitative approach to resource deposits. May incl field trips.

516 Appalachian Stratigraphy (3:3:0). Prereq Baccalaureate degree in geology or Pol. Analysis of the stratigraphy and tectonics of sedimentary rocks of Appalachian Mountain system with emphasis on the stratigraphic provinces that contain energy resources.

German Courses (GERM)

Foreign Languages and Literatures


101 Elementary German I (3:3:1). Designed for students with no knowledge of German. Intro to German, incl elements of grammar, vocabulary, oral skills, listening comprehension, and reading. Lab work req.

102 Elementary German II (3:3:1). Prereq GERM 101 or PoD. Continuation of GERM 101. Lab work req.

105 Review of Elementary German (3:3:1). Prereq Appropriate placement score or PoD. Review of elements of German for students who have studied German previously. May not be taken for cr in combination with GERM 101, 102, or 109. Lab work req.

109 Intensive Elementary German (6:6:2). Equiv to GERM 101, 102, taught in single sem. Req for students who desire an intensive intro to German. May not be taken for cr in combination with GERM 101, 102, or 105. Lab work req.

201 Intermediate German I (3:3:1). Prereq GERM 102, 105, or 109, appropriate placement score, or PoD. Further development of skills in listening, speaking, reading and writing. GERM 201 and 202 must be taken in sequence. Lab work req.

202 Intermediate German II (3:3:1). Prereq GERM 201, appropriate placement score, or PoD. Application of skills to reading, composition and discussion. Lab work req.

209 Intensive Intermediate German (6:6:2). Prereq GERM 102, 105, 109, or appropriate placement score, or PoD. Equiv to GERM 201 and 202, taught in a single sem. May not be taken for cr in combination with GERM 201 or 202. Lab work req.

301 German Culture and Civilization (3:3:0). Prereq 54 hr or Pol. Development of German civilization from 18th century to the present. German cultural contributions to world civilization. Taught in English.

302 Germany Today (3:3:0). Prereq 54 hr or Pol. Contemporary German life—its major aspects, problems, and goals, seen from the West German perspective. Taught in English.

310 German Conversation and Composition (3:3:0). Prereq GERM 202 or equiv. Development of fluency in speaking and proficiency in writing German through discussion, reports, and compositions based on texts dealing with contemporary events and issues.

312 Practical Stylistics (3:3:0). Prereq GERM 202 or equiv or Pol. Presentation of the main stylistic and idiomatic features of German. Practice of these features (synonyms, idiomatic expressions, different levels of style).

313 German for the Business World (3:3:0). Prereq GERM 202 or equiv or Pol. Introduction to the terminology and structural features of business German. Emphasis on acquiring vocabulary and on developing facility in reading German business articles and correspondence. Practice in preparing letters and forms used in routine business transactions.

325 Major German Writers (3:3:0). Prereq ENGL 101 or equiv or Pol. Works of major German writers in translation. Writers to be studied vary. Course work in English. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr with PoD.

340 Survey of German Literature (3:3:0). Prereq GERM 202 or equiv. Req for German majors. Overview of the history of German literature from its beginnings to 1880. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

350 Early German Literature (3:3:0). Prereq 15 hr of German or Pol. German literature from the heroic saga to the advent of the Enlightenment, with primary emphasis upon the medieval epic and Minnesang, and the drama and picturesque novel of the Baroque age. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

360 The Literature of German Romanticism (3:3:0). Prereq 15 hr of German or Pol. Background and some theory of German Romanticism, selected poetry and prose. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

370 German Literature: 1830-1880 (3:3:0). Prereq 15 hr of German or Pol. Study of the literature of Young Germany, Biedermeier and Poetic Realism; prose, drama, and lyric poetry. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

415 Advanced German Grammar (3:3:0). Prereq 18 hr of German or Pol. Systematic approach to the grammar of modern German. Application of theoretical knowledge in closely guided and supervised written and oral exercises.

420 Linguistics of Modern German (3:3:0). Prereq 18 hr of German or Pol. Study of the German language introducing the principles of modern linguistics. Analysis of German phonology, morphology, and syntax. Particularly valuable to the student who intends to teach or undertake graduate study in German.

440 German Drama in the Age of Classicism (3:3:0). Prereq 15 hr of German or Pol. Dramatic literature of the Enlightenment, Sturm und Drang, Classicism, and early Romanticism. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

441 Goethe (3:3:0). Prereq 15 hr of German or Pol. Poetry, drama (incl Faust), and some prose, in the context of Goethe's life and thought. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

450 Modern German Literature: 1880-1924 (3:3:0). Prereq 15 hr of German or Pol. Naturalism, Impressionism, the works of fin-de-siecle writers, and Expressionism. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

451 Modern German Literature: 1925 to the Present (3:3:0). Prereq 15 hr of German or Pol. Literary trends since 1925. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

480 (380) Special Topics in German Literature (3:3:0). Prereq 15 hr of German or Pol. German literature by topics or genres, such as literature of revolt, literature in lied, and operas, major types of poetry, the novella. Topic varies. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr with PoD.

490, 491 Independent Study (1-3:0:0). (1-3:0:0). Prereq German majors with 84 hr and PoC. Research and analysis of a selected problem in literature or linguistics in consultation with a department member. Maximum of six hr of independent study may be applied to fulfillment of req in the major.

497, 498 Senior Honors Tutorial (3:0:0). (3:0:0). Prereq German majors with 84 hr and a GPA of 3.00 and 3.00 in the
major field. Students who meet these req are admitted to candidacy upon submission of a letter of application to the department Honors Committee in the second half of the junior year, supported by a faculty rec and an interview by and with the approval of the Honors Committee. In the first sem, weekly meetings with a faculty member to discuss readings from a comprehensive list prepared by the German faculty. In the second sem, independent research and completion of an honors essay under the supervision of a member of the German faculty.

518 Studies in Eighteenth- and Early Nineteenth-Century German Literature (3:3:0). Major authors, movements, and themes in eighteenth and early nineteenth—century German literature. Literary theory and practice, historical background, and critical reception. May be repeated for cr with PoD.

525 Studies in Modern German Literature (3:3:0). Writers, themes, or genres of modern German literature. May be repeated for cr with PoD.

550 Special Topics (3). Study of a special topic in the area of German language, literature, or culture. Specific topics are announced in advance. May be repeated for cr with PoD.

560 History of the German Language (3:3:0). Development of the German language from the eighth century to the present. Phonological, morphological, and syntactic structures characteristic of the various stages of development.

Government and Politics Courses (GOVT)

Public Affairs


103 Introduction to Democratic Government (3:3:0). Analysis and comparison of American presidential and British parliamentary forms of democratic government, examined in light of basic concepts and institutions of democracy. Subdivided into GOVT 101, intro concepts basic to democracy, and GOVT 102, comparison and analysis of American and British systems. May be taken separately. To register for both, enroll in GOVT 103. GOVT 102 and GOVT 103 are not open to students who have completed a course in American national government.

132 Introduction to International Politics (3:3:0). Nature of international politics; approaches to study of international politics; states and nonstate actors in international system; patterns of action and interaction among nation–states; international institutions; major global issues.

133 Introduction to Comparative Politics (3:3:0). Intro to the methods and subject matter of comparative political analysis: the major issues of political systems, the setting of politics, participation in politics, government structures, the policy–making process, and the evaluation of political performance.


241 Intro to Public Administration (3:3:0). Prereq GOVT 103 or Pol. Administrative structure and processes, organization theory, administrative behavior, personnel, decision making, communications, leadership, management, budgetary processes, and administrative responsibility.

243-244 America in the Global System (3:3:0). Prereq GOVT 132. Courses must be taken in sequence. Policies and role of the United States in the world community. Emphasis on analysis of internal and external factors that shaped conduct of the United States in the global system from independence to present. Structure of foreign policy making; selected major issues in American foreign policy.


300/PHYS 300 Nuclear Weapons: Technology and Politics (3:3:0). Prereq 54 hrs or Pol. A study of the history and development of nuclear weapons and nuclear strategy, the physical basis of nuclear weapons and their biological and physical effects, the effects of a nuclear war and the possible effectiveness of civil defense, the possibility of limited and winnable nuclear wars, arms control, nuclear proliferation, and public opinion on nuclear issues. This course may not count toward the requirements of the physics major.

301 Public Law and the Judicial Process (3:3:0). Prereq 54 hr. American judicial organization and operation, role of the Supreme Court in policy formation, and selected constitutional principles.

303 Contemporary Constitutional Issues (3:3:0). Prereq 54 hr. Contemporary issues in the application of basic American constitutional principles. U.S. courts' interpretation and clarification of constitutional rights and liberties in such areas as First Amendment freedoms, equal protection of the laws, state and national interrelations within the federal system, and social and economic protection and regulation.

305 Contemporary American Federalism (3:3:0). Prereq GOVT 103, 204. Legal, administrative, fiscal, and political dimensions of evolving American federalism.

307 Legislative Behavior (3:3:0). Prereq GOVT 103. Organization, processes, functions, and roles of the legislature and its members—the U.S. Congress. Incl state legislatures and cross-national comparisons as time and resources permit.

308 The American Presidency and Chief Executive (3:3:0). Prereq GOVT 103. Institutions, authority and duties of the American presidency; organization of the executive staff and office; electoral trends; tactics of presidential influence; relations with other governmental and political institutions; comparison with other selected chief executive positions.

309 Government and Politics of Metropolitan Areas (3:3:0). Prereq GOVT 204 and 54 hr. Government, politics, and problems of metropolitan centers and surrounding areas.


312 Political Parties and Elections (3:3:0). Prereq GOVT 103. Characteristics and functions of political parties, influence of parties and other political forces on electoral decisions, emphasis on parties' inability or ability to hold government accountable to citizens.

318 Interest Groups and the Political Process (3:3:0). Prereq GOVT 103. The role, internal operations, strategies and activities of interest groups. Evaluation of their ability to enable citizens to influence or control government, and to enhance the democratic process. Consideration of conditions under which social movements become, or fail to become, effective interest groups.

320 Political Values (3:3:0). Prereq 54 hr. Nature of man, origin and nature of the state, bases of political obligation, problems of consent, concepts of power, and sources of political authority as presented in the works of major writers.

321 Contemporary Political Ideologies (3:3:0). Study of political ideologies which shape the values, beliefs, and actions of contemporary regimes and political movements.
Liberalism, conservatism, socialism, communism, and fascism in theory and in contemporary practice. Problems of totalitarianism and nationalism in post-industrial and developing societies.

331 Government and Politics of Latin America (3:3:0). Prereq 54 hr. Contemporary political systems of Latin America, with emphasis on institutions, political processes, political behavior. Case studies of several key Latin American polities. Problems of political development in Latin America.

332 Government and Politics of the Middle East and North Africa (3:3:0). Prereq GOVT 132 and 54 hr. Societies of the Middle East and North Africa and their response to the impact of internal socio-cultural-political determinants and external forces. Focus on their contemporary politics—ideologies, popular manifestations, institutions, and operations.


334 Government and Politics of Western Europe (3:3:0). Prereq 54 hr, GOVT 103 or Pol. Contemporary democratic political systems of Western Europe, with emphasis on political processes, institutions, and behavior. Case studies of key Western European polities. Problems of multiparty systems, coalition governments, Eurocommunism, and stability and change in post-industrial societies.

336 Political Development and Change (3:3:0). Prereq 54 hr. Process of political development and change in the context of modernization and industrialization. Patterns of political development, with emphasis on the Third World.

340 Advanced International Relations (3:3:0). Prereq GOVT 132 and 54 hr. Advanced inquiry into international relations. Theories and concepts of international relations. Major forces and issues in international politics.

341 Methods of International Relations Research (3:3:0). Prereq GOVT 132, 340. Systematic research in international relations: identification of problems, research design, research techniques, and research report. Examples of applied research.


344 American Foreign Policy (3:3:0). Prereq GOVT 132, HIST 122. The central issues surrounding the conduct of America's foreign relations, with special emphasis on structural and constitutional questions, national policy objectives abroad, and the conduct of foreign policy in a democracy.

355 Public Personnel Administration (3:3:0). Prereq GOVT 241 and 54 hr or Pol. Techniques and tools employed in the management of personnel in government organizations, incl the merit system, recruiting, placement, career systems, public pay systems, employee motivation, public employee labor relations, employee appraisals, manpower planning, employee separations, and retirement systems.

356 Public Budgeting and Finance (3:3:0). Prereq GOVT 241 and 54 hr or Pol. Tools and techniques employed in budgeting and financial management in governments in the United States, incl the management of public financial institutions, the budgetary process, budgetary reform, and the relationship of public budgeting to national economic policy.

357 Introduction to Public Planning (3:3:0). Prereq 54 hr or Pol. Framework, subject matter, uses, methods, administration and future of public planning. Emphasis on setting goals, defining objectives and choosing among program alternatives. Political and bureaucratic constraints and problems of implementation. Illustrations of planning may be drawn from various levels of government.

358 Public Policy Analysis (3:3:0. Prereq GOVT 250 or Pol. Methods of public policy analysis, evaluation, and research. Design and development of alternative courses of government action and evaluation of results. Problems in applying systems analysis to political issues.

359 Computers in Public Management (3:3:0). Prereq GOVT 250 and CS 103. Application of computers and computer-based analytical techniques to management needs in the public sector. Focus on both main frame and micro-computer applications.

371 Personnel Administration for Police (3:3:0). Prereq Open to pre- and in-service law enforcement students and by Pol. Police supervision as related to organizational environment and goals and to employee discipline, morale, safety, training and career development, cooperation, and behavior.

372 Police Supervision (3:3:0). Prereq Open to pre- and in-service law enforcement students and by Pol. Police supervision as related to organizational environment and goals and to employee discipline, morale, safety, training and career development, cooperation, and behavior.

376 Collective Bargaining in the Public Sector (3:3:0). Collective bargaining and the broad concept of labor relations as involved in selection and hiring, seniority, promotions, and training. Labor relations and the bargaining process extending from initial hiring to retirement.

377 Public Safety Officers and the Law (3:3:0). Law applicable to fire and police protection, firefighters, and police officers and their relationship to the public, their employers, the courts, and other societal institutions. Rights and obligations of the uniformed services in tort and criminal law, historical development of each, Virginia law, and other local topics.

378 Risk and Insurance (3:3:0). Elements of risk control and management, applications of the same to the fields of insurance incl fire, liability, accident, crime, surety, and property insurance.


402 Public Policy in Metropolitan Areas (3:3:0). Prereq GOVT 204. Metropolitan political problems and specific policies to deal with them. Substance and impact of such policies as housing, transportation, land use, crime prevention, service delivery, and health care.

410 The Individual Citizen in a Democracy (3:3:0). Prereq GOVT 103. Aspects of various forces on attitudes and behavior of citizens in a democracy: personality, family and others, political communications, political culture, current political events. How attitudes and behavior of citizens facilitate or hinder operation of democratic system.


416 Political Persuasion and Propaganda (3:3:0). Prereq GOVT 103. Techniques and processes of political argument and persuasion as used in campaigns, public education, and political debate. Propaganda in both domestic and international human relations. Political persuasion, myths and symbols as used to induce conformity and form unified polity. Films and tapes supplement examples of classic political speeches.

420 American Political Thought (3:3:0). Prereq GOVT 103 and 54 hr. Major political values and theories in America from the formation of the American Republic to the present. Changes in American political values in crisis periods and contemporary American political theory, incl pluralism, elite theories of democracy, and empirical political theory.
430 Comparative Political Leadership (3:3:0). Prereq 54 hr. Comparative political leadership, relationships between political cultures and types of leadership, patterns of leadership recruitment, and linkages between political elites and citizenry.


446 International Law (3:3:0). Prereq GOVT 132 and 54 hr. Nature, sources, and subjects of the law of nations; the law and the individual; territorial questions; international transactions; war and the present and future status of international law.

449 Senior Seminar in International Studies (3:3:0). Prereq Open only to majors in International Studies with 84 hr. An integrative seminar that draws previous course material into one analytical framework and provides the opportunity for in-depth study of some aspect of international studies. Format varies, but involves the student in the current literature, research techniques, and major issues of the field.

451 Administrative Management and Behavior (3:3:0). Prereq GOVT 241 and 54 hr. American governmental administration: organizational theory and behavior, administrative responsibility, management systems, roles of the bureaucracy, and relationships between individuals and organizations.

452 Administrative Law and Procedures (3:3:0). Prereq GOVT 241 and 54 hr. Law of public office; procedures followed by, and the legal limits on, the administrative agencies and their officers and employees.

459 Information Resources Utilization and Management in Government (3:3:0). Prereq GOVT 359 or equiv. Information, records, paperwork, and knowledge systems in government; information applications, access, preservation and security; high technology development, management and utilization; sociotechnical systems.

461 Citizen Participation in the Policy Process (3:3:0). Prereq GOVT 204. The ways in which citizens participate in the policy process with an emphasis on recent innovations. Research skills to study participation in the local community, and experience in group process skills.

462 Political Campaign Organization (3:3:0). Prereq GOVT 103 and 54 hr or Pol. Campaign practices and techniques, incl candidate recruitment and selection, campaign organization, utilization of volunteers, financing, polls, and media techniques. Implications of various campaign practices for the American political system.

463 Lobbying and the Policy Process (3:3:0). Prereq GOVT 103 and 54 hr or Pol. Lobbying techniques, activities, and characteristics of interest groups and the implications of their political behavior for the American political system.

471 Prevention and Deterrence of Crime (Same as SOCI 471) (3:3:0). Prereq 54 hr, in-service status or Pol. Theoretical and practical strategies for crime prevention and deterrence. Social, environmental and mechanical developments. The police, courts, and correctional elements of law enforcement in terms of current effectiveness and future potential for crime prevention.

480 Internship (3-6:0:0). Prereq Open only to majors with 54 hr or 84 hr. Contact the department one sem before enrollment. Internships are approved work-study programs with specific employers. Cr is determined by the department.

490 Seminar (3:3:0). Prereq Open to Public Affairs majors with 54 hr or 84 hr, and by PoD to others with 84 hr who have completed at least 12 hr of work in government. May be repeated for elective cr. Subject varies according to the specialization of the faculty member in charge. Readings, individual or group projects, and discussions of seminar papers comprise the content and format. Only three cr/hr may be counted within the major program.

496 Directed Readings and Research (1-3:0:0). Open to majors in public affairs with 84 hr and Pol and PoD. Reading and research on a specific topic, under the direction of a facility. A written report is req; an oral examination over the research and report may be req. May be used for elective cr only.

536 The Context of Development (3:3:0). Prereq Grad stdg or PoD. Factors and forces—both internal and external—that affect the political development of Third World countries, incl North-South relations, dependencia theory, and development strategy within the context of resource scarcity.

537 Selected Problems of Third World Development (3:3:0). Prereq Grad stdg or PoD. Third World development problems, incl development management, a new international economic order, foreign aid, multinational corporations, international organizations. May be repeated with PoD.

Greek Courses (GREE)

Foreign Languages and Literatures


101, 102 Elementary Greek (3:3:1), (3:3:1). Grammar of the language and easy excerpts from classical authors. Development of ability to read. Discussion of elements of English vocabulary drawn from Greek. Must be taken in sequence.

201, 202 Intermediate Greek: Readings in Classical Literature (3:3:1), (3:3:1). Prereq GREE 102 or equiv. Review of grammar. Development of proficiency in reading, with emphasis on traits of syntax, vocabulary, dialect or style that will be met in authors to be read. Must be taken in sequence.

Health Education Courses (HEAL)

Health and Physical Education

110 Personal Health (3:3:0). Individual and family well-being through the integration of such topics as fitness, nutrition, human sexuality, consumer health, drug education and mental health.

111 Advanced First Aid & Emergency Care (2:1:2). Identification, care and treatment of various medical emergencies.

120 Community Health (3:3:0). Organization of community health programs of official and voluntary local, state, and national health programs. Field observation req.

205 Principles of Accident Causation and Prevention (3:3:0). Investigation of safety-related problems; emphasis on fire, home, occupational, and vehicle safety; violent and property crime prevention.

220 Dimensions of Mental Health (3:3:0). Integration of behavioral and sociocultural factors in the study of mental health.

305 Health Education in the Elementary School (3:3:0). Designed for elementary education students with emphasis on content, methodology and resource materials in health teaching.

310 Drugs and Health (3:3:0). Prereq HEAL 110. Analysis of drug use, with emphasis on its positive aspects; alternatives to drug misuse and abuse.

315 Foundations of Health Education (3:3:0). Prereq HEAL 110 and 120. Historical and philosophical foundations of health education with emphasis on principles and theories governing contemporary programs.
323 Community Health Education Programs (3:3:0). Prereq HEAL 120 or Pol. Organization and principles in planning, developing, implementing and evaluating community health education programs.


402 Introduction to Driver Education: Driver Task Analysis (3-2-3). Prereq HEAL 205. Vehicle operator’s task incl lab experiences in the use of psycho-physical and psychological tests.

420 Organization of the School Health Program (3:3:0). Prereq Admission to the teacher education program and PoD. School health program, health services, healthful school environment, and health education as interrelated responsibilities of the school and the community.

430 Seminar on Contemporary Health Problems (3:3:0). Prereq Admission to the teacher education program or PoD. Overview of contemporary and often controversial health issues with analysis of selected problems of current concern to society.

440 Health Education Methods (3-3:0). Prereq Admission to the teacher education program or PoD. Instructional strategies, lesson and unit plan development, resource materials and evaluation techniques for secondary school health instruction. 10 hr field experience req.

450 Epidemiology (3:3:0). Study of the incidence, distribution, and causes of diseases and injuries in human populations. Emphasis is on essential diagnostics and planning for community health problem solving.

460 Internship in Community Health Education (6-12:0:0). Prereq PoC. Directed experience to observe and participate in the health education activities of a community health agency or professional health organization in cooperation with approved agency.

480 Special Topics (1-3:3:0). Selected health issues and/or problems are presented for each specific “Special Topics” course. Application of information to education programs receives special attention.

499 Independent Study in Health Education (1-3:3:0). Prereq 84 hr and PoD. Study of a problem area in health education research, theory, or practice under faculty direction. May be repeated but no more than three hours total credit may be given.

500 Workshop in Health Education (1,2,3:3:0:0). Analysis of selected health problems and issues involving readings, research, and group attention. six sem hr of HEAL 500 may be applied to degree credit.

511 History and Philosophy of Health Education (3:3:0). Focus on evaluation of significant historical events that affected and contributed to health education development. Emphasis on personalities, institutions, and philosophical ideas of each area.

513 Current Issues in Health Education (3:3:0). Analysis of topical and often controversial health issues with emphasis on selected problems of concern to society.

515 Community Health Education Planning and Delivery (3:3:0). In-depth study of the processes of planning, organizing, delivering and evaluating community health education programs.

516 Program Development and Resources in Health Education (3:3:0). Prereq Baccalaureate degree in health education or related field, or PoC. Procedures used in planning, development and organization of health education programs in school and health agency settings.

517 Health Education Process: School and Community (3:3:0). Prereq Baccalaureate degree in health education or related field, or PoC. Examination of the health education process in a variety of health promotion, disease prevention and rehabilitative settings.

540 Advanced Driver and Traffic Safety Education (3:3:0). Prereq 3 hr basic course in driver education, course in general safety education on college level, valid operator’s license. Advanced course in driver education for teachers, supervisors, and administrators of driver education and traffic safety programs.

599 Independent Study in Health Education (1-3:3:0:0). Prereq PoD. Study of a problem area in health education research, theory or practice under direction of faculty. May be repeated, but no more than three hr total cr may be given.

History Courses (HIST)

History

100 The Uses of History (3:3:0). Primarily for non-majors; may be taken by majors only as elective cr. Intro to nature of history and the historical method. Emphasis on distinguishing fact from interpretation, synthesis of historical information, and critical analysis of historical writings.

101 Foundations of Western Civilization (3:3:0). Evolution of Western culture from the ancient Mediterranean world to the formation of modern Europe in the seventeenth century.

102 Development of Western Civilization (3:3:0). History of Western institutions and ideas from the seventeenth century to the present.

121 Formation of the American Republic (3:3:0). Social, political, economic, and intellectual growth of American institutions from colonization through the Civil War.

122 Development of Modern America (3:3:0). History of the United States from 1865 to present.

130 History of the Modern Global System (3:3:0). Studies the interaction of major world regions that, under the impact of European expansion, became integrated within a single global cultural and economic network. Beginning with a description of regional civilizations around 1500, the course focuses on cultural interaction and economic change through the eras of mercantile expansion, industrial revolution, global imperialism, and twentieth-century crises and developments.

251, 252 A Survey of East Asian Civilization (3:3:0), (3:3:0). Survey of the history of China, Japan, Korea, and Vietnam from the prehistoric period to present.


281, 282 Survey of Middle Eastern Civilization (3:3:0), (3:3:0). Survey of the history of major civilizations of Middle East with attention to cultural, intellectual, social, and political developments.

300 Interpretations of History (3:3:0). (Req of history majors with 54 hr). Study of development of historical writings in the West from ancient to modern times. Intro to historical methodology.

301 Classical Greece (3:3:0). Prereq 6 hr of history or Pol. Political, social, economic, and cultural history of classical
302 Classical Rome (3:3:0). Prereq 6 hr of history or Pol. Political, social, economic, and cultural history of classical Rome from founding of the city through fall of the Roman empire.

303 Western Europe in the Middle Ages (3:3:0). Prereq 6 hr of history or Pol. Survey of development of European society from the impact of the reforms of Diocletian and Constantine to the end of the fifteenth century. Emphasis on political, institutional, economic, and social developments, incl influence of the Church.

304 The Eastern Roman Empire and Byzantium (3). Prereq 6 hr of history or Pol. The political, social, economic, cultural, and religious history of the Eastern Roman and Byzantine empires from the Age of Constantine to the fall of Constantinople in 1453.

305 The Renaissance (3:3:0). Prereq 6 hr of history or Pol. Survey considering the Renaissance as a phenomenon rather than a chronological period. Emphasis on growth of Humanism in Italy in the fourteenth and fifteenth centuries, development of new political concepts, and laicization of society, incl transmission of these developments to transalpine Europe in the late fifteenth and sixteenth centuries.

306 The Reformation (3:3:0). Prereq 6 hr of history or Pol. Late medieval ecclesiastical conditions and reform movements; late scholasticism; Protestant Reformation, Catholic Reformation, dynastic rivalries and religious wars. Concludes with the Peace of Westphalia (1648).

308 Nineteenth-Century Europe (3:3:0). Prereq 6 hr of history or Pol. History of Europe from Congress of Vienna to outbreak of World War I.

309 Contemporary Europe (3:3:0). Prereq 6 hr of history or Pol. Survey of major political changes in Europe since 1914 with emphasis on broad patterns of ideological conflict.

314 History of Germany (3:3:0). Prereq 6 hr of history or Pol. Political, diplomatic, economic, social, and cultural development of Germany from the dissolution of Holy Roman Empire to present.


321 Tudor and Stuart England (3:3:0). Prereq 6 hr of history or Pol. England between 1485 and 1714: religious, social, and constitutional change during the English Reformation; the Stuarts and Parliament; the Civil War and Interregnum; the Stuart restoration; the Glorious Revolution and the Bill of Rights; the era of Queen Anne.

322 Modern Britain from the Georgian Age to the Welfare State (3:3:0). Prereq 6 hr of history or Pol. England from 1714 to present: the first four Georges, growth and consequences of industrialization, reform of the franchise, foreign affairs and imperialism, transition from empire to commonwealth, the twentieth-century welfare state.

328 Rise of Russia (3:3:0). Prereq 6 hr of history or Pol. Political, social and cultural experience of Russia from the appearance of the Kievan state to the age of Pushkin.

329 Modern Russia and the Soviet Union (3:3:0). Prereq 6 hr of history or Pol. Analysis of Russian civilization in 19th and 20th centuries; focus on failure of tsarism, revolutionary response; and development of the Soviet Union.

333 Westward Movement in the United States (3:3:0). Prereq 6 hr of history or Pol. History of exploration, settlement and expansion of the frontier; emphasis on influence on cultural and political institutions.

335 The Afro-American Experience in the United States: African Background to 1865 (3:3:0). Prereq 6 hr of history or Pol. Brief intro to origin of man, concept of race, impact of color on black experience, moving from the African background to the U.S. Civil War. Attention directed to the effect of transplantation on certain African cultural survivals in the New World. Examination of genesis of American slavery and prejudice, colonial heritage, revolutionary legacy, colonization, abolitionist movement, and institutionalized slavery.

336 The Afro-American Experience in the United States: Reconstruction to the Present (3:3:0). Prereq 6 hr of history or Pol. General knowledge of the experience and development of black American society from 1865 to present. Focuses on the parallels between the 19th and 20th centuries.

341 History of the United States Constitutional Law to 1865 (3:3:0). Prereq 6 hr of history or Pol. Consideration of the development of the federal Constitution to 1865. Emphasis on Anglo-American origins in common law and American revolutionary ideology, as well as the interplay of politics and the courts. The development of broader understanding of the Bill of Rights guarantees is a secondary theme.

342 History of the United States Constitutional Law from Reconstruction to the Present (3:3:0). Prereq 6 hr of history or Pol. The history of the Constitution, its expansion and development, from 1865 to the present. Among the principal elements treated are the adoption and impact of the Fourteenth Amendment, and the consequences of war and reform on twentieth-century government.

345 From Colony to World Power: A History of American Foreign Relations (3:3:0). Prereq 6 hr of history or Pol. Survey of American diplomacy from Revolutionary War to present. Emphasis on domestic and external forces that have shaped American diplomacy.

348 American Economic History (3:3:0). Prereq 6 hr of history or Pol. General survey of history of American economic thought and development from colonial times to present with stress on growth of modern economic institutions and role of economic factors.

351 History of the Old South (3:3:0). Prereq 6 hr of history or Pol. History of the South to the outbreak of the Civil War, with particular emphasis on the rise of sectionalism. Development of a distinct Southern culture through emergence of economic, political, social, agricultural, and intellectual institutions.

352 The South Since 1865 (3:3:0). Prereq 6 hr of history or Pol. History of the South during Reconstruction, the Redeemer era and the New South, with particular emphasis on race relations. Political, economic, cultural and intellectual development from aftermath of war.

353 History of Traditional China (3:3:0). Prereq HIST 251 or 252 or Pol. China from earliest times to the period of modern Western intrusion. Development of traditional Chinese culture, society, and government.

354 Modern China (3:3:0). Prereq HIST 251 or 252 or Pol. China from 1644 to the Peoples Republic of China. Emphasis on the coming of the West and the various stages of Chinese reaction.

356 Modern Japan (3:3:0). Prereq HIST 251 or 252 or Pol. Japan from the Meiji Restoration to World War II. Emphasis on Japan's modernization in the face of challenge.

363 The History of Argentina, Brazil and Chile (3:3:0). Prereq HIST 271 or Pol. Intensive study of evolution of Argentina, Brazil, and Chile from the Colonial period to the present with emphasis on changing social, political, and economic conditions.

379 History of Canada (3:3:0). Prereq 6 hr of history or Pol. Intro to history of Canada from French settlement to present. Emphasis on Canada's historical position in the British Empire and Commonwealth, its unique relationship with the United States and problems created by the French-speaking minority.

380 The Ancient Near and Middle East (3:3:0). Prereq 6 hr of history or Pol. Political, social, economic, and cultural history of ancient cultures of Egypt and the eastern
Mediterranean from origins through the Aegean Bronze Age.

390 Topics in History (3:3:0). Study of historical topics or periods of special interest. Topics announced in advance.

391 History of Virginia to 1860 (3:3:0). Prereq 6 hr of history or Pol. Discovery and settlement of Virginia. Colonial period with emphasis on development of representative government and race relations, the "Golden Age," the Virginia dynasty, coming of Civil War.


393 History Through Film (3:3:0). Study of historical periods or topics from perspective of feature films and documentaries. Topics announced in advance. May be repeated with PoD. Maximum of six hr may be applied toward the history major.

394 History of the Family in the United States and Europe, 1500–Present (3:3:0). Historical development of Western family life. Topics incl attitudes toward infants and children, role of family in educating youth and in influencing marriage choice, relationship between parents and adult children, and interaction between nuclear and extended family. Change in family behavior in the context of wider social transformation.

395 History of Western Science I: Antiquity to the Age of Galileo (3:3:0). Prereq 54 hr or Pol. Examines the foundations and development of scientific thought in Western Europe from antiquity to the seventeenth century. Emphasis will be on the historical context of science. No advanced background in mathematics or natural sciences is required.

396 History of Western Science II: From the Scientific Revolution to the Twentieth Century (3:3:0). Prereq 54 hrs or Pol. Examines the foundations and development of scientific thought in Western Europe from the scientific revolution of the seventeenth century to the twentieth century. Emphasis will be on the historical context of science. No advanced background in mathematics or natural science is required.

398 The Social History of Technology (3:3:0). Prereq 54 hr or Pol. An intro to the social, economic and mechanical conditions that lead to technological change. Major historical innovations in the use of machines and materials and their social consequences in Europe, the United States, and Latin America will be considered.

401 Colonial America (3:3:0). Prereq 6 hr of history or Pol. Intensive study of colonial American history from its European origins through the Revolutionary War.

403 Early National Period in American History, 1783–1820 (3:3:0). Prereq 6 hr of history or Pol. Study of formative years of the new republic from the Treaty of Paris of 1783 to the election of 1820.

404 Jacksonian Democracy, 1820–1848 (3:3:0). Prereq 6 hr of history or Pol. Study of the age of Andrew Jackson; emphasis on democratic institutions that emerged as dominant influence in American society.

406 Civil War and Reconstruction (3:3:0). Prereq 6 hr of history or Pol. Course, conduct, and consequences of the American Civil War and aftermath. Emphasis on interconnectedness of political, military, and economic affairs.

409 Between the Wars: The United States, 1919–1941 (3:3:0). Prereq 6 hr of history or Pol. Intensive study of political, social, economic, and diplomatic developments in the 1920s and the 1930s.

410 The United States Since World War II: Nation and Empire (3:3:0). Prereq 6 hr of history or Pol. Examination of major domestic and foreign policy factors that shaped American experience from World War II to present. Political, social, and economic forces as they affected the nation's history.

411 Cultural and Intellectual History of the United States: 1600–1865 (3:3:0). Prereq 6 hr of history or Pol. Cultural and intellectual currents to 1865.

412 Cultural and Intellectual History of the United States Since 1865 (3:3:0). Prereq 6 hr of history or Pol. American thought and society from 1865 to present. Effects of industrialization on American institutions; development of a business "credo"; growth of radical thought in economics, politics, and religion; changes in social structure; increasing power and influence of the state.

413, 414 War and the Military in American Life (3:3:0). Prereq 6 hr of history or Pol. Study of impact of war on American society; its influence on the shaping of national policy. Topics incl role of the military in the economy, minorities in the armed forces, development of peace movements. The first sem covers colonial times to about 1917; the second sem covers American entry into World War I through Vietnam conflict.

415 United States Urban History: Colonial Origins to Civil War (3:3:0). Prereq 6 hr of history or Pol. Study of American urbanization focusing on origin and growth of colonial towns, the urban role in fostering nationalism; and economic rivalries during the transportation and communications revolutions. Attention to the regulations and social, economic, and environmental problems of rapid urbanization.

416 United States Urban History: Civil War to the Present (3:3:0). Prereq 6 hr of history or Pol. Urban problems that ensued from the rapid growth of America after the Civil War.

420 Topics in Twentieth–Century U.S. Diplomacy (3:3:0). Prereq 6 hr of history or Pol. Topics vary.

431 Medieval Intellectual Topics (3:3:0). (Same as ENGL 431) Prereq 6 hr of history or Pol. Selected topics in the intellectual history of the Middle Ages. Topics vary, depending on discipline of instructor. May be taken for cr by English, history, or area studies majors.

435 Social Transformation and Culture in Seventeenth– and Eighteenth–Century Europe (3:3:0). Prereq 6 hr of history or Pol. Examination of the cultural lives of Europeans. Focus on religious, artistic, literary, and recreational behavior. In addition, political activity—riots and royal receptions, work stoppages, and chivalric disputes—are covered. Incl formal thinkers and popular culture and examines differences and interrelationships between the two.

436 European Society and Culture: Nineteenth and Twentieth Century (3:3:0). Prereq 6 hr of history or Pol. Examination of major cultural trends in Europe since the French Revolution. Major themes incl romanticism, socialism, Marxism, the social effects of modernization, science, and societies.

440 France, 1610–1789: Absolutism and Revolution (3:3:0). Prereq 6 hr of history or Pol. Survey of French history from 1610 through the establishment, perfection, and decline of monarchical absolutism, to the opening stages of the Revolution.

441 France Since the Revolution (3:3:0). Prereq 6 hr of history or Pol. Study and influence of domestic, foreign and cultural developments in France from 1789 to present.

443 History of Spain and Portugal (3:3:0). Prereq 6 hr of history or Pol. Development of Spain and Portugal from prehistoric to modern times, noting particularly factors related to their former empires in America.

451 The United States and China (3:3:0). Prereq HIST 252 or Pol. History of foreign relations between U.S. and China in nineteenth and twentieth centuries, with emphasis on causes of their cooperation and conflicts.

455 History of Print Journalism (3:3:0). Prereq 3 hr COMM or HIST cr. Development of print journalism from its inception to the present, with emphasis on the interaction of
technology, audience, and government intervention. Topics incl birth of the press, development of the modern newspaper; and American development, incl the Revolutionary and Civil Wars; the rise of the independent press; and the Yellow Journalism period. Same as COMM 455.

463 Ancient India and Pakistan (3:3:0). Prereq 6 hr of history or Pol. History of Indo–Pakistan subcontinent with special reference to Indus Valley people, Hindus, Jains, Buddhists, and Muslims from ancient to medieval times.

464 Modern India and Pakistan (3:3:0). Prereq 6 hr of history or Pol. Political history of Indo–Pakistan subcontinent from mid-eighteenth century to present. Background of earlier cultures of Hindus and Muslims as prelude to developments in modern periods.

465 The Middle East in the Twentieth Century (3:3:0). Prereq 6 hr of history or Pol. Political, social, and cultural history of the Middle East since World War I. Emergence of Israel, Arab nationalism, and political and economic influence of the Middle East in world affairs.

470 Diplomacy and War in Latin America (3:3:0). Prereq 6 hr of history or Pol. Balance of power diplomacy among nation states of Latin America from independence to present. Emphasis on sources of conflict.

475 History of Mexico (3:3:0). Prereq 6 hr of history or Pol. Intensive study of Mexican history from pre–Columbian era to present, with emphasis on the national period.

478 Spanish Borderlands (3:3:0). Prereq 6 hr of history or Pol. U.S. frontier from Carolinas to Pacific considered as a part of the Kingdom of New Spain and, later, the United Mexican States, 1500–1848: expeditions of discovery, exploration and settlement; political, cultural and social developments; foreign encroachment; incorporation of the area into the U.S.; and origins of present Mexican–American minority.

480 Alexander the Great and Persia (3:3:0). Prereq 6 hr of history or Pol. Rise of Persia, the Persian wars with Greece, subjugation of Greece by Philip II of Macedonia, life of Alexander the Great and his conquest of the Persian empire.

495 Racism in the United States: A Seminar (3:3:0). Prereq 84 hr, 6 hr of history or Pol. Manifestations of racism in U.S., as directed against Indians, Orientals, Jews, Mexican–Americans, and Afro-Americans.

496 Internship (3:6:0:0). Prereq History majors with 54 hr and Pol. Internships are approved work-study programs in cooperation with specific organizations incl area museums, archives, historic sites, and local, state and federal agencies. Cr determined by department.

497 Directed Research in History (1–3:0:0). Prereq History majors with 84 hr and Pol. Research conducted on an individual basis in consultation with instructor. A student may present not more than three hr for graduation credit.

498 Directed Readings in History (3:0:0). Prereq History majors with 84 hr and Pol. A student may present not more than three hr for graduation cr. A specialized topic in history conducted on an individual basis in consultation with instructor.

499 Senior Seminar in History (3:3:0). History majors with 84 hr and Pol. A student may present not more than three hr for graduation cr. Research on a specialized historical topic culminating in a seminar paper. Subject determined by instructor. Permission must be obtained in advance.

Information Resource Management (IRM)

School of Business Administration

If a student takes noncore, upper–level business administration courses prior to acceptance to junior standing, those courses will not count on an undergraduate degree application for any major in the School of Business Administration (except as general elective credit).

201 An Introduction to Computer-Based Management Information Systems (3:3:0) (formerly INFS 201). Prereq MATH 108, DESC 200 (formerly MATH 109). Introduction to the components of the management information system (MIS) and their integration for managerial control and decision support. Analysis, design, and implementation of MIS software. Microcomputing lab for use of BASIC programming and spreadsheet applications.

403 Computer Systems Analysis and Design (3:3:0) (formerly INFS 403). Prereq IRM 201 (formerly INFS 201). Treatment of the life cycle of a computer information system with emphasis on information requirements analysis, feasibility studies, economics, systems design, equipment selection, and implementation process. Term project required. Computing lab.

410 Managerial Applications of Microcomputers (3:3:0). Prereq IRM 201 (formerly INFS 201). Selection and use of microcomputer hardware and software for management applications. Word processing, spread sheet analysis, graphics, communications, file management, and data base management. Term project and microcomputing lab.


491 Seminar in Information Resource Management (3:3:0). Prereq Completion of all other required courses for a major in Information Resource Management. In–depth analysis of selected topics that highlight the latest developments in the Information Resource Management field, including contemporary research findings and case studies of information systems in business and other organizations.

499 Independent Study in Information Resource Management (1–3:3:0). Prereq Information Resource Management majors with at least 3 upper–level Information Resource Management or Information Systems credit hours. Research and analysis of selected problems or topics in information resource management. Must be arranged with an instructor and receive written approval of chair before registration. Written report required. May be repeated to a maximum of six hours if topics vary.

Information Systems Courses (INFS)

Computer and Information Sciences

310 Program Structure and Design Using COBOL (3:3:0). Prereq IRM 201. Programming using the COBOL and RPG II languages to focus on fundamental concepts of software design and software development methodologies. Computing lab.

311 Database Management (3:3:0). Prereq INFS 310. Study of the logical and physical characteristics of data, and its organization in computer processing. Emphasis on data as a resource in computer applications. Examination of Database Management System (DBMS) software and its design, implementation, and use. Lab exercises using one or more DBMS for business applications. Computing lab.

312 Computer Hardware and Operations (3:3:0). Prereq INFS 310. Intro to computing system hardware components and operating system software concepts. Provides basic experience in assembly language programming for modern microprocessors and examines techniques for system evaluation and selection. Computing lab.
and reading and writing. The use of the written language (katakana, hiragana and kanji) emphasized. Lab work req. 201 and 202 must be taken in sequence.

202 Intermediate Japanese II (3:3:0). Prereq JAPA 201 or equiv. Continuation of JAPA 201. Lab work req.


Korean Courses (KORE)

Foreign Languages and Literatures


LAC Courses (LAC)

See "Regional Cultures."

Latin Courses (LATN)

Foreign Languages and Literatures


101, 102 Elementary Latin (3:3:1), (3:3:1). (Must be taken in sequence). Intro to Latin, incl basic grammar and development of reading skills; intro to Latin literature and Roman civilization.

201 Intermediate Latin: Prose and Poetry (3:3:1). Prereq LATN 102 or equiv. Intensive review of elementary grammar; intro to more advanced grammatical constructions and patterns of usage; continued development of reading proficiency; study of origin and development of Latin literature.

202 Intermediate Latin: The Golden and Silver Ages (3:3:1). Prereq LATN 201 or equiv. Study of advanced grammatical constructions and patterns of usage; reading selection from various Latin authors who flourished during the late Republic and early Empire of Rome; study of the cultural and political background of classical Latin authors.

321, 322 Latin Tutorial (1-3:0:0), (1-3:0:0). Prereq LATN 202 or equiv and PoD. Readings in Latin drawn from classical or post-classical literature. Selection of authors or genres by the instructor in consultation with the student. Meets on a tutorial basis. May be repeated once under each number to a maximum of 4 separate topics and 12 sem hr of cr.

Latin American Studies Courses (LAS)

Area Studies

489 Independent Study (1-6:0:0). Prereq 54 hr, PoC and Pol. Intensive study of a period, problem or project related to Latin American Studies proposed by an individual student to be conducted in close consultation with a LAS faculty member. May be repeated for a total of six cr.

490 Internship (2-6:0:0). Prereq 54 hr and PoC. Internships are non-paying, work-study positions that focus on
interdisciplinary LAS issues, positions that focus on interdisciplinary LAS issues. Qualified students are placed with area institutions, interest groups, agencies, museums or corporations. Placement depends upon availability of positions.

491 Contemporary Latin America (3:3:0). Reqd of LAS majors with 84 hr or Pol. Interrelationship of economic, political, social and cultural factors in explaining current Latin American reality. Topic announced. May be repeated for cr prvided that course subtitle is different.

Logistics Courses (LOGS)

School of Business Administration

310 Business and Government Logistics (3) (formerly MKTG 331). Prereq MKTG 301 or Pol. An overview of the physical distribution and logistics management systems in business and government. Attention is given to transportation and traffic management; warehouse, distribution centers, and plant location; and packaging and materials handling. Topics include activities required in design, test, and evaluation, production/construction, operational support, and retirement/disposal of business products, and major government systems.

311 Advanced Government Logistics (3). Prereq LOGS 310 or Pol. A consideration of logistics systems in government with emphasis on the various logistics activities required throughout the system/product life cycle. Topics include development of support concepts and factors in system design, test and evaluation, production/construction, operational support, and system retirement/disposal.

320 Transportation and Traffic Management (3) Prereq LOGS 310, ECON 375, or Pol. A study of the traffic management function in industry. It is concerned with the entire group of transportation cost, rates, and service aspects of the inbound and outbound movement of products. Issues of national transportation policy which arise from the present condition of the industries and suggestions for change are discussed.

331 Federal Procurement and Acquisition Management (3). Prereq LOGS 310, or Pol. Introduces the federal procurement and contracting processes, describes procurement planning, development, and contracting for major systems, including organization and operation of the federal procurement team, preparation and conduct of negotiation of contracts, and performance evaluation and audit.

341 Support Systems Planning and Analysis (3). Prereq LOGS 310, DESC 301, or Pol. The application of analysis techniques to logistics planning and problem solving. Emphasis is on the design and evaluation factors and methods, and logistics support analysis methods and documentation requirements.

432 Contract Price Analysis (3) Prereq LOGS 331 or Pol. Basic concepts in the analysis of contract price by cost-price analysis techniques. The point of view is that of the federal government as it attempts to negotiate and justify a price based on cost. Includes the use of models and predictors of life cycle cost elements, operating and support costs, economic analysis, and design-to-cost principles.

491 Seminar in Logistics Management (3). Prereq completion of 9 hours of required courses for logistics major or Pol. A course in which selected problems and cases in contemporary logistics are studied and discussed in a seminar form.

Management Courses (MGMT)

School of Business Administration

If a student takes noncore upper-level business administration courses prior to acceptance to junior standing, those courses will not count on an undergraduate degree application for any major in the school (except as general elective credit).

301 Management of Organizations (3:3:0). Prereq COMM 101 or 130 and 60 hr or Pol. Principles of management, emphasizing managerial functions. Fundamentals of organization theory and behavior and how they effect the management of organizations, domestic and international.

311 Organizational Behavior and Administration (3:3:0). Prereq MGMT 301 or Pol. Review and application of major theoretical issues in organization behavior. Analysis and critique of research methods used in the field. Particular emphasis on micro factors and their application to development of effective managerial styles.

321 Personnel Administration (3:3:0). Principles and procedures related to recruitment and selection of a labor force, grievance and disciplinary procedures, problems involved in collective bargaining, pay policies, merit rating, promotion, and training. Emphasis on their relationship to management.

331 Labor-Management Relations (3:3:0). Examination of American trade unions and of unionism. The labor contract; the bargaining process; the philosophy of unionism; the use of bargaining techniques for nonwage issues; the legal context of labor-management relations; the responsibilities and duties of unions and management; the political-economic impact of unionism.

341 Business Communication (3:3:0). Intro to theory and practice of effective business communication. Includes study of principles of communication, communicating through correspondence and reports, and business research methods.

381 Management Problem Solving and Decision Making (3:3:0). Prereq MGMT 301. Application of principles and techniques of management to cases drawn from business, public and nonprofit organizations. Emphasis on internal management of organizations, applications of systems theory and methodology; and techniques used to analyze problems effectively.


421 Advanced Personnel Administration (3:3:0). Prereq DESC 202 and MGMT 321. In-depth, experience-based examination of the more complex areas of personnel administration: job and task analysis, performance appraisal, selection and placement, wage and salary field of personnel administration.

431 Labor Legislation and Collective Bargaining (3:3:0). Prereq MGMT 331. Study of the institutional framework of collective bargaining, with two distinct focuses. The first is on major pieces of legislation from English Common Law through the present day, while the second includes an in-depth analysis of collective bargaining—its participants, techniques, issues and legal environment, and evaluation of the contract.

451(351) Small Business Management (3:3:0). Prereq ACCT 201, 202 and MGMT 301, or Pol. Study of the entrepreneur and entrepreneurial organizations. Emphasis on the entrepreneurial process and social, economic, and cultural factors affecting behavior. Problems facing the small businessman in a variety of high-technology and service-related businesses.

471 Organizational Management and Environmental Change (3:3:0). Prereq BULE 401. An examination of organizational management concepts and applications in response to changing environments. The organizational impact of various stakeholders, as well as the interaction between organizations and processes will be reviewed. Management practices, structures, and processes will be emphasized.
Marketing Courses (MKTG)

School of Business Administration

If a student takes noncore, upper-level business administration courses prior to acceptance to junior standing, those courses will not count on an undergraduate degree application for any major in the school (except as general elective credit).

301 Principles of Marketing (3:3:0). Prereq ACCT 201, 202, and ECON 103, 104, or Pol. An examination of marketing principles, concepts, strategies, tactics, and analytical tools used by profit and nonprofit organizations to meet market ideas, products, and/or services to selected target groups. Emphasis is on how to promote, distribute, and price the firm's offering in a dynamic economic, social, political, and international environment.

307 (formerly BUAD 307) Introduction to International Business (3:3:0). Foreign trade from the viewpoint of business management. The historical dimension of international business; physical movement of goods; conditions essential for successful trading; the role of government in international trade; how international business policies are developed.

311 Sales Management (3:3:0). Prereq MKTG 301, or Pol. An examination and evaluation of the sales effort as it relates to the consumer and participants within the marketing channel.

312 Consumer Behavior (3:3:0). Prereq MKTG 301 or Pol. Marketing strategy implications of the concepts and propositions that comprise consumer decision processes. Emphasis is on life style, situation, and information processing. Lecture and case analysis.

313 Advertising Management (3:3:0). Prereq MKTG 301. Advertising and its role as a function of marketing and merchandising and as a tool of management; evaluation, criticism, and control of advertising. Measurement of results.

322 Retail Management (3:3:0). Prereq MKTG 301, or Pol. Comprehensive view of retailing as it relates to the total marketing process. Emphasis on retail decision alternatives used when formulating retail strategy.

333 Industrial and Governmental Marketing (3:3:0). Prereq MKTG 301, or Pol. An in-depth description, analysis, and evaluation of industrial and governmental marketplaces. Emphasis on marketing procedures practiced and available to decision makers when considering pricing, promotion, and channels of distribution.

351 Marketing Research Techniques and Applications (3:3:0). Prereq DESC 202, MKTG 301. Study of concepts, theories and principles underlying the marketing research process. Focus on development and evaluation of research designs for gathering marketing information.

Mathematics Courses (MATH)

Mathematical Sciences

Knowledge of high school algebra is a prerequisite for all mathematics courses. In exceptional cases the prerequisite for a course above the calculus sequence may be waived at the discretion of the instructor.


108 Introductory Calculus with Business Applications (3:3:0). Functions, limits, the derivative, the integral. Applications of differentiation and integration. Students who have received cr for MATH 113 or 115 may not receive cr for this course.

110 Finite Mathematics (3:3:0). Elementary set theory, probability and statistics.

111 Finite Mathematics (3:3:0). Matrix algebra, linear programming, Markov chains and game theory.

Applications.

113 Analytic Geometry and Calculus I (4:4:0). Prereq Thorough understanding of high school algebra and trigonometry. Functions, limits, the derivative, maximum and minimum problems, the integral, conic sections.

114 Analytic Geometry and Calculus II (4:4:0). Prereq C or better in MATH 113. Transcendental functions, methods of integration, applications of the integral, analytic geometry.

115, 116, 215 Analysis I, II, III (4:4:0), (4:4:0), (4:4:0). Must be taken in sequence. Prereq Thorough understanding of high school algebra and trigonometry. The derivative, the integral, transcendental functions, applications, vectors and analytic geometry, vector differential calculus, multiple integrals, infinite series. Designed primarily for mathematics majors.


213 Analytic Geometry and Calculus III (3:3:0). Prereq
MATH 114. Infinite series, partial differentiation, multiple integrals, line and surface integrals.


303 Matrix Algebra (3:3:0). Prereq MATH 114 or Pol. Matrix operations, vector spaces, rank of a matrix, determinants, eigenvalues and eigenvectors.


305 Discrete Mathematical Structures (3:3:0). Prereq MATH 114 or 116. Survey of topics in discrete mathematical structures essential to the study of computer science. Topics incl a discussion of numeration schemes, lattices, Boolean algebra, graphs and directed graphs, combinatrics and elementary introduction to graphs and finite fields and finite-state machines.


351 Probability (3:3:0). Prereq MATH 213 or 215. Random variables, probability functions, special distributions, limit theorems.

352 Statistics (3:3:0). Prereq MATH 351. Estimation, decision theory, testing hypothesis, correlation, linear models and design.

371 Mathematics for the Elementary School (1:3:0). Concepts and theories underlying elementary school mathematics, incul sets, logic, systems of numeration, whole numbers and integers, operations with integers, equations and inequalities. Intended for elementary education majors only; does not count toward a major in mathematics.

372 Mathematics for the Elementary School II (3:3:0). Continuation of MATH 371; MATH 371 is rec prior to enrolling in MATH 372. Topics incl elementary number theory, rational and real numbers, intuitive geometry and measurement incl the metric system. Intended for elementary education majors only; does not count toward a major in mathematics.


411 Functions of a Complex Variable (3:3:0). Prereq MATH 304 or 306. Analytic functions, contour integration, residues and applications to such topics as integral transforms, generalized functions and boundary value problems.


491, 492 Reading and Problems (1-3:0:0). (1-3:0:0). For mathematical sciences majors only. Independent study in math. Must be arranged with instructor before regis.

493 Topics in Applicable Mathematics (3:3:0). Prereq 6 cr of math at or above the 310 level. Topics that have been successfully used in applications of mathematics. Subject determined by instructor.

494 Topics in Pure Mathematics (3:3:0). Prereq 6 hr of math at or above the 310 level. Topics of pure math not covered in other courses. Topics might incl Galois theory, cardinal and ordinal arithmetic, measure theory, mathematical logic and differential geometry. Subject determined by instructor.

Medical Technology Courses (MTCH)

Biology

200 Introduction to Medical Technology (1:1:0). Intro to profession of medical technology.

401 Orientation to the Problems and Practices of the Clinical Laboratory (1-2:0:0). Prereq Completion of req for B.S. with a major in medical technology, except for the 30 hr of professional study and admission to a school of medical technology approved by the National Accrediting Agency for Clinical Laboratories. Orientation to clinical lab; specimen collection and record keeping; management principles and problems; educational theories as they apply to the teaching of clinical laboratory procedures; quality control principles. Not offered on campus.

402 Clinical Hematology and Coagulation (6-8:0:0). Prereq Completion of req for B.S. with a major in medical technology, except for the 30 hr of professional study and admission to a school of medical technology approved by the National Accrediting Agency for Clinical Laboratories. Morphology of blood cells in health and disease; theories of hemopoiesis and coagulation; techniques for measurement of hematologic parameters; hematologic pathologies and their lab evaluation. Not offered on campus.

403 Clinical Microscopy (1-3:0:0). Prereq Completion of req for B.S. with a major in medical technology except for the 30 hr of professional study and admission to a school of medical technology approved by the National Accrediting Agency for Clinical Laboratories.
In Music Courses (MUSI), the 100 Fundamentals of Music (3:3:0) course is offered for nonmusic majors only. Study of musical notation, interval, and triad construction, the reading of treble and bass clefs, scale construction, rhythm, elementary sight singing and ear training, and application at the keyboard. It cannot be applied toward a degree in music.

101 Music Appreciation (3:3:0). For nonmusic majors only. Intro to music appreciation through formal and aesthetic principles. The elements of music are examined separately and as combined in various musical forms.

103 Folk and Traditional Music of the World (3:3:0). For nonmusic majors only. Study of musical structure and cultural meaning of folk music among diverse peoples, with an intro to traditional art music of India, China, and Japan.

104 Introduction to Twentieth-Century Music (3:3:0). For nonmusic majors only. Survey of various styles found in 20th-century music. Melodic, tonal, atonal, serial, and experimental music.

105 Music in the United States (3:3:0). For nonmusic majors only. Study of music in the U.S. from colonial times to present. Through interaction with musical examples, the student traces significant African and European influences on emerging style and artistic activity in the U.S.

106 Latin American Music (3:3:0). For nonmusic majors only. Survey of folk, popular, and artistic music of Latin American countries in an historical setting. Influences of other cultures on the musical life of representative countries.

107 The Development of Jazz (3:3:0). For nonmusic majors only. Historical, analytical, and aural survey of jazz from inception to present day. Trends resulting from synthesis of jazz with other musical idioms.

113 Sight Singing and Ear Training I (2:0:3). Prereq Student must be able to read music and must have some proficiency on a musical instrument or in voice. The student is taught to sing a line of music without the accompaniment of an instrument. Matching tones, major and minor scales, key signatures, intervals, rhythm. Treble, bass, alto, and tenor clefs. Rhythmic and melodic dictation.

114 Sight Singing and Ear Training II (2:0:3). Prereq MUSI 113 or Pol. Continuation of Sight Singing and Ear Training I. Modulation, various modes. Melodic and harmonic dictation.

115 Harmony I (3:3:0). Prereq Student must be able to read music and must have some proficiency on a musical instrument or in voice. Music notation, scales, key signatures, intervals, chords, cadences, figured bass.


151 Class Strings: Violin and Viola (1:0:3). Prereq Nonmusic majors must have Pol. Study of techniques of playing and teaching the violin and viola. Survey of instructional materials and bow and instrument selection.

152 Class Strings: Cello and String Bass (1:0:3). Prereq Nonmusic majors must have Pol. Study of techniques of playing and teaching the cello and string bass. Survey of instructional materials and bow and instrument selection.

153 Class Woodwinds: Flute and Clarinet (1:0:3). Prereq Nonmusic majors must have Pol. Study of techniques of playing and teaching the flute and clarinet. Survey of instructional materials and mouthpiece and instrument selection.

154 Class Woodwinds: Oboe and Bassoon (1:0:3). Prereq Nonmusic majors must have Pol. Study of techniques of playing and teaching the oboe and bassoon. Survey of instructional materials, instrument selection, and reed adjustment.

155 Class Brass (1:0:3). Prereq Nonmusic majors must have Pol. Study of techniques of playing and teaching the brass instruments. Survey of instructional materials and mouthpiece and instrument selection.

156 Class Percussion (1:0:3). Prereq Nonmusic majors must have Pol. Study of techniques of playing and teaching the percussion instruments. Survey of instructional materials and instrument selection.

157 Class Guitar (1:0:3). Prereq Nonmusic majors must have Pol. Study of techniques of playing and teaching the guitar. Survey of instructional materials and instrument selection.

158 Class Voice I (1:0:2). Prereq Nonmusic majors must have Pol. Study of the human voice in artistic singing. Practical application of basic principles is emphasized.

159 Class Voice II (1:0:2). Prereq MUSI 158 or Pol. Continuation of voice study begun in MUSI 158. Emphasis on artistic singing in several styles.

171 Class Piano I (1:0:3). Prereq Nonmusic majors must have Pol. Study of piano keyboard as it is related to various clefs in music. Emphasis on solution of basic problems of a stylistic and technical nature.

172 Class Piano II (1:0:3). Prereq MUSI 171 or Pol. Study of piano keyboard as it is related to intermediate song and combined in various music forms.

173, etc. Private Music Instruction See descriptions at end of music section.

181, 381 University Chorale (1:0:3). Prereq Audition. Performance of works from the choral repertoire. Public concerts are given. Four cr are to be earned at the 181 level before proceeding to the 381 level. May be taken eight times.
183, 383 Symphonic Winds (1:0:3). Prereq Open to students with a reasonable amount of performing ability. Performance of work from the band repertoire. Public concerts are given. Four cr are to be earned at the 183 level before proceeding to the 383 level. May be taken eight times.

184, 384 Symphonic Chorus (1:0:3). Prereq Audition. Performance of major works from the choral repertoire. Public concerts are given. Four cr are to be earned at the 184 level before proceeding to the 384 level. May be taken eight times.

187, 387 Chamber Orchestra (1:0:3). Prereq Open to students with a reasonable amount of performing ability. Performance of works from the chamber orchestra repertoire. Public concerts are given. Four cr are to be earned at the 187 level before proceeding to the 387 level. May be taken eight times.

189, 389 Jazz Ensemble (1:0:3). Prereq Audition. Ensemble providing practical experience in various aspects of jazz performance—section work within a large aggregation, combo work and improvisation. Public concerts are given. Four cr are to be earned at the 189 level before proceeding to the 389 level. May be taken eight times.


216 Harmony IV (2:2:0). Prereq MUSI 215 or Pol. Continuation of study of chromatic harmony as it applies to classical forms.

218 Keyboard Harmony (1:0:2). Prereq MUSI 172 and 215. For music majors only. Study of techniques of harmonization at the piano keyboard.

231 Survey of World Music (3:3:0). Prereq MUSI 215 or Pol. Survey of music literature in the four major theoretical systems of the world. Emphasis on influences of non-Western systems on Western music.

251 Music for the Elementary School (4:3:2). For nonmusic majors only. Study of fundamentals of sound, rhythm, melody, harmony, and form and their notation. Development of basic vocal, listening, and instrumental skills. Application of these understandings and skills to the development of the elementary school child's musicality by the nonspecialist classroom teacher.

271, 272 Techniques of Accompanying (1:0:3). Prereq 4 cr earned in Private Music Instruction (keyboard instrument) or Pol. Fourteen one-hr classes and 28 hr of supervised practicum per sem. The latter consists of practical application of concepts and techniques learned during class sessions. This practical application normally consists of assignments to function as accompanist for two Private Music Instruction students (in lessons, practice sessions, and public performances) and/or equiv amount of work as accompanist for GMU ensembles (in rehearsals and performances). MUSI 271 and 272 can each be taken three times.

285 Chamber Ensembles (1:0:3). Prereq Audition. Performance of works from the chamber music repertoire. Public performances are given. May be taken for cr six times.

315 Physics of Musical Sound (3:3:0). (Same as PHYS 315) Prereq MUSI 216 or Pol. The physics of music. Topics incl simple harmonic motion, vibration, temperament, the ear, architectural acoustics, sound recording and reproduction.

319 Class Composition and Arranging I (3:3:0). Prereq MUSI 114, 216, or Pol. Students are encouraged to exercise their creative powers through the writing of original compositions for specified instruments, voices or combinations. They then apply compositional principles to the creative arrangement of existing music of various styles.

320 Class Composition II (3:3:0). Prereq MUSI 319 or Pol. Compositional skills acquired in Class Composition and Arranging I are applied to larger forms of music and larger ensembles, with emphasis on twentieth–century techniques.

327 Choral Arranging (3:3:0). Prereq MUSI 216 or Pol. Practical application of various techniques employed in composition and arrangement of choral music. Incl notation, text setting, choral voicing, choral texture and contemporary vocal writing, as well as the composition of original materials as they apply to arranging techniques.

335 Historical, Theoretical and Analytical Study of Music I (3:3:0). Prereq MUSI 116 or Pol. Study of music in Western Civilization from Greek antiquity through the Renaissance, with emphasis on historical, theoretical, and analytical aspects.

336 Historical, Theoretical and Analytical Study of Music II (3:3:0). Prereq MUSI 116 or Pol. Study of music in Western civilization from Monteverdi through Haydn, Mozart, and their contemporaries, with emphasis on historical, theoretical, and analytical aspects.

351 Keyboard Pedagogy (3:3:0). Prereq MUSI 114, 216, 218 and 8 cr in piano or organ, or Pol. Application of the techniques of improvisation used in the various periods of music history on the student's major instruments and the piano.

380 Junior Recital (1:0:0). Coreq MUSI 377 or 378. A public recital given by students during their junior year.

382 Piano Ensemble (1:0:3). Prereq Audition and 4 cr in Private Music Instruction—Piano. Study and performance of original four–hand works for one and two pianos. Public performances. May be taken four times.

385 Gloriae Singers (1:0:3). Prereq Audition. Discovery, interpretation, and performance of choral music for vocal chamber music ensemble from all historical periods. Emphasis is placed on achieving a high level of artistic performance and on bringing to the University and its surrounding community those musical compositions which are not readily accessible in the regular concert repertoire. May be taken four times.

386 Laboratory Ensemble (1:0:3). Prereq One sem of class instrumental instruction on a band or orchestral instrument; for music majors only. Vocal and instrumental ensemble for music majors seeking state certification as music teachers; designed to provide opportunities for performance on secondary instruments and voice and to serve as a lab for conducting, methods and materials, and composition and arranging classes. May be taken twice.

388 Musical Theatre Techniques (1–3:1:2–6). Prereq Audition and Pol. Preparation and presentation of works or parts of works from the musical theatre repertoire (opera, operetta, musical comedy). Students will investigate applicable techniques in lab sessions and rehearsals. Public performance will be given. May be taken for cr four times.

390 Improvisation Ensemble (1:0:3). Prereq Audition. An ensemble experience designed to promote exploration of new sound sources inherent in each instrument or voice, with emphasis on group interaction and sensitivity to musical texture, timbre, and tonal resources through aural awareness. Public concerts are given. May be repeated for a total of four cr.

391 General Conducting (2:0:3). Prereq MUSI 114, 172, 216 and 218, or Pol. Study of basic techniques of conducting a musical ensemble.

396 Advanced Conducting (2:0:3). Prereq MUSI 391 or Pol. Advanced conducting course emphasizing the techniques of bringing a musical ensemble to concert standard. Consideration of the interpretation of repertoire from the applicable historical periods.

417 Techniques of Twentieth–Century Style Analysis (3:3:0). Prereq MUSI 216, 218 and 319, or Pol. Various analytical
methods for understanding the complex nature of twentieth-century music and the diverse styles of today's composers. Selected masterworks from contemporary music literature.

419 Orchestration (3:3:0). Prereq MUSI 216, 218 and 319, or Pol. Principles of combining and balancing instruments in orchestral and chamber contexts. Attention to orchestral terminology and general notation as well as timbre, range, clefs, transposition, special effects, and scoring procedures.

435 Historical, Theoretical, and Analytical Study of Music III (3:3:0). Prereq MUSI 216 or Pol. Study of development of Western music from Beethoven through the post-Romantic era, with emphasis on historical, theoretical, and analytical aspects.

436 Historical, Theoretical, and Analytical Study of Music IV (3:3:0). Prereq MUSI 216 or Pol. Development of Western music from late nineteenth-century Impressionism to the present, with emphasis on historical, theoretical, and analytical aspects.

437 Choral Literature (3:3:0). Prereq MUSI 216 or Pol. Survey of sacred and secular choral literature from the Middle Ages to the present. Representative genres such as Mass, motet, madrigal, anthem, cantata, passion, oratorio, and part-song.

438 Operatic Literature (3:3:0). Prereq MUSI 216 or Pol. Opera from 17th century to present, with emphasis on historical and stylistic development. Important works in the operatic repertory.

439 Keyboard Literature (3:3:0). Prereq MUSI 216 or Pol. Chronological survey of keyboard literature and its antecedents from sixteenth century to present. Solo keyboard genres such as chorale prelude, suite, sonata, theme and variations, and character piece in a historical context.

440 Orchestral Literature (3:3:0). Prereq MUSI 216 or Pol. Chronological survey of development of orchestra and its literature from seventeenth century to present. Suites, symphonies, concertos, symphonic poems and other orchestral works of important composers.

461 The Teaching of General Music in the Elementary School (3:3:0). Prereq/coreq MUSI 114, 216, 218, 396 and EDUC 509 or 510, 300 or 522, and 524. For music majors only. Study of theory, methods, practice and materials involved in teaching of general music in the elementary school. Field experience req.

463 The Teaching of Vocal Music in the Secondary School (3:3:0). Prereq/coreq MUSI 114, 216, 218, 396 and EDUC 509 or 510, 300 or 522, and 524. For music majors only. Survey of repertoire and methods for teaching high school choral groups, small ensembles and voice classes. Field experience req.

464 The Teaching of Instrumental Music in the Elementary and Middle School (3:3:0). Prereqs MUSI 114, 216, 218, 396 and EDUC 509 or 510, 300 or 522, and 524. A study of theory, methods, practice and materials for teaching instrumental music at the elementary school level. Emphasis is placed on philosophical foundations, the development of objectives, evaluation of student progress, recruiting techniques, and management of various phases of the instrumental music program. Field experiences in the public schools are required.

465 Selected Topics in Music Education (1-3:1-3:0). Prereq 84 hr in a music degree program or Pol. Topics of practical interest to prospective and practicing music educators covering pedagogy, performance, and logistics relating to teaching of music in schools, private studio, and community. Field experience req.

466 The Teaching of Instrumental Music in the High School (3:3:0). Prereqs MUSI 114, 216, 218, 396, and EDUC 509 or 510, 300 or 522, and 524. A study of theory, methods, practices, and materials for teaching instrumental music at the secondary school level. Developing goals and objectives for large and small ensembles, instrument, theory, and music history/literature classes, creating and evaluating learning experiences, managing the classroom, the rehearsal, and the instrumental program in general. Field experiences in the public schools are required.

480 Senior Recital (1:0:0). Coreq MUSI 477 or 478. Public recital given by students during senior year.

481 Composition Recital (1:0:0). Prereq 6 hr of undergrad Private Music Instruction—Composition successfully taken after being admitted into the composition concentration of the B.M. degree program. Public recital given by composition students in senior year.

497, 498 Independent Study (1-3:0:0) (1-3:0:0). Prereq Music majors with 84 hr and two of the following: MUSI 335, 336, 435, 436; and Pol, PoC, the music faculty. Individual research and study of selected subject in close consultation with an instructor. A student may choose from the musicological, ethnomusicological, theoretical, compositional or educational areas of music and produce at least one major written work based on the research.

511 Analytical Techniques (3:3:0). Prereq baccalaureate in music or Pol. A detailed formal and stylistic examination of music selected from the major style periods. Development of the analytical skills necessary for theoretical study at the graduate level.

512 Advanced Orchestration (3:3:0). Prereq baccalaureate in music with a minimum of 3 hr study in orchestration or Pol. Intensive study through analysis and arranging of advanced methods of instrumentation. Scoring for large forces. Twentieth century vocal and instrumental techniques such as multiphonics. Unusual instruments. New methods of notation. Late twentieth–century performance practices.

513 Advanced Topics in Music Theory (3:3:0). Prereq baccalaureate in music or Pol. An intensive study and analysis of music from the theoretical point of view, comparing trends in compositional techniques through various works. May be repeated for cr as topics change.

531 Advanced Topics in Music History and Literature (3:3:0). Prereq baccalaureate in music or Pol. A thorough examination of a specific musical style, genre, composer, compositional school, or historical development. Primary and secondary source materials will be studied in historical and/or analytical contexts. May be repeated for cr as topics change.

541 Chamber Music Literature (3:3:0). Prereq baccalaureate in music or Pol. A historical and analytical study of the extensive literature for chamber ensembles (trios through nonets) in various instrumental combinations, from the seventeenth through the twentieth centuries.

543 Concerto Literature (3:3:0). Prereq baccalaureate in music or Pol. A historical and analytical study of the concepts which produced the concerto form and its extensive literature, from the seventeenth through twentieth centuries.

561 Advanced Topics in Music Education (1-3:1-3:0). Prereq degree in music education or Pol. Intensive examination of specific areas of concern to music educators engaged in teaching vocal, instrumental and general music at all levels or functioning as private studio teachers. Individual research, group discussions and participation in related activities. Field experience req.

562 The Psychology of Music Teaching and Learning (3:3:0). Prereq baccalaureate in music or Pol. A study of the learner's musical behaviors (affective, cognitive and psychomotor) in an effort to devise an empirically- based teaching method founded on learning principles.

581 Graduate Choral Ensembles (1:0:3). Prereq audition. Performance of works from the choral repertoire. Public concerts are given. May be taken for cr four times.

583 Symphonic Winds (1:0:3). Prereq audition. Performance of works from the band repertoire. Public concerts are given. May be taken for cr four times.

MUSI 585 Chamber Ensembles (1:0:3). Prereq audition and 
Private Music Instruction

Beginning Private Music Instruction

To earn one cr per sem, a student takes 14 one-half-hour private music lessons and is expected to practice 50 minutes each day. Only one cr can be earned each sem. Instruction is offered in piano, classic guitar, voice and the standard band and orchestral instruments. Cannot be applied toward a degree in music. The private music instruction fee applies.

177, 178, 277, 278 Beginning Private Music Instruction—Instrumental/Vocal (1:0:5 for each).

Undergraduate Private Music Instruction

To earn one credit per semester, a student takes 14 one-hour private music lessons; to earn two or three credits per semester, a student takes 14 one-hour lessons for two or three credits per semester, a number of which may be spent in a group-practicum situation at the instructor’s discretion.

The following amount of practice (or composing) is expected each day: one credit/50 minutes; two credits/1 hour and 40 minutes; three credits/2 and one-half hrs.

As part of the repertoire req, each student must attend at least 10 music programs sponsored by the Department of Performing Arts. Undergraduate Private Music Instruction is offered in piano, organ, harp, classic guitar, voice, koto, the standard band and orchestral instruments, composition, conducting and accompanying. The private music instruction fee applies.

173, 174, 273, 274, 373, 374, 473, 474 Undergraduate Private Music Instruction—Instrumental/Vocal (1:0:5 for each).

223, 224, 323, 324, 423, 424 Undergraduate Private Music Instruction—Composition (2:0:1 for each).

175, 176, 275, 276, 375, 376, 475, 476 Undergraduate Private Music Instruction—Instrumental/Vocal (2:0:1 for each).

377, 378, 477, 478 Undergraduate Private Music Instruction—Instrumental/Vocal (3:0:1 for each). Prereq for MUSI 173, 175 and 179; Audition; for MUSI 377, 8 cr or on the major instrument and approval by an audition committee; coreq for MUSI 377 or 378: MUSI 380; coreq for MUSI 477 or 478: MUSI 480.

221, 222, 321, 322, 421, 422 Undergraduate Private Music Instruction—Composition (1:0:5 for each).

Nursing Courses (NURS)

Nursing

250 Concepts of Health Throughout the Life Span (3:3:0). Prereq 3 hr of psychology and sociology. Consideration of health maintenance and health promotion behaviors throughout the life cycle. Examination of normal growth, development, nutrition.

254/304 Introduction to Professional Nursing (3) (2:2:0). Prereq or coreq NURS 250 or PoD. Intro to nursing as an emerging discipline, profession, and occupation. Emphasis on development of a dynamic concept of nursing, essential behaviors of the profession and the design of nursing systems.

262 Technologies in Nursing (4:0:9). Prereq anatomy and physiology. Prereq or coreq 3 hr of communication. NURS 254 and at least 90 percent on the first math test. Skills req in the assessment, design, and control of nursing systems. Clinical practice arranged.

301, 302 Elements of Pathology and Medical Therapeutics (4:4:0), (4:4:0). Prereq anatomy and physiology, chemistry, microbiology, psychology (3 hr), sociology, NURS 250, 254, 262; or PoD. Content foundational to nursing; pathology in psychological, sociological, and physiological system; medical technologies, selected modes of medical diagnosis and treatment.

311, 312 Nursing of Individuals (4:1:9), (4:1:9). Prereq NURS 250, 254, 262; or coreq NURS 301. Design and control of nursing systems; purpose planning to bring together essential elements to form a coherent nursing system. Clinical application focusing on the variables of age, developmental stages, life-cycle events, roles, health disorders, and the health situation.

321, 322 Nursing of Small Groups (4:1:9), (4:1:9). Prereq NURS 250, 254, 262; coreq NURS 302. Design and control of nursing systems; planning that brings together essential elements to form a coherent nursing system. Clinical application to small groups and families, focusing on the variables of age, developmental stages, life-cycle events, roles, health disorders, and the health situation.

397, 398 Fundamentals of Aging I, II (3:0:0). Prereq 8 hr of biology, anatomy, or physiology; 3 hr of psychology or sociology. Interdisciplinary approach to the study of aging. Physical, psychological, and social aspects of normal aging. Health care, mental health, social services, education and public policy in the field of gerontology. Three to six hr field experience req.

411 Research Dimensions in Nursing (3:3:0). Prereq MATH 250, 301, 302, 311, 312, 321, 322. Intro research course
Course Dictionary

presenting basic research concepts and methods used in nursing studies. Major nursing theories as a foundation for scholarship.


431 Nursing of Large Groups (6:2:12). Prereq NURS 301, 302, 311, 312, 321, 322; Prereq or coreq NURS 426. Delivery of nursing care to large groups to facilitate increased self care. Nursing systems are developed to serve large groups in community settings.

450 Health Assessment (3:2:3). Prereq NURS 301, 302, 311, 312, 321, 322. Acquisition of skills necessary to collect data for health history and to carry out physical and psychosocial assessment of the individual. Lab experiences develop and validate health appraisal skills.

470 Nursing Systems for Individuals and Groups with Complex Problems (3:3:0). Prereq NURS 301, 302, 311, 312, 322. Synthesis of knowledge of nursing systems of individuals and groups. Complex problems that affect care.

476 Application of Nursing Systems for Individuals and Groups with Complex Problems (6:0:18). Prereq NURS 301, 302, 311, 312, 321, 322; Prereq or coreq NURS 426. Application in an acute care setting of knowledge of nursing systems for individuals and small groups. Clinical experiences focus on understanding nursing as a subsystem within the larger health care system and are based upon student’s interest and goals in the provision of complex nursing care.

480 Health Maintenance and Health Aspects of Aging (3). The study of physiological and psychological factors which have influence on the health status and have implications for preventive measures in disease and health disorders in the aging. Nutrition, the nature of health problems and methods of assessing physical and psychological needs are examined.

486 Special Problems in Nursing (3:3:0). Prereq 84 hr or Pol. Student defines and examines a nursing problem of particular interest. Clinical practice may be arranged.

495 Directed Reading in Nursing (2:0:0). Prereq 84 hr and Pol. Examination of literature on specialized topic in nursing practice, education or scholarship. Conducted in consultation with faculty.

499 Independent Study in Nursing (1-3:3:0). Prereq Pol. Individual study of a particular problem area in nursing research, theory development, or education under the direction of faculty. Clinical practice may be arranged.

511 Anthropology of Health (3:3:0). Cross-cultural issues of health and illness are explored from the standpoint of medical anthropology theory. Cultural dimensions of the developmental cycle and health care systems.

512 Nursing Action and the Political Process (3:3:0). Explores issues of power, political and legislative action as they relate to nursing. Effects of political establishment on nursing practice.

518 Cancer: Theoretical Foundations and Nursing Interventions (3:3:0). Focus on current knowledge about the nature of cancer and present treatment modalities. Emphasis on development of a concept of nursing clients with cancer, on an understanding of cancer as a major chronic illness and on assistance available to clients with cancer and their families.

519 Design of Complex Nursing Systems for Individuals and Groups Affected by Cancer (3:3:0). Prereq NURS 518. Concerns and problems confronted by client, family and nurse in providing effective health care. Emphasis on impact of identified physiologic and psychosocial problems on each of these agents and range of strategies available to comprehensive intervention.

525 Independent Nursing Practice (3:3:0). Overview of designs for independent practice and their conceptual frameworks. Problems inherent in pioneering a private nursing practice are delineated with opportunities to explore innovative approaches and alternatives for independent nursing practice.

550 Pathophysiologic Bases for Major Health Deviations of Individuals (3:3:0). Health deviations in individuals occurring in U.S. which require long-term and/or terminal health care interventions. Presented within developmental framework, as they influence physiologic integrity at the cellular level. Focus on man as a whole, open system. Complex health programs from the perspective of maintaining homeodynamics.

569 Cultural Dimension of Aging (3:3:0). Prereq Pol. Impact of cultural definitions of aging, research methodologies and findings of cross-cultural studies. Implications for health care and nursing.

Operations Research Courses (OR)

Systems Engineering

352 Methods and Models of Management Science (3:3:0). Prereq DESC 301. Application of a variety of management science techniques to business and industrial problems. Topics incl PERT, CPM, optimization, inventory models, queuing theory, Markov processes, statistical quality control, and special applications of mathematical programming.


451 Optimization Models (3:3:0). Prereq DESC 352. An examination of optimization models as applied to business problems. Both linear and nonlinear models are considered, incl dynamic, integer, and goal programming. Applications to management, finance, and marketing.

535 (formerly BUAD 535) Computer Simulation (3:3:0). Prereq INF S 610 (BUAD 630) and DESC 611 (BUAD 641), or undergrad equiv. Computer simulation as a scientific methodology in corporate planning and operations analysis emphasizing model development, implementation, and analysis of results. Project, lecture, and lab. Fall

541 Operations Research I (3:3:0). Prereq MATH 303 or equiv. Deterministic methods for solving “real-world” decision problems. The linear programming model and simplex method of solution, duality and sensitivity analysis, transportation and assignment problems, shortest path and maximal flow problems, project networks including PERT and CPM, intro to integer and nonlinear programming and game theory. Emphasis on modeling and problem solving. Students who have taken MATH 441 or 443 will not receive cr.

Plan for Alternative General Education Courses (PAGE)

Only students enrolled in the PAGE program are eligible to take PAGE courses.

Because of the highly integrative nature of the PAGE program, the courses in one semester are prerequisite for the courses in the following semester. (Exceptions for majors in certain departments have been previously arranged and are available in the PAGE office.)

120 Computers in Contemporary Society (4:4:0). Provides computer literacy through hands-on programming and information processing, as well as appreciation of the computer's roles in modern society.

122 Reading the Arts (3:3:0). Explores the relationship of the parts to the whole in a work of art, the connections among different art forms, and the links between art and the outside world. Specific content and forms considered vary from section to section.

123 Reading Cultural Signs (3:3:0). Uses techniques developed in PAGE 122 and new methods introduced from sociology, economics, history, anthropology and psychology to explore ways in which various media (art, architecture, movies, literature and music) reflect and shape personal and social values.

125, 225 Analysis and Solution of Quantitative Problems I, II (3:3:0), (3:3:0). Discusses real-world modeling and problem solving techniques and, in conjunction with the computer and tools introduced from the mathematical sci, applies these to the analysis and solution of a variety of quantitative problems in the nat and social sci as well as the business environment.

130 Conceptions of Self (3:3:0). Drawing from appropriate works in the social sci, arts and humanities, examines different conceptions of the self, characteristics of different cultures, and historical eras.

131 Contemporary Society in Multiple Perspectives (3:3:0). Explores methods and perspectives in the social sci and humanities to evaluate the contribution of different disciplines to an understanding of significant social issues and their global ramifications.

150, 152, 250 Symbols, Codes and Information (1:1:0), (1:1:0), (1:1:0). Prereq Taken in sequence. Provides a synthesis of the PAGE courses emphasizing the various ways in which people communicate ideas to one another through language, mathematics, the graphic and musical arts. Lectures by PAGE faculty and guest speakers.

151, 153, 251 Values, Themes and Cultural Problems (1:1:0), (1:1:0), (1:1:0). Prereq Taken in sequence. Integrates the material treated in the PAGE courses dealing with the interrelationship of the self and society as seen through the various social sci, humanities, and arts. Lectures by PAGE faculty and guest speakers.

227, 228 Scientific Thought & Processes I, II (4:3:3), (4:3:3). Prereq Taken in sequence. Explores and integrates the principles of classical and modern sci through the study of such topics as cosmology, evolution, ecology, mechanics, relativity, and quantum physics.

230 Cross-Cultural Perspectives (3:3:0). Enables students to broaden cultural horizons and to understand human behavior by studying in depth a society different from their own.

252 The Decision Making Process and the Choice of Technologies (3:3:0). Prereq PAGE 150, 152, 250. Examines decision making in large organizations, its effects on the choice of technologies, and the impact of these choices on values.

253 The Contemporary United States (3:3:0). Prereq PAGE 151, 153, 251. Studies specific aspects of contemporary U.S. society from historical, sociological, political, economic, cultural and global perspectives.
of recreational leadership; community resources, supervision and evaluation methods for converting leisure into outdoor recreation and education. (Fee)

320 Leadership Principles and Techniques in Leisure Services (3:3:0). Analysis of leadership techniques and individual leadership styles in working with leisure service volunteers, advisory boards, community organizations, personnel and leisure participants.

325 Cooperative Education or Internship (9:0:0). A paid or voluntary experience in a park and recreation agency. Application of academic research and course work into the work environment. Supervisory roles explored, management structure and operation analyzed. Must be taken concurrently with PRLS 326.

326 Seminar: Practical Problem Solving (3:3:0). Students involved in internship or cooperative education experiences will meet to compare management styles, organization structures, and leisure facility operations. Problem solving methods will be reviewed and applied in the work environment. Professional standards, legal and fiscal policy will be compared across several agencies. Must be taken concurrently with PRLS 325.

400, 401 Field Study of Metropolitan Park and Recreation Resources (3:3:0). A field course which reviews and compares a wide variety of park and recreation facilities, museums, national parks, community centers, sports facilities, theme parks, reservoirs, campgrounds, visitor centers, national state and local lands and facilities, commercial and private developments, large-scale redevelopment and restoration projects.

405 Design and Maintenance of Leisure Facilities (3:2:2). A direct application course that reviews the principles of design and maintenance in terms of demand, function, efficiency, safety, and economy. A variety of leisure facilities will be analyzed, incl parks, recreation centers, playgrounds, campgrounds, commercial facilities, and multi-use conversions.

410 Management and Operation of Leisure Resources (3:3:0). A comprehensive course addressing the day-to-day problems in the operation and management of leisure resources. Discussions incl role definitions, management techniques, problem solving, decision making, affirmative action mandates, emergency and legal problems, as well as legislation and implications for land management.

415 Leisure for Special Populations (3:3:0). Methods and techniques of leisure service adapted to meet the unique needs of special populations (physical, social, emotional or mental). Emphasis will be placed on the role of leisure in assisting the special population person to actualize his individual potential. Specific topic areas incl client assessment, activity analysis, use of consultant services, cooperation with primary therapist, client evaluation, and reporting.

420 Research and Evaluation of Leisure Services (3:3:0). Using current multidisciplinary research sources, analyzes the purpose and use of evaluation in determining service effectiveness. Skills necessary for the evaluation of staff, facility, program and self will be developed. Methods for establishing individual and agency evaluative criteria and making applicable use of current research data to improve delivery of leisure services will be emphasized.

425 Leisure Funding and Finance (3:3:0). An examination of methods and techniques of funding generation, appropriation, justification, and management. Specific areas incl budget preparation and presentation, grantships (sources, cycles and techniques), revenue projection and analysis, contract services, budgeting modalities and accountability.

450 Senior Practicum in Park and Recreation Area Management (4:4:0). A senior project featuring in-depth analysis of selected problem areas in parks and recreation such as master plans, maintenance management operations, revenue resource analysis, grant and proposal development, planning/programming/budgeting systems, legislative and financial policy, research projects and other topics in the planning design and management of specific facilities and areas. A senior thesis or project-oriented report is required.

460 Legal Dimensions of Leisure (3:3:0). An examination of the relationship between leisure and the law. Specific topics incl liability, safety codes, law enforcement, dealing with deviant behavior, insurance, bonding, contracts. Identification of legal decision-making organizations and how they are influenced as well as the legal dimensions of land acquisition, personnel disputes, and current issues.

470 Leisure and Recreation Programming for Older Adults (3:3:0). A general survey of recreation services and opportunities provided for the older population, incl those who are institutionalized and isolated. An in-depth study of the relationship between attitudes and behavior toward leisure and the delivery of recreation services; trends in planning; diversity in programming; and evaluation of current programs. Observation and participation in local existing programs are required.

499 Independent Study (1-3:0:0). Individual study of topic area in leisure research, theory or practice under the direction of faculty.

**Philosophy Courses (PHIL)**

**Philosophy and Religion**

100 Introduction to Philosophy (3:3:0). Intro to nature of philosophical reasoning and to some of the main problems of philosophy.


111 Introduction to Social and Political Philosophy (3:3:0). Examination of philosophical foundations of some of the major concepts and institutions in social and political thought.

151 Introduction to Ethics (3:3:0). Consideration of some of the perennial issues in ethical theory.

173 Introduction to Logic (3:3:0). Basic concepts and techniques of deduction, emphasizing the modern treatment of such topics as quantification and rules of inference, with study of the classical treatment. Basic principles of induction, informal fallacies, and uses of logic in everyday life.

212 Alternative Futures for Science and Society (3:3:0). Inquiry into how values of freedom and rationality are involved in the ways in which science and technology are being used to meet problems of our day.

254 Contemporary Ethical Problems (3:3:0). Topics incl homosexuality, abortion, drugs, civil disobedience, capital punishment, the rights of the individual vs. the rights of society.

261 History of Western Philosophy : Ancient (3:3:0). Selected figures and problems in philosophy from the pre-Socratics to the Stoics and Epicureans. May not be taken by students who have previously taken PHIL 231.

302 History of Western Philosophy : Medieval (3:3:0). Figures and problems of medieval philosophy: in-depth study of leading thinkers from the 5th to the 15th centuries. May not be taken by students who have previously taken PHIL 234.

303 History of Western Philosophy : Modern (3:3:0). Figures and problems of modern philosophy: in-depth study of such philosophers as Descartes, Locke, Berkeley, Hume, Kant and Hegel. May not be taken by students who have previously taken PHIL 232.

305 Business Ethics (3:3:0). An examination of some of the moral problems that arise with regard to the responsibilities
of various segments of the business community—employers, management, stockholders—to one another, to the consumer, and to society at large.

306 Criminal Justice Ethics (3:3:0). Prereq 54 hr or Pol. This course will be an in-depth analysis of the ethical principles relevant for those working in criminal justice.

309 Medicine and Human Values (3:3:0). Examination of some of the major moral issues involved in the practice of medicine and arising from research in the life sciences. Topics incl medical experimentation, eugenics, definition of death, euthanasia, abortion, distribution of scarce resources, transplants, organ donation and psychiatric medicine. May not be taken by students who have previously taken PHIL 310.

311 Philosophy of Law (3:3:0). Prereq 3 hr of philosophy or Pol. Investigation of theories of natural law, legal positivism, and legal realism as they pertain to some of the central philosophical questions about law: What is the nature of law? What is a legal system? What is a valid law? What is a good reason for a judicial decision?

313 Philosophy of Religion (3:3:0). Prereq 3 hr of philosophy or Pol. Study of classical appeals to philosophy in support of belief in God's existence (Philo, Augustine, Anselm, Aquinas, Descartes); the idealism of Hume and the metaphysical agnosticism of Kant, the concept of religious experience in the philosophies of Hegel, Schleiermacher, and Kierkegaard; the problem of religious language in contemporary empirical philosophy.

315 Philosophy of History (3:3:0). Prereq 3 hr of philosophy or Pol. Investigation of development of historical consciousness of humanity. Intended to distinguish the historical from the unhistorical attitudes of human consciousness; and to investigate the various forms of historical consciousness by studying different interpretations of history.

325 Kari Marx's Social and Political Thought (3:3:0). Prereq 3 hr in PHI L or Pol. Study and evaluation of Marx's social and political ideas based on writings selected from several phases of his career. Examination of relation of Marx's thought to post-Marxist socialist theory and practice.

331 Philosophy in the United States (3:3:0). Prereq 3 hr of philosophy or Pol. Selected studies of American philosophers of the 19th and early 20th centuries, such as Emerson, Thoreau, Peirce, James, Royce, Santayana, Dewey and Whitehead. Emphasis on their relation to American culture.


334 Latin American Thought (3:3:0). Historical sources and present range of Latin American thought. Metaphysical, ethical and aesthetic themes from colonial-period scholasticism to modern personal and national philosophies. Distinguished philosophers of recent times such as Korn and Romero (Argentina), Farias Brito (Brazil), Varona (Cuba), Caso and Vasconcelos (Mexico), Deusta (Peru), and Vaz Ferreira (Uruguay). Contemporary thought touching religious, social and political topics.

336, 337 Contemporary Continental Thought: Phenomenology and Existentialism (3:3:0), (3:3:0). Prereq 3 hr of philosophy or Pol. Study of phenomenological and existentialist thought, demonstrating that the movement is both a criticism and a continuation of the philosophical outlook developed in modern philosophy beginning with Descartes. PHIL 336 focuses on the existentialists' concern with the meaning of being human by exploring the themes of subjectivity, absurdity and the meaning-giving functions of consciousness. PHIL 337 stresses the emergence of new theories of reality as consequences of changing attitudes toward consciousness. The courses need not be taken in sequence.

355 Contemporary Ethical Theory (3:3:0). Prereq PHIL 151 or Pol. Major trends and issues in recent moral philosophy.

356 Philosophy of Art (3:3:0). Prereq 3 hr of philosophy or Pol. Basic problems which arise from an inquiry into the meaning and value of art and our response to art.

357 Philosophy of the Social Sciences (3:3:0). Prereq 3 hr of philosophy or Pol. Philosophical aspects of the scope, methods, and uses of the behavioral and social sciences.

371 Philosophy of Natural Sciences (3:3:0). Prereq 3 hr of philosophy or Pol. One sem of logic rec. Study of aims and methodology of science. Among the questions of concern are: What constitutes a good scientific explanation? What grounds are used for comparing rival theories? Is there a special method of scientific discovery?


373 Theory of Knowledge (3:3:0). Prereq 3 hr of philosophy or Pol. Discussion of basic problems concerning the nature of knowledge, with study of the relation of knowledge to perception, belief and language.

374 Philosophy of Mind (3:3:0). Prereq 3 hr of philosophy or Pol. Investigation of such theories as dualism, behaviorism and materialism as they pertain to some of the central philosophical questions about mind: What is mind? What is the relation of mind to body? What is the justification of our belief in minds other than our own?

375 Metaphysics (3:3:0). Prereq 3 hr of philosophy or Pol. Study of basic problems concerning being in general and foundations of individual being; traditional treatments of such problems and criticism of the possibility of such knowledge. Selected readings from figures such as Plato, Aristotle, Aquinas, Spinoza, Leibniz, Kant, Bradley, Heidegger, and others.

376 (formerly 273) Introduction to Symbolic Logic (3:3:0). Prereq PHIL 173 or MATH 110 or Pol. Study of predicate calculi by means of a step-by-step construction of artificial languages. Topics incl procedures for constructing a calculus, proof techniques, significant properties of predicate calculi and procedures for recognizing phrases.

391, 392 Special Topics in Philosophy (3:3:0), (3:3:0). Examination of topics of current interest, such as death and dying, the rights of children, or philosophical controversies in modern physics.

Foundations of European Civilization (3:3:0). (See EUST 300 under European Studies.) Up to 3 cr of listed European Studies seminars may be credited toward the major.

Classicism and Romanticism (3:3:0). (Same as EUST 350) Up to 3 cr of listed European Studies seminars may be credited toward the major.

421, 422, 423, 424 Seminar (3:3:0) for each. Limited to philosophy majors with 9 hr of philosophy; but others may be admitted if the topic is sufficiently close to their fields of study. Topics vary.

425, 426 Independent Study (3:0:0), (3:0:0). Prereq Philosophy majors with 54 hr and 15 hr of philosophy and Pol.D.

The Twentieth Century in Europe (3:3:0). (Same as EUST 450) Up to 3 cr of listed European Studies seminars may be credited toward the major.

510 Seminar in the Ethics of Health Care (3). Prereq 54 hr, 84 hr, grad stdg or Pol. An examination of moral dilemmas within the health care profession on ethical theories and principles. Special emphasis on patients' rights, social justice of health care, and evolving health care technologies.

512 Issues in Philosophy and Literature (4:3:0). Prereq 84 hr, 6 hr of 300–level English and 6 hr of 300–level philosophy,
or Pol. The topic of the seminar will vary from term to term; possible topics include structuralism, technology, form and matter, conceptions of the future. The course will be cross-listed and team taught.

531 Freud and Philosophy (3:3:0). Prereq 6 hr of philosophy, or a course in personality theory, or Pol. Exploration of philosophical aspects of Freud's thought, focusing on Freud's philosophy of human nature and culture and its influence on contemporary thought.

555 Environmental Ethics (3). Prereq 54 hr, 84 hr or grad stgd, and 3 cr in philosophy plus a combined total of 9 additional cr in philosophy and sciences, or Pol. An examination of ethical principles affecting environmental issues with special emphasis on the problems encountered by environmental biologists.

574 Current Issues in Philosophy of Psychology (3:3:0). Prereq A combined total of at least 12 cr in philosophy or psychology, at least 3 of which must be in philosophy and at least 3 of which must be at 300 level or above, or Pol. A careful examination of some issue or issues of current interest to both philosophers and psychologists. Typical issues examined incl: the mind–body problem, philosophical and psychological implications of work in artificial intelligence, philosophical issues in psycholinguistics.

### Physical Education (PHED)

#### Health and Physical Education

**Activity Courses**

All activity courses are open to students with handicapping conditions; accommodations for these students are made on individual basis. Students unable to participate in regular activity classes may be placed in an individualized section (PHED 170, 171, 172, 173) if so desired.

100 Foundations of Exercise and Fitness (1:1:0). Development of an understanding of cardiovascular health and fitness through a personal exercise program. Special emphasis will be given to strength, endurance, and weight management as components of conditioning. This course is a prerequisite or corequisite to all physical education laboratory sections.

101 Soccer and Volleyball (1:0:2). Basic skills, rules and strategies of each sport.

103 Beginning Fencing (1:0:2). Basic skills, techniques and rules of foil fencing.

104 Non–Contact Lacrosse (1:0:2). Basic skills, rules and strategies.

105 Aerobics, Basic Conditioning (2:0:3). Develop skills for cardiovascular fitness programs.

106 Beginning Gymnastics (1:0:2). Basic skills and techniques of gymnastics.

107 Folk, Square, and Social Dance (1:0:2). Basic steps, sequences and style of each dance form.

108 Weight Training and Body Conditioning (1:0:2). Principles and techniques of individualized progressive resistance exercise and cardiovasacular fitness.

109 Beginning Ice Skating (1:0:2). Fundamental skills necessary to select equipment and to skate forward and backward. (Fee).

110 Beginning Swimming (1:0:2). Intro open only to non-swimmers. Emphasis on becoming safe swimmers. (Fee).

111 Basketball and Soccer (1:0:2). Basic skills, strategy and rules of each sport.

116 Combative Sports, Games, Unarmed Combat, and Wrestling (1:0:2). Development and skill in combative sports.

121 Flag Football and Basketball (1:0:2). Basic skills, rules and strategy for each sport.

124 Basketball and Softball (1:0:2). Basic skills, rules and strategy for each sport.

131 Volleyball and Field Hockey (1:0:2). Basic skills, strategy and rules for each sport.

133 Tennis for All (1:0:2). Basic ground strokes, volley, serve and smash, rules, strategy and terminology.

140 Golf (1:0:2). Grip, stance, swing, rules, and etiquette. (Fee).

148 Badminton and Bowling (1:0:2). Basic skills, rules, terminology and strategy. (Fee).

150 Intermediate Swimming (1:0:2). Increase proficiency, endurance, and versatility in aquatics. (Fee).

151 Beginning Tennis (1:0:2). Basic skills, rules, terminology and strategy for beginners.

152 Tennis for the Advanced Beginner (1:0:2). Prereq PHED 151 or equiv experience. Continuation of basic ground strokes, serve, volley, and smash; racket selection, rules, terminology and strategy.

153 Intermediate Tennis (1:0:2).* Prereq PHED 152 or equiv experience. Basic skills with the intro of the chop, slice, half volley and lob; singles and doubles strategy.

154 Advanced Tennis (1:0:2).* Prereq PHED 153 or equiv skill level. For experienced players to strengthen skills, strategies and tactics.

*Students taking tennis classes are required to purchase a can of new balls and a United States Tennis Association Rule Book.

161 Archery and Golf (1:0:2). Basic skills, techniques and rules of target archery and golf.

165 Racquetball (1:0:2). Fundamental skills, techniques and strategy of playing singles and doubles racquetball.

170, 171, 172, 173 Individual Physical Education (2:0:3) for each. Prereq Pol and classification of "C" or "D" on the Department of Health Classification Form. Students unable to participate in the regular program of physical education may register for this course. Activities based on the physician's rec.

200 Swimmers (1:0:2). Prereq Students must swim 50 meters of crawl or breast stroke. Speed, endurance, and perfection of strokes and diving. (Fee).

206 Gymnastics for Children and Youth (3:1:4). Prereq PHED 106 or Pol. Fundamentals and progressions in teaching gymnastics, preschool through secondary school age with 12–15 hr of field experience involving lab.

207 Intermediate Folk, Square and Social Dance (1:0:2). Prereq PHED 107 or Pol. Advanced skills in square and social dance with new steps and styles to folk and social dances.

210 Advanced Life Saving (1:0:2). Meets certification req for Advanced Life Saving for the American Red Cross. (Fee).

211 Sports Officiating and Intramural Administration (3:2:3). Application of officiating techniques and organization of intramural programs.

250 Water Safety Instructor (2:0:3). Meets the Water Safety Instructor req for the American Red Cross. (Fee).

255 Basic Scuba Diving (2:0:3). (See PRLS 255).

300 Kinesiology (3:3:0). Prereq BIOL 124, 125. Study of human movement and cinematographic analysis.

301 Physical Education in Elementary School (3:3:0). Planning experiences in physical education for children. Field experience (10 to 12 hr) in public schools req. Not open to physical education majors.

303 Professional Dimensions of Physical Education (3:3:0). Intro to the professional practice of physical education.
304 Sport, Culture, and Society (3:3:0). Prereq PHED 303 or Pol. Sport viewed from historical, political, economic, and cultural perspectives. Spring only.

306 Psychomotor Learning (3:3:0). Prereq EDUC 302, 313, or Pol. Learning theory, processes, and conditions as they affect movement. Field experience req. Spring only.

308 Developmental Physical Education (3:2:2). Prereq BIOL 124, EDUC 302, or Pol. Chronic and functional impairments as they affect physical education and exercise. Saturday morning lab and an adapted aquatics lab. Fall only.

311 Tennis, Folk, Square and Social Dance (2:0:3). This course is designed for physical education majors to improve their basic skills and knowledge in tennis, folk, square and social dance, through an in-depth study of skill progressions and drills for teaching skill analysis and peer group teaching is included.

312 Flag Football and Volleyball (2:0:3). This course is designed for physical education majors to improve their skills and knowledge through in-depth study of basic skills progressions and drills for teaching. Skill analysis and peer group teaching are included.

315 Archery, Badminton, and Golf (2:0:3). For physical education majors only. Basic skills progressions and drills incl skill analysis and peer group teaching.

317 Weight Training/Body Conditioning: Track and Field (2:0:3). This course is designed for physical education majors to improve their skills and knowledge through in-depth study of basic skills progressions and drills for teaching. Skill analysis and peer group teaching are included.

318 Basketball and Soccer (2:0:3). This course is designed for physical education majors to improve their basic skills and knowledge through in-depth study of skill progressions, drills for teaching. Skill analysis and peer group teaching are included.

365 Measurement and Evaluation in Physical Education (3:3:0). Prereq PHED 300, 303. Selection, administration, evaluation and construction of measurement and evaluation tests and techniques in physical education; statistical analysis of data and survey of selected instruments. Spring only.


403 Curricular Experiences in Elementary School Physical Education (3:3:0). Prereq PHED 300, 303, 313 or Pol. Curricular experiences and methods for elementary school physical education; req 12 to 15 hr of field experience. Fall only.

410 Psychology of Sport and Coaching (3:3:0). Research, trends and techniques of coaching.

420 Coaching of Sports (2:1:3), (2:1:3). Prereq PoC. Sports usually coached at the secondary level with each activity scheduled on a sem basis and conducted independently for 2 cr hr. Principles and fundamentals of offensive and defensive play strategy, team and staff organization, and materials for coaching.


441 Practicum in Athletic Training (1-2:0:0). Prereq PHED 430 and PoD. Application of techniques and procedures in the care and prevention of athletic injuries in a selected environment under certified trainer supervision. Involves at least 100 hr of participation for each cr hr in athletic training.

442 Practicum in Physical Education (1-3:0:0). Prereq 54 hr or 84 hr and PoD. Supervised professional practice in a selected area of interest. Student may repeat this course but no more than 3 cr hr may be given. Each cr hr req a minimum of 60 hr of participation in the specialty over a period of 6 weeks. Areas selected with faculty adviser approval.

450 Physiology of Exercise (3:3:0). Prereq BIOL 124-125, PHED 300. Human physiological response to, and the effects of, exercise. Fall only.


472 The Physical Education Program, Grades K Through 12 (3:3:0). Prereq PHED 403. Selection, design and application of learning experiences appropriate for elementary, middle and secondary schools needs. Incl philosophy, objectives, class control, methods. May be taken only in the sem in which student teaching is done. Spring only.

490 Internship in Physical Education with Selected Specialization (12:0:0). Directed internship in a physical fitness or sports program in cooperation with a community agency, business or industrial organization. Req daily seminar.

499 Independent Study in Physical Education (1-3:0:0). Prereq 94 hr and PoD. Study of a problem area in physical education research, theory or practice under the direction of faculty. May be repeated, but no more than 3 hr total cr may be given.

500 Workshop in Physical Education (1, 2, 3:0:0). Prereq grad stgd or Pol. Concentrated full-time workshops, weekend seminars, and workshops dealing with selected topics in physical education and ancillary fields. May be repeated. No more than 6 sem hr may be applied for degree cr.

508 Seminar in Special Physical Education (3:3:0). Prereq grad stgd or Pol. Discussion of current problems, issues and research in special physical education. Practica may be included.

530 Exercise Physiology and Fitness Programs for Older Adults (3:3:0). Prereq PHED 397, grad stgd or PoD. Principles of exercise physiology related to fitness and health of older populations; 3 to 6 hr field experience.

599 Independent Study in Physical Education (1-3:0:0). Prereq grad stgd or Pol. Study of a problem area in physical education research, theory or practice under the direction of faculty. May be repeated, but no more than 3 hr total cr may be given.

### Physics Courses (PHYS)

#### Physics

100 Physics for Liberal Arts Majors (3:3:3). A study of the basic ideas of classical and modern physics and their applications in the context of contemporary social, economic and political realities.

103, 104 Principles and Development of Modern Physics (4:3:3), (4:3:3). Prereq PHYS 103 prerrq to PHYS 104. For nonscience majors. Topics incl mechanics, relativity, cosmology, atomic physics, electricity and magnetism, nuclear physics and elementary particles. Emphasis on historical, philosophical and social aspects of modern physics.

106, 107 Physics for the Life Sciences (3:3:0) (3:3:0). Topics include mechanics, properties of fluids and gases, sound, heat, electricity, light, the atom, the nucleus, and radiation. Basic principles of physics emphasizing applications to biological sciences.

[http://catalog.gmu.edu](http://catalog.gmu.edu)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 211</td>
<td>Frontiers of Physics</td>
<td>1-1-1</td>
<td>Overview of subfields of physics, their interrelation, and the relationship of physics to other disciplines. Discussion of current research topics in physics; career opportunities.</td>
</tr>
<tr>
<td>PHYS 212</td>
<td>Energy and Environment</td>
<td>3-3-0</td>
<td>Basic ideas of science and technology with emphasis on their interaction with our contemporary culture. Designed for science and nonscience majors with interests in current concerns of energy and environment. Origin, forms, uses and distribution of energy and resulting environmental effects. May not be included for credit by physics majors within the 44 hr of physics courses req for B.S. degree or within the 31 hr of physics courses req for B.A. degree.</td>
</tr>
<tr>
<td>PHYS 250</td>
<td>University Physics</td>
<td>4-3-1</td>
<td>First semester of a three semester calculus-based introductory physics sequence, designed primarily for science and engineering majors. Mechanics.</td>
</tr>
<tr>
<td>PHYS 251</td>
<td>Nuclear Weapons: Technology and Politics</td>
<td>3-3-0</td>
<td>A study of the history and development of nuclear weapons and nuclear strategy, the physical basis of nuclear weapons and their biological and physical effects, the effects of a nuclear war and the possible effectiveness of civil defense, the possibility of limited and winnable nuclear wars, arms control, nuclear proliferation and public opinion on nuclear issues. This course may not count toward the physics major req.</td>
</tr>
<tr>
<td>ENGR 301</td>
<td>Digital Electronics</td>
<td>2-2-2</td>
<td>Intro to characteristics and uses of various modern electronic devices, circuits and instruments. Some applications relevant to the student's major are demonstrated. Not open to physics and engineering majors.</td>
</tr>
<tr>
<td>PHYS 304</td>
<td>Modern Physics with Applications</td>
<td>3-3-0</td>
<td>Theoretical and experimental basis for the analysis of advanced physical phenomena, including modern optics, lasers, binding and energy bands in solids, electrical, thermal and magnetic properties of solids, semiconductors, radioactivity, nuclear reactions, radiation detectors and applications of nuclear physics to other sci.</td>
</tr>
<tr>
<td>PHYS 381</td>
<td>Computer Methods in Physics and Engineering</td>
<td>3-3-0</td>
<td>Introduction to algorithms used to solve problems in physics and engineering and their computer implementation, data handling and data processing techniques in physics and engineering.</td>
</tr>
<tr>
<td>PHYS 397</td>
<td>Thermodynamics</td>
<td>3-3-0</td>
<td>Basic definitions of thermodynamics and their application to engineering systems, properties of pure substances, equations of state, analysis of thermodynamics processes.</td>
</tr>
<tr>
<td>PHYS 311</td>
<td>Mathematical Methods in Physics and Engineering</td>
<td>3-3-0, 3-3-0</td>
<td>Prerequisite: MATH 314 or MATH 315. Functions of one and several variables; vector algebra and calculus; solutions of ordinary differential equations; Laplace transforms; complex variables.</td>
</tr>
<tr>
<td>PHYS 312</td>
<td>Introduction to Quantum Mechanics and Atomic Physics</td>
<td>3-3-0</td>
<td>Prerequisites: PHYS 303 and or POL. Experimental basis of quantum mechanics; the wave function; systems in 1, 2 and 3 dimensions.</td>
</tr>
<tr>
<td>PHYS 407</td>
<td>Senior Laboratory in Modern Physics</td>
<td>3-3-0, 3-3-0</td>
<td>Experiments in modern physics involving advanced techniques in electronics, optics, nuclear physics and solid state. Typical experiments: the Frank Hertz Experiment, Hall Effect, electron paramagnetic resonance, Mossbauer Effect.</td>
</tr>
</tbody>
</table>
408 Senior Research (2–3:0:0). Prereq 84 hr. The student works under the guidance of a faculty member on a research project in experimental or theoretical physics.

412 Computational Physics (3:3:0). Prereq PHYS 311 or equiv and MATH 266 or Pol. Solutions to current problems in physics using digital computers.

414 Nuclear and Particle Physics (3:3:0). Prereq PHYS 402. Accelerators, detectors and related electronics; nuclear and elementary particle structure; symmetries and conservation laws; the electromagnetic, weak and hadronic interactions; nuclear models; the quark model; nuclear science and technology.

416 Special Topics in Modern Physics (1:2:0). Prereq 84 hr. Topics of major current interest in modern physics with emphasis on the breadth of physical understanding needed to approach many of today's problems. Seminar every other week.

417 Geophysics (3:3:0). (Same as GEOL 417) Prereq GEOL 101, 102, 201, 301; MATH 113, 114; PHYS 250; coreq MATH 213; PHYS 350, 351. Seismological and gravitational theory and application to an understanding of the earth's interior. The geology req may be waived for physics and engineering students with sufficient background.

428 Relativity and Cosmology (3:3:0). (Same as ASTR 428.) Prereq PHYS 352; MATH 214 or 216; and PHYS 303, 305 or Pol. Special relativity, 4 dimensional space-time, general relativity, non-Euclidian geometries, geodesic and field equations, tests of general theory of relativity, black holes, cosmology, models of the universe, remnant blackbody radiation, big bang cosmology, thermodynamics and the universe.

480–481 Special Workshop (4:3:3–4:3:3). Intensive two seminar course in basic physics designed to review and update the student's knowledge and bring it up to the level of a physics major at the end of the sophomore year. Topics incl mechanics, heat and thermodynamics, electricity and magnetism, optics, atomic and nuclear physics. Emphasis on conservation laws in physics, thermodynamics, radiation, atomic and nuclear physics.

500 Physics for High School Teachers (3:3:0). Prereq Certification as a secondary school physics instructor or PoD. Techniques of teaching high school physics. Intro to modern physics with emphasis on concepts rather than mathematical formalism. Recent developments in physics.


502 Introduction to Quantum Mechanics and Atomic Physics (3:3:0). (Same as PHYS 402) Prereq PHYS 303 or Pol. Experimental basis of quantum mechanics; the wave function; systems in 2, 3 and 3 dimensions.

510 Mechanics of Continuous Media (3:3:0). Prereq PHYS 303 and 305. Study of continuous media. Incl physical perspective, mathematical formulation and solution of problems in ideal fluids, viscous fluids, waves in fluid media, turbulence, thermal convection, stability considerations, elastic deformations, stress–strain tensor and body waves in elastic media.


512 Solid State Physics and Applications (3:3:0). Prereq PHYS 402 or 502. Crystal structures, binding, lattice vibrations, the free electron model, metals, semiconductors and semiconductor devices, super–conductivity, magnetism.


520 The Physics of Energy and Environmental Technology (3:3:0). Prereq B.A. or B.S. degree in nat sci or mathematics or Pol. Contemporary problems of energy and the environment with emphasis on the underlying principles of physics within the constraints of engineering and economics. Intended for those pursuing careers in energy research and development, business administration, economics, ecology and high school sci instruction.

590 Selected Topics in Physics (3:3:0). Prereq grad stdg or PoD. Selected topics from recent theoretical developments and applications. Designed to satisfy the needs of the professional community to keep abreast of current developments.

Plan for Alternative General Education: See PAGE 213

Portuguese Courses (PORT)

Foreign Languages and Literatures


101, 102 Elementary Portuguese (3:3:2), (3:3:2). Intro to Portuguese, incl basic grammar, aural training, the development of oral skills and reading proficiency. Intro to the life and culture of Portuguese–speaking countries through selected readings and through programs in the language lab. Must be taken in sequence.

201, 202 Intermediate Portuguese (3:3:2). Prereq PORT 101, 102 or equiv. Intensive review of basic grammar; intro to more difficult grammatical constructions and patterns of usage; continued development of reading proficiency and of aural and oral skills; continued study of the life and culture of Portuguese–speaking countries.

Psychology Courses (PSYC)

Psychology

100 Basic Concepts in Psychology (3:3:0). Prereq to all other courses in psychology. Intro to psychology as a scientific discipline. Incl an examination of concepts and methods in learning, motivation, development, personality, and measurement.

211 Developmental Psychology (3:3:0). Prereq PSYC 100 or Pol. Review of major developmental theories incl perspectives of childhood, adolescence, adulthood, and old age.

220 Personality Theory (3:3:0). Prereq PSYC 100 or Pol. Intro to classical and contemporary theories of personality and a comparative evaluation of major theories in terms of relevant research studies.

230 Industrial Psychology (3:3:0). Prereq PSYC 100 or Pol. Examination of application of psychological principles and methods to problems commonly encountered in business and industry.

231 Social Psychology (3:3:0). Prereq PSYC 100 or Pol. Study of man's development in a social matrix, incl such topics as socialization, cultural behavior, group norms, and attitude formation.

300 Analysis and Interpretation of Psychological Data (4:3:2). Prereq 6 hr of psychology incl PSYC 100, or Pol. Descriptive and inferential statistics in design, analysis, and
interpretation of psychological research with practical application using calculators.

303 Computer Applications in Biobehavioral Research (3:3:0). Prereq PSYC 100 and ENGR 240 or Pol. Survey of computer applications to research in perception, learning, cognition, motivation, and physiological psychology. Software and hardware req and their implementation for controlling biobehavioral experiments and processing and collecting response data.

304 Principles of Learning (4:3:2). Prereq PSYC 300 or Pol. Experimental methodology within the context of the basic principles of learning, incl such topics as classical and instrumental conditioning and discrimination learning.

305 Memory and Cognition (4:3:2). Prereq PSYC 300 or Pol. Experimental methodology within the context of discrimination, concept formation, verbal learning, psycholinguistics, and memory.

309 Perception and Information Processing (4:3:2). Prereq PSYC 300 or Pol. Experimental methodology within the context of perceptual psychology, incl such topics as psychophysics, perceptual organization and constancies.

313 Child Psychology (3:3:0). Prereq 6 hr of psychology incl PSYC 100, or Pol. Study of process of human psychological development from conception to adolescence incl such topics as genetic factors, emotional and intellectual growth, and environmental influences.

314 Adolescent Psychology (3:3:0). Prereq 6 hr of psychology incl PSYC 100, or Pol. Study of the biological and cultural changes accompanying adolescence, incl the effect of these changes on emotional, intellectual, and social development.

320 Psychological Tests and Measurements (4:3:2). Prereq PSYC 300 or Pol. Examination and application of principles underlying the theory, interpretation, and administration of psychological tests; incl a study of tests of intelligence, achievement, and ability.

321 Counseling Psychology (3:3:0). Prereq PSYC 325 or Pol. Review of the theories and methods in psychological counseling.

322 Behavior Modification (3:3:0). Prereq PSYC 220 or Pol. Examination of experimental principles of human and animal learning within the theoretical framework of applied behavior analysis; incl the design, implementation, and evaluation of operant intervention programs across a wide variety of human situations and the opportunity to apply this approach in a practicum setting.

323 Clinical and Social Psychology Research Techniques (4:3:2). Prereq PSYC 300 or Pol. Review and application of some research techniques incl interviewing, survey analysis, and process analysis.

325 Abnormal Psychology (3:3:0). Prereq PSYC 100 or Pol. Study of development of abnormal behavior patterns, incl such topics as methods of diagnosis and prevention of serious mental disorders such as psychosomatic disorders, psychoses, character disorders, and mental retardation.

326 Therapeutic Communication Skills (3:3:0). Prereq PSYC 325 or Pol. Intro to understanding and use of basic therapeutic communication skills employed in clinical and counseling psychology.

330 Psychology of Adjustment (3:3:0). Prereq PSYC 100 or SOCI 101 or NURS 250 or EDUC 200 or equiv. Nature of effective and faulty patterns of adjustment. Factors in healthy and unhealthy personality development, unique motivation patterns of individuals, and influence of personally significant groups on adjustment. Resources for personal growth and application of contemporary psychological principles to achievement of increased intellectual, emotional, and social competence.

360 Theories and Systems of Psychology (3:3:0). Prereq 9 hr of psychology or Pol. Review of various systems and theories that have played a role in contemporary psychology, incl association theory, structuralism, behaviorism, and theories of personality.

362 Psychology of Women (3:3:0). Prereq PSYC 100, BIOL 103, 104, or equiv, or Pol. Behavior and attitudes of women; influence of sex chromosomes and sex hormones on behavior; influence of culture on sex role differentiation; theories of sex role development.

385 History of Psychology (3:3:0). Prereq 9 hr of psychology or Pol. Survey of man’s attempts to understand himself systematically from the classical age to the present, incl various models of man.

371 Physiological Psychology: Sensory Psychology (3:3:0). Prereq PSYC 100, BIOL 103, 104, or equiv, or Pol. Sensory systems in animals and man, incl sensory physiology, psychophysics, information processing in the central nervous system, and experimental psychology.

372 Physiological Psychology: Neuropsychology (3:3:0). Coreq or prereq PSYC 373 or equiv. Role of the central nervous system in behavior, incl neuroanatomy, elementary biophysics, synaptic behavior and brain mechanisms in motivation, learning, and memory.

373 Physiological Psychology Laboratory (1:0:1). Prereq BIOL 103, 104, or equiv, or Pol. Functional anatomy and physiology of the brain, incl dissection of brain and eye, demonstration and practice in techniques of studying brain mechanisms of behavior. It is advisable that psychology majors take PSYC 372 concurrently with PSYC 373.

374 Sensory Psychology Laboratory (1:0:1). Prereq BIOL 103, 104, or equiv or Pol. Experiments in sensory psychology; methods of estimating sensory magnitude, response to visual and auditory stimuli. PSYC 371 should be taken as a prereq. or coreq.

400 Laboratory Methods and Instrumentation in Experimental Psychology (1:0:3). Prereq Lab course in experimental psychology. Supervised experience in working with the methods, instrumentation, and techniques encountered in the modern psychological lab. Topics incl electro–mechanical programming, psycho–physiological measurement techniques, and basic electrical circuits.

410 Motivation and Emotion (3:3:0). Prereq PSYC 100, BIOL 103, 104, or Pol. Experimental methodology within the context of the concepts and principles that determine human and animal motivation, incl such topics as instincts and drives.

411 Comparative Psychology (3:3:0). Prereq PSYC 100, BIOL 103, 104, or Pol. Experimental methodology within the context of a study of behavior through the phylogenetic continuum, incl. such topics as species–specific behavior, early experience and learning.

414 Behavior Disorders of Childhood (3:3:0). Prereq PSYC 313 and 325 or Pol. Review of the theories, methods, and research dealing with emotional and behavioral disorders of children.

415 Psychological Factors in Aging (3:3:0). Prereq 3 hrs. in PSYC or SOCI. Examination of the sensory, perceptual, intellectual, and personality changes that occur in older people. Common adjustment problems as well as more serious adjustment difficulties are discussed. Applications of various personality theories of aging.

416 Seminar in Developmental Psychology (3:3:0). Prereq 6 hr of developmental psychology or Pol. Rotating topics (e.g., Cognitive and Perceptual Development, Personality and Social Development) to be announced in advance. May be repeated once for cr.


421, 422 Undergraduate Practicum in Psychology (3:3:0), (3:3:0). Prereq PSYC 325 and 326 and permission of Clinical Review Committee. Supervised experience in application of psychological principles requiring work in a nonclassroom situation.
423 Group Psychotherapy Techniques (3:3:0). Prereq PSYC 220 or Pol. Review of theory and methods of group therapy with emphasis on humanistic and interpersonal approaches, incl applications to family therapy, alcoholism and drug abuse.

435 Personnel Training and Development: A Psychological Perspective (3:3:0). Prereq PSYC 230; or coreq PSYC 320; or Pol. An overview and critique of training methods currently used in industry from the viewpoint of psychological theory, incl simulations, on-the-job training, supervisory/leadership skills training, computer-assisted instruction, and programmed texts. Principles of needs analysis, program development, and program evaluation are discussed within the framework of industrial psychology.

460 Independent Study in Psychology (1–3:0:0). Prereq required experimental course, a 2.50 GPA in psychology and a written proposal approved in advance of regis by instructor and the department chair. Investigation of a psychological problem according to individual interest with stress on research methods. By PoC, a student may take a second sem for a maximum of 6 hr of cr. Students meet once a week to discuss their study.

461, 462 Special Topics (3:3:0), (3:3:3). Prereq Pol. Selected topics reflecting interest in specialized areas. Announced in advance.

499 Senior Thesis (3:0:0). Prereq psychology major with 84 hr, an experimental psychology lab course, 3.00 GPA in psychology, PSYC 460, Pol, and prior approval of thesis proposal. Directed research on a topic agreed upon by student and adviser. The student should take PSYC 460 with the same adviser in order to develop a thesis proposal prior to registering for PSYC 499. The student must complete a thesis and defend it orally before the adviser and 2 faculty members. With PoD, students may take a second sem for a maximum of 6 hr cr.

506 Theories of Personality (3:3:0). Prereq PSYC 220. Comparative review of prevalent theories of personality with special emphasis on their fundamental models and their similarities and differences.

508 Theories of Development (3:3:0). Prereq PSYC 313 or 211. Major theories of infant and child development incl works of Piaget, Freud, Erikson, and Spitz.

513 Infant Development (3:3:0). Prereq PSYC 313 (210) or Pol. Examination of current issues, research methods, and clinical evaluation techniques in the field of infant development.

530 Human Factors Engineering (3:3:0). Prereq PSYC 230 or an experimental lab course or Pol. Investigation of complex man–machine interactions found in industry today. Extensive empirical research findings are examined.

533 Seminar in Industrial/Organizational Psychology (3:3:0). Prereq PSYC 230 or PSYC 636 or Pol. Rotating topics (e.g., leadership theories and management development, performance appraisal) to be announced in advance. May be repeated for cr.

548, 549 Practicum in Gerontology (3:0:0), (3:0:0). Prereq Completion of 2 of the 3 req core courses in the gerontology certificate program. Practical experience in a gerontological setting under supervision of a qualified professional. 150 contact hr per 3 sem hr cr.

553 Quantitative Methods I: Advanced Statistics (3:3:0). Prereq PSYC 300. Topics in inferential psychological statistics from an advanced, perspective. Additional topics are incl. Course provides intro to use of computer packages in data handling and analysis. Req. for students in doctoral and master’s programs. Req. may be satisfied by demonstrating competence on examination.

559 Drugs, Hormones, and Behavior (3:3:0). Prereq PSYC 372 or equiv or Pol. Overview of the chemistry of behavior, incl neurotransmitters, mechanisms of action of therapeutic drugs such as antidepressants, actions of hallucinogens and other psychoactive drugs, chemical theories of memory, and effects of hormones on behavior.

560 Advanced Applied Social Psychology (3:3:0). Prereq PSYC 231. Study of major trends in social psychological research with emphasis on the ethical and practical problems posed by human experimentation. Topics incl attitude measurement, attitude change, conformity, social perception, and small group interaction.

564 Sensory Processes (3:3:0). Prereq PSYC 309 or 371. Intensive exploration of the neural foundations of sensory experience, with special emphasis on the processing mechanisms at different levels of the various sensory pathways.

565 Cognitive and Perceptual Development (3:3:0). Prereq 6 hr of child psychology and a course in experimental psychology. Experimental study of child development. Topics incl biogenetic factors in development, sensory processes, learning, perception, motivation, language and cognitive development.

581/ENGL 581 Survey of Psycholinguistics (3:3:0). Prereq ENGL 391 or PSYC 305 or Pol. Study of the psychological basis of human language acquisition and competence, incl research on aphasia, association, autism, second language learning, grammatcal transformations, and the psychological reality of transformational rules.

Public Administration Courses (PUAD)

Public Affairs

502 Theory and Practice of Public Administration (3:3:0). Prereq grad stdg or PoD. Survey and review of the field of public administration to incl development of U.S. governmental administration, theories of administrative organization and behavior, administrative processes, management of people and money, administrative responsibility, and the nexus of public policy–making and implementation.

503 The Political Environment of Public Management (3:3:0). Prereq grad stdg or PoD. Skills involved in a public manager’s interaction with private groups, legislative bodies, advisory committees, the press, other administrative agencies, political executives, and other levels of government. Case studies of administrative participation in the political process of public policy making.

Real Estate and Urban Development Courses (REUD)

School of Business Administration

After Fall Semester 1981, noncore, upper–level (300–400 series) courses offered by the School of Business Administration may not be presented on an undergraduate degree application for any major in the School (except as general elective credit) if taken prior to acceptance to junior standing.

301 Principles of Real Estate (3:3:0). Dimensions and specialties involved in the public control and private development, sale, finance and management of real estate. Subject areas incl land planning, land use control, appraisal, finance, brokerage, property management, and investment. Lecture, discussion, and computer–assisted research.

304 Real Estate Law (3:3:0) (see BULE 304). Prereq BULE 301. Basic principles of modern real estate law incl classifications of property, types of ownership, acquisition and transfer, leasing, government regulation, and taxation. Emphasis on the real estate sale incl the contract of sale.

415 Real Estate Finance (3:3:0). Prereq REUD 301 or Pol. Mechanisms of real estate finance, sources of funds, loan contracts, principles of mortgage risk analysis, and secondary mortgage markets. Students will develop
analytical skills including the use of the microcomputer and appropriate software.

416 (413) Real Estate Appraisal (3:3:0). Prereq REUD 301 or Pol. Economic theories of value applied to real estate; estimation of value through the cost, income and market data approaches; valuation as a guide to business decisions; market analysis techniques for the major types of real estate; development of analytical skills incl the use of the microcomputer and appropriate software.

417 Real Property Asset Management (3:3:0). Prereq REUD 301 or Pol, FNAN 301 and REUD 415. Fitting investment strategy to context of physical property, leverage, form of ownership, income tax, and management alternatives. Economic and financial analysis, risk projection for sole proprietorship, partnership, trust and corporate real estate enterprises. Students will develop analytical skills incl the use of the microcomputer and appropriate software.

418 Real Estate Brokerage (3:3:0). Prereq REUD 301 or Pol. Nature and function of real estate brokerage as a business, including the legal environment of brokerage, personnel selection and contract relationships, listing and agency agreements, financial control, the working environment, and techniques of marketing and production. Students will develop skills in the use of the microcomputer and appropriate software.

419 Real Estate Brokerage (3:3:0). Prereq REUD 301 or Pol. An introduction to the fundamentals of real estate investment, including an overall investment strategy, analytical skills, feasibility studies, and characteristics of various types of properties. Students will develop skills in the use of the microcomputer and appropriate software.

582 (formerly BUAD 680) The Real Estate Process (3:3:0). Prereq ECON 103, 104, or 602. Institutional background of real property; economics of urbanization, supply and demand; building industry, real estate credits, cyclical fluctuation, rents and prices, real estate market analysis, city growth, structure and planning, land use control, urban redevelopment and real estate investment analysis. Students will develop analytical skills involving the use of the microcomputer and appropriate software.

583 (formerly BUAD 581) Residential Property Development and Management (3:3:0). Prereq REUD 301 or REUD 582 (formerly BUAD 680). Business of creating housing; incl market analysis, integrated real estate components, cyclical fluctuation, rents and prices, real estate market analysis, city growth, structure and planning, land use control, urban redevelopment and real estate investment analysis. Students will develop analytical skills involving the use of the microcomputer and appropriate software.

584 (formerly BUAD 582) Commercial Property Development and Management (3:3:0). Prereq REUD 301 or REUD 582 (formerly BUAD 680). The business of creating industrial and commercial real estate, incl office space, shopping centers, recreation facilities and specialized commercial properties. Incl feasibility and market studies, design and construction, location analysis, site selection and financial analysis. Students will develop analytical skills involving the use of the microcomputer and appropriate software.

Regional Cultures Courses (LAC)

History

151 Latin America (3:3:0). Interdisciplinary intro to Latin America. Focus on crucial contemporary issues and their related cultural and historical origins, utilizing the perspectives and methods of the social sci and humanities. Problems of social change and assimilation, nationalism, and international relations in selected areas.

152 Sub-Saharan Africa (3:3:0). Interdisciplinary intro to sub-Saharan Africa. Focus on crucial contemporary issues and their related cultural and historical origins utilizing the perspectives and methods of the social sci and humanities. Problems of social change and assimilation, nationalism, and international relations in selected areas.

153 Asia and the Western Pacific (3:3:0). Interdisciplinary intro to Asia and the Western Pacific. Focus on crucial contemporary issues and their related cultural and historical origins, utilizing the perspectives and methods of the social sci and humanities. Problems of social change and assimilation, nationalism, and international relations in selected areas.

154 North Africa and the Middle East (3:3:0). Interdisciplinary intro to North Africa and the Middle East. Focus on crucial contemporary issues and their related cultural and historical origins, utilizing the perspectives and methods of the social sci and humanities. Problems of social change and assimilation, nationalism, and international relations in selected areas.

350 Comparative Cultures (3:3:0). Prereq Two LAC Regional Cultures courses or equiv and Pol. Cross-cultural and interdisciplinary seminar examining significant contemporary themes that affect the Third World.

450 Independent Study in Regional Cultures (1-3:0:0). Prereq One LAC Regional Cultures course in the region of proposed study or equiv and Pol. Individual study of some aspect of the Third World, focusing on a specific theme and/or area. At least 1 major piece of written work during the sem is req.

Religion Courses (RELI)

Philosophy and Religion

The courses of study are designed to serve a variety of needs and interests. With careful planning, students may acquire the necessary intellectual tools and scholarly background for further academic or professional study. The Religion Track within the philosophy major is an excellent vehicle for this endeavor.

Areas of study may be identified by the second digit of the course numbers as follows:

1—History of Religions
2—Religion and Culture
3—Religious Literature
4—Religious Thought

100 The Human Religious Experience (3:3:0). An examination of the primary forms of expression that belong to religion, and of the nature and functions of religion. Topics to be considered may include: the idea of ultimate reality; religious interpretations of nature; the person and the need for salvation; symbol, parable, and myth; magic and ritual; functions of religion in society; mystical experience. Efforts will be made, through considerations of more specific topics such as these, to address the general question of the nature of religion and to consider modern as well as classical interpretations of religious ideas. This course may not be taken by students who have had RELI 132.


213 Hindu Religion and Philosophy (3:3:0). Hindu religious and philosophical developments from origins through formative periods.

231 Religion in America (3:3:0). Religious heritage in American culture; growth of denominations and sects; interrelationship of religion and socio-political life.

237 Religious Dimensions of Contemporary Dramatic Literature (3:3:0). Contemporary religious thinking through study of selected modern plays of the Western stage. Focuses on such themes as the self, human finitude,
ioneliness and alienation, love and redemption, personal guilt and social responsibility, suffering and death.


271 Contemporary Religious Ethics (3:3:0). Prereq 24 hr or Pol. Philosophical examination of major theoretical and practical issues in contemporary Judeo-Christian morality.

300 Approaches to the Study of Religion (3:3:0). Prereq 3 cr in PHIL or 3 cr in RELI or Pol. Methods employed in study of religious phenomena. Diverse assumptions of different perspectives and how they affect the understanding of religious phenomena. Illustrative readings from a variety of perspectives are critically evaluated, including anthropological, historical, linguistic, literary, philosophical, psychological, and sociological approaches.

314 Chinese Philosophies and Religious Traditions (3:3:0). Prereq RELI 212 or Pol. A survey of major religious traditions and philosophical themes of China, including Confucianism, Taoism, and Chinese Buddhism and Neo-Confucianism. The course examines the foundation of the Chinese world view and spirituality by investigating their diverse religious traditions that have created tensions and harmony among them.

315 The Buddhist Tradition (3:3:0). Prereq RELI 212 or Pol. A survey of the Buddhist religious traditions. The main thrust of the course includes, but is not limited to, the historical development of Buddhism in India, China, and Japan, examining both Theravada and Mahayana traditions; philosophical and religious significance of Buddhism; and political implications of the Buddhist traditions in the South Asian and East Asian countries.

331 Civil Religion in America: The Americanization of God (3:3:0). Prereq RELI 231 or Pol. Development of American political religion, or religious nationalism/Americanism; the concept of America as a New Israel; the myths, rituals, symbols, and liturgical calendar of the nation.

332 American Religion in Social Thought and Action (3:3:0). Prereq RELI 231 or Pol. Churches' involvement in social thought and action during the 19th and 20th centuries.


334 Religion in the Theatre of Asia (3:3:0). Prereq RELI 212 or Pol. Study of certain Indian and Japanese theatre genres and their dramatic literature in relation to religions of India and Japan.

337 Mysticism: East and West (3:3:0). Prereq 3 hr in religion or Pol. A comparative treatment of major expressions of mysticism in East and West through exploration of various ways of understanding mystical experience. Readings and discussion emphasize one or more of the Eastern (Hinduism, Buddhism, Taoism, Zen) and Western traditions (Judaism, Christianity, Islam).

370 Judaism: Life and Thought (3:3:0). Prereq RELI 211 or RELI 251 or Pol. A study of Judaism from Biblical times to contemporary American development, with a focus on medieval and modern Judaic life and thought.


372 History of Western Christian Thought II: Modern (3:3:0). Prereq 3 cr in RELI or PHIL or Pol. Development of Christian doctrine from Reformation to present. Effects of scientific empiricism, existentialism, and linguistic analysis on Protestant and Catholic theology.

373 Contemporary Issues in Religious Thought (3:3:0). Prereq junior standing or Pol. A consideration of selected issues in contemporary religious thought, especially with reference to ways in which those issues are defined and treated in the light of unique demands made upon religion by modernity. Issues to be considered may include: current redefinitions of the idea of "God," symbol, myth and interpretation; the impact of Eastern thought on Western religious experience; contemporary problems in religious ethics; secularization; the role of religious institutions in modern society; religion, society, and technology.

374 Islamic Thought (3:3:0). Prereq RELI 211; 54 hr or Pol. Major components of Islamic thought and its role in regulating the various aspects of social life in the Muslim World. Emphasis on religious foundation of Islamic society and culture.

376, 377 Special Topics in Religious Thought (3:3:0). (3:3:0). Prereq 3 hr in philosophy or religion or Pol. Selected topics from a philosophical perspective. Topics vary.

490 Comparative Study of Religions (3:3:0). Prereq 9 cr in RELI (including RELI 211 and 212) or Pol. A cross-cultural examination of the comparative aspects of religious phenomena. The course examines the significance of religious phenomena from diverse religious and cultural perspectives, investigates the structure of the patterns of religious phenomena that have appeared in world cultures and civilizations.

Russian Courses (RUSS)

Foreign Languages and Literatures


101 Elementary Russian I (3:3:1). Designed for students with no knowledge of Russian. Intro to Russian, incl elements of grammar, vocabulary, oral skills, listening comprehension and reading. Lab work req.

102 Elementary Russian II (3:3:1). Prereq RUSS 101 or PoD. Continuation of RUSS 101. Lab work req.


201 Intermediate Russian I (3:3:1). Prereq RUSS 102 or 109, or appropriate placement score, or PoD. Further development of skills in listening, speaking, reading and writing. RUSS 201 and 202 must be taken in sequence. Lab work req.

202 Intermediate Russian II (3:3:1). Prereq RUSS 201, or appropriate placement score, or PoD. Application of language skills to reading, composition and discussion. Lab work req.

209 Intensive Intermediate Russian (6:6:2). Prereq RUSS 102 or 109, or appropriate placement score, or PoD. Equiv to RUSS 201 and 202, taught in a single sem. May not be taken for cr in combination with RUSS 201 or 202. Lab work req.

252 Russian Conversation and Composition (3:3:0). Prereq RUSS 202 or Pol. Development of students' ability to express themselves orally on topics of current interest and everyday situations; composition provides practice in more difficult forms of expression.

300 Field Study in Russian Culture (1-3:3:0). Prereq HIST 328 or 329; GEOG 230; RUSS 353 or 354; or Pol. Study tour to Soviet Union of between 2 and 3 weeks. Students must attend a series of lectures before the tour and must consult with the designated faculty member on a research project on a topic in Russian culture resulting in a term paper or report.

303 Russian Advanced Conversation (3:3:0). Prereq RUSS
202 or equiv. Development of oral proficiency, incl current Soviet expressions.

310 (254) Readings in Russian Literature (3:2:0). Prereq RUSS 202 or Pol. Readings of Russian literary works in the original language with lectures, discussions and examination in English. This course may not be taken by anyone who has previously taken and satisfactorily completed RUSS 254. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

311 Contemporary Soviet Short Fiction (3:3:0). Prereq RUSS 202 or equiv. Reading and discussion of recent short stories by the best-known Soviet writers of today. Readings in original language, with lectures and discussion partly in English, partly in Russian. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

325 Major Russian Writers (3:3:0). Prereq ENGL 101 or equiv or Pol. Study of the works of major Russian writers in translation; course work in English. Writers to be studied may be taken toward fulfillment of the general req in literature for baccalaureate degrees.

326, 327 A Survey of Russian Literature (3:3:0), (3:3:0). Prereq 54 hr or Pol. RUSS 326 consists of a survey of Russian literature from its beginning to 1880. RUSS 327 consists of a survey of Russian literature of the late 19th and the 20th centuries. Course work in English. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

352 Scientific Russian (3:3:0). Prereq 54 hr or Pol. Civilization and culture of Russia and the Soviet Union. In addition to readings and lectures, incl films, slides and music. Course work in English. May be taken toward fulfillment of the Non-W Culture req for the BA degree.

353 Russian Civilization (3:3:0). Prereq 54 hr or Pol. Civilization and culture of Russia and the Soviet Union. In addition to readings and lectures, incl films, slides and music. Course work in English. May be taken toward fulfillment of the Non-W Culture req for the BA degree.

380, 381 Advanced Russian (3:3:0), (3:3:0). Prereq RUSS 202, 209 or equiv. A comprehensive study of the more difficult characteristics of contemporary standard Russian in the areas of grammar, style and vocabulary usage. Emphasis on developing fluency in oral and written expression.

401 Readings in the Social Sciences (3:3:0). Prereq 15 hr of Russian or equiv. Reading, translation and discussion of Soviet materials in fields of history, politics, geography and sociology.

402 Scientific Russian (3:3:0). Prereq 15 hr of Russian or equiv. Reading, translation and discussion of Soviet materials in fields of history, politics, geography and sociology.

407 Russian Drama and Theatre (3:3:0). Prereq 54 hr or Pol. Development of Russian theater incl directing techniques in the Moscow Art Theater. Reading and discussion of major Russian plays of the 19th and 20th centuries. Course work in English. Knowledge of Russian is not req. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

410 Russian Poetry (3:3:0). Prereq 15 hr of Russian or equiv. Historical development of Russian poetry and of representative works of the major poets. Reading is in Russian. Course work in English and Russian. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

415 The Slavs: A Cultural Survey (3:3:0). Prereq 54 hr or Pol. Development of Slavic culture through the ages, with emphasis on the western (Polish, Czech) and southern (Yugoslav, Bulgarian) Slavs. Course work in English.

480, 481 Fourth Year Russian (3:3:0). Prereq RUSS 380, 381 or equiv or Pol. Advanced work in major grammatical and lexical topics of Russian. Application of theoretical principles in guided written and oral exercises.

498, 499 Senior Seminar (3:3:0), (3:3:0). Prereq 84 hr as a major in Russian Affairs and PoC. Research, analysis and discussion of selected topics in Russian language, literature and culture. Preparation of a seminar report. Maximum of 6 hr may be applied to fulfillment of req in the major.
425 Planning and Organizing for Community Change (3:3:0). Prereq 84 hr or Pol. Community organization and planning; with specifics in the practice of grass-roots community organizations. Inc1 the community development approach, neighborhood study and analysis, direct services in the neighborhood, relevant roles for neighborhood residents in service delivery, independent social action; role of social work in planned change.

453 Senior Practicum I (5:3:0). Prereq SOCW 357, 358, 323 and 324 with a grade of at least C and rec of faculty; open only to social work majors. Under supervisory instruction provided by field agencies, students are involved 2 days per week in learning through participation in the provision of service to individual clients, families, groups and/or communities, and in activities sponsored by or involving professional social workers. Weekly seminar and periodic faculty-agency consultations.

454 Senior Practicum II (5:0:0). Prereq SOCW 453, with a grade of at least C and rec faculty. Field experience and weekly seminar.

455 Senior Practicum/Block Placement (10:0:0). Prereq SOCW 357, 358, 323, 324. 471, completion of all req social work courses except electives; open only to social work majors. Under supervisory instruction provided by field agencies, students are involved 4 days per week in learning through participation in the provision of service to individual clients, families, groups and/or communities, and in activities sponsored by or involving professional social workers. Weekly seminar, completion of a special project and periodic faculty-agency visits.

471 Research in Social Work (3:0:0). Prereq SOCI 221, SOCW 453, or Pol. Principles and the theory underlying scientific inquiry. Emphasis on the use of research in social work practice, steps in conducting research and utility of research efforts in developing and evaluating social work knowledge and skills.

475 Selected Topics in Social Work Policy (3:3:0). Prereq 54 hr or Pol. Opportunity to study indepth special areas of social work which are of interest to students, faculty and the social work community. Topics vary.

483 Selected Approaches to Social Work Intervention (3:3:0). Prereq 54 hr or Pol. Taken simultaneously with SOCW 453 or 454 (Senior Practicum) Opportunity to examine critically personal use of different approaches to social work intervention currently employed in practice settings. Students thus have an opportunity to use with clients the technical skills these approaches req. May be taken more than once for cr.

499 Independent Study in Social Work (1-3:0:0). Prereq 84 hr and a research proposal approved by instructor in advance of enrollment. Investigation of a research problem in the field of social work.

Social Work Courses

Sociology Courses (SOCI)

101 Introductory Sociology (3:3:0). Intro to basic sociological concepts. Aspects of human behavior; individual and group interaction; social mobility and stratification; status and class; race relations; urbanism; crime and criminology; social change and reform.


201 Marriage and the Family (3:3:0). Prereq SOCI 101 or Pol. Study of marriage and family in contemporary America. Human sexuality, premarital behavior, marital adjustment, socialization of children, family economics, divorce and variations in family life.

203 The Sociology of Small Groups (3:3:0). Prereq SOCI 101 or Pol. Characteristics, structure and processes of small group dynamics; theories and models of group analysis; techniques of observation and research in small groups.

205 Sociology of Deviance (3:3:0). Prereq SOCI 101 or Pol. Major theoretical approaches to deviant behavior are explored: functional theory, conflict theory and symbolic interaction theory. Positive and negative aspects of deviant behavior in relation to their effects upon society.

206 Personal Worth and Collective Identity: The Socialization Process (3:3:0). Prereq 3 hr of sociology or Pol. Institutional and personal dimensions of the socialization process analyzed in terms of norms, roles, group processes and stratification. Development throughout the life cycle is examined in terms of major agents of socialization. Focus on influence of certain ascribed status prescriptions in contemporary society—such as race, age, sex and the handicapped.

221 Statistics for the Behavioral Sciences (4:3:2). Prereq SOCI 101 or Pol. Intro to fundamentals of applied statistics as used in behavioral sci to incl descriptive statistics, inferential statistics, correlation—regression, analysis of variance, factor analysis, nonparametric statistics and practical experience with calculators in applying statistical analysis to actual problems of the behavioral sci.

240 Social Services in Society (3:3:0). Prereq SOCI 101 or Pol. Survey course covering the institutions of health and welfare in society. Emphasis on various ameliorative efforts made by organizations to combat effects of social problems and discussion of the variety of skills and resources involved.

299 Independent Study (1-3:0:0). Prereq SOCI 101 and a written proposal approved in advance of enrollment. Individual study of a sociological topic of interest to the student. Open to sociology majors only.

300 Social Control (3:3:0). Prereq SOCI 101 or Pol. How various social institutions function to organize and regulate society. Topics incl family, education, ideology, law, media, work, governmental planning and stratification. Course serves as a foundation of many specialized courses offered by the department, especially those that focus on control of crime and delinquency.

301 Criminology (3:3:0). Prereq SOCI 101 or Pol. Analysis of the nature, genesis, organization and personal and social consequences of crime and criminal behavior; examination of theories of punishment and treatment of criminals and prevention of crime and of police and court systems, prisons and reformatories.

302 Sociology of Delinquency (3:3:0). Prereq SOCI 101 or Pol. Types, causes, treatment and prevention of delinquent behavior.

303 Sociological Research Methodology (4:3:2). Prereq SOCI 221 or Pol. Intro to empirical design in sociological research. Historical development, research design, sampling, methods of gathering data, sociometric scales, analysis and interpretation of results and research reporting.

304 Sociology of Work (3:3:0). Prereq 3 hr of sociology or Pol. Meaning and structure of the world of work and its relationship to other spheres of life.

306 Demographic Analysis (Population Problems) (3:3:0). Prereq 6 hr of sociology incl SOCI 101 or Pol. (It is rec that students first take SOCI 332.) Influence of population structure distribution and change in vital rates of ecological, social, economic and political problems of human society.

307 Sociology of Collective Behavior (3:3:0). Prereq 6 hr of sociology incl SOCI 101 or Pol. Analysis of crowds, mobs and publics. Structure and function of social movements distinguished from other formal and collective behavior.

308 Sociology of Race Relations and Minorities (3:3:0). Prereq 6 hr of sociology incl SOCI 101, or Pol. History and changes in racial, ethnic and minority relations in modern society, with particular emphasis on blacks in American society.
101 Social Stratification: The Study of Inequality (3:3:0). Prereq 12 hr of sociology incl SOCI 101 or Pol. Structure of social inequality from a stratification framework. Social class systems are analyzed through economic, political and prestige structures. Incl the study of social mobility and differential life stages and opportunities.

402 Sociology of Punishment and Corrections (3:3:0). Prereq 6 hr of sociology incl SOCI 101 or Pol. Historical overview and theory of justification of punishment, rehabilitation, and correctional elements. Theory of punishment and other topics related to the implementation of change in the treatment process are compared and contrasted.

403 Sociology of Law (3:3:0). Prereq 54 hr or Pol. Social relations and reciprocal influence between the law and (1) the American community; (2) special group interests in the U.S.; (3) social change; (4) social deviance.

410 Social Surveys and Attitude and Opinion Measurements (3:3:0). Prereq 12 hr of sociology incl SOCI 221 and 303, or Pol. Survey research methods and techniques used in collecting and analyzing social data and techniques and methods of measuring social attitudes and opinions.

412 Contemporary Sociological Theory (3:3:0). Prereq 12 hr of sociology incl SOCI 101 and 311, or Pol. Contemporary sociological theorists such as Parsons, Merton, Mills, Berger and Gouldner are analyzed in terms of their relationship to major schools of contemporary sociological theory.

413 Seminar in Social Issues (3:3:0). Prereq 84 hr and 12 hr of sociology. Opportunity to apply to contemporary relevant issues the theoretical perspectives and methodological skills previously learned.

414 Sociology of Language (3:3:0). Prereq 54 hr and 3 hr of sociology, or Pol. Interaction of language and social structure. Focus on language as revealing culturally specific rules of interpretation; on the sex, class, race and setting specific uniformities in the production of talk; and on language as it constrains the individual.

420 Regional and Societal Development (3:3:0). Prereq 54 hr or Pol. Social dimensions of economic growth and development with particular emphasis on Third World countries. Examines alternative definitions of development, problems related to the implementation of change strategies, and the contexts of national, regional and institutional change.

441 The Sociology of Aging (3:3:0). Prereq 6 hr of sociology or Pol. Aging from a sociological perspective. Topics covered incl demographic trends and the aging population in America, the social construction of life stages and the creation of "old age," cultural labeling and human resistance.


480 Seminar in Sociology (3:3:0). Prereq Open only to senior majors in sociology. May be taken for cr only once. Topics of contemporary interest in sociology through individual class reports and group discussion. Topics vary.

495 Sociocultural Change (3:3:0). Prereq 54 hr or Pol. Sources, processes and consequences of social and cultural alteration. Anthropological and sociological models for case
Spanish Courses (SPAN)

Foreign Languages and Literatures


100 Spanish for Travel (3:3:0). Development of skills stressing vocabulary, pronunciation, and use of idiomatic expressions. Not part of sequence that fulfills foreign language req. May not be taken for cr by students who have previously earned any cr in Spanish. (Students with cr for SPAN 100 may take any Spanish course for cr for which they meet the prereq.)

101 Elementary Spanish I (3:3:1). Designed for students with no knowledge of Spanish. Intro to Spanish, incl elements of grammar, vocabulary, oral skills, listening comprehension, and reading. Lab work req.

102 Elementary Spanish II (3:3:1). Prereq SPAN 101 or PoD. Continuation of SPAN 101. Lab work req.

105 Review of Elementary Spanish (3:3:1). Prereq Appropriate placement score or PoD. Review of elements of Spanish for students who have studied Spanish previously. May not be taken for cr in combination with SPAN 101, 102 or 109. Lab work req.


141, 142 Applied Spanish for the Social Services (4:4:2). (Must be taken in sequence). Designed to meet the professional needs of majors in social service fields.

201 Intermediate Spanish I (3:3:1). Prereq SPAN 102, 105, or 109; appropriate placement score; or PoD. Further development of skills in listening, speaking, reading, and writing. SPAN 201 and 202 must be taken in sequence. Lab work req.

202 Intermediate Spanish II (3:3:1). Prereq SPAN 201, appropriate placement score, or PoD. Application of skills to reading, composition and discussion. Lab work req.

209 Intensive Intermediate Spanish (6:6:2). Prereq SPAN 102, 105, or 109; appropriate placement score; or PoD. Equiv to SPAN 201 and 202, taught in a single sem. May not be taken for cr in combination with SPAN 201 or 202. Lab work req.


301 Advanced Grammar and Syntax (3:3:0). Prereq 12 hr of Spanish or Pol. In-depth review of Spanish grammar and syntax. Extensive practice in controlled and free writing, emphasis on fundamental difficulties and points of interference which exist between English and Spanish.

311 Introduction to Hispanic Literary Analysis (3). Prereq 15 hr of Spanish or Pol. This req course will prepare students for the study of Hispanic Literatures. It introduces basic terminology of literary analysis and provides practice in the examination of texts in the major genres: poetry, narrative, and drama.

317 The Literature of Spain (3:3:0). Prereq 15 hr of Spanish or Pol. Examination of the main periods, trends, genres, and most representative works of Spanish peninsular literature from the 12th century to the present. Req for Spanish majors.


321 Introduction to Spanish Culture (3:3:0). Prereq ENGL 101 or equiv or Pol. Designed for non-majors. History, culture, economic and social development, scientific and artistic achievements that have contributed to the formation of modern Spain. Course work in English. Cr may be earned either in SPAN 321 or 361, but not in both.

322 Introduction to Latin American Culture (3:3:0). Prereq ENGL 101 or equiv or Pol. Designed for non-majors. History, culture, economic and social development, scientific and artistic achievements that have contributed to the formation of modern Latin America. Course work in English. Cr may be earned either in SPAN 322 or 366, but not in both.

323 Field Study in Hispanic Culture (1-3:0:0). Prereq 54 hr or Pol. Study tour to an area of Spanish-speaking world. Students must attend a series of lectures before the tour and must consult with the designated faculty member on a research project on a topic in Hispanic culture resulting in a paper or report.

325 Major Hispanic Writers (3:3:0). Prereq ENGL 101 or equiv or Pol. Designed for non-majors. Study of the works of major Hispanic writers in translation. Writers studied vary. Course work in English. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr with PoD.

329 Special Topics in Spanish and Latin American Literature (3:3:0). Prereq ENGL 101 or Pol. Designed for non-majors. Course work in English. May be taken toward fulfillment of the Humanities req in Literature for the baccalaureate degree.

351 Spanish Conversation (3:3:0). Prereq 12 hr of Spanish or equiv or Pol. Development of oral expression on topics of current interest and everyday situations.

352 Spanish Composition (3:3:0). Prereq 12 hr of Spanish or equiv or Pol. Development of ability in written expression on topics of current interest.


359 Introduction to Translation (3:3:0). Prereq 12 hr of Spanish or Pol. Readings and translation of texts selected from current periodicals and newspapers. Rec for students who wish to improve reading and writing of Spanish and for Latin American Studies majors.

361 Spanish Civilization and Culture (3:3:0). Prereq 15 hr of Spanish or Pol. Overview of Spanish culture and civilization from the pre-Roman era to the 20th century.

366 Latin American Civilization and Culture (3:3:0). Prereq 15 hr of Spanish or Pol. Intro study of Latin American civilization and culture, from the pre-Columbian era to 20th century.


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or 452, or Pol. Studies in Spanish phonetics, phonology, morphology, syntax, semantics, dialectology or linguistic history. The topic for a given sem may be obtained from the department in advance. May be repeated for cr with PoD.

425, 426 Independent Study (1-3:0:0), (1-3:0:0). Prereq 84 hr as a major in Spanish and Pol. Research and analysis of a selected problem in literature or linguistics in consultation with a department member. Maximum of six hr of independent study may be applied to fulfillment of req in the major.

430 Literature of the Golden Age (3:3:0). Prereq SPAN 311 and 317 or Pol. Advanced study of major literary works of Spanish Golden Age (1517–1680). May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

431 Readings in Medieval Spanish Literature (3:3:0). Prereq SPAN 311 and 317 or Pol. Medieval Spanish literature. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

432 Cervantes (3:3:0). Prereq SPAN 311 and 317, or Pol. Major works of Cervantes, with emphasis on Don Quixote. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

435 Spanish Literature of the Nineteenth Century (3:3:0). Prereq SPAN 311 and 317 or Pol. Study of the major works of nineteenth century Spanish literature, with emphasis on the main authors of the Romantic and Post–Romantic period. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

436 Contemporary Spanish Literature (3:3:0). Prereq SPAN 311 and 317, or Pol. In–depth examination of the main authors of the “generation of ’98,” and an analysis of contemporary post–Civil War authors. The various genres are studied in the works of these writers. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

441 Spanish American Poetry (3:3:0). Prereq SPAN 311 and 318 or Pol. Study of the more representative poets of Latin America from colonial period to present. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

442 Spanish American Short Story (3:3:0). Prereq SPAN 311 and 318 or Pol. Development of the short story in Spanish American literature from early nineteenth century to present. Reading and discussion of selected short stories by writers representative of major literary movements or trends. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

443 Spanish American Novel (3:3:0). Prereq SPAN 311 and 318 or Pol. Evolution and development of the most representative novels in Spanish America from colonial times to present. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

451 Advanced Oral Spanish (3:3:0). Prereq 15 hr of Spanish or Pol. Development of vocabulary and strengthening of conversational skills through class discussions and oral reports based on contemporary themes.


480, 481 Special Topics in Hispanic Literature (3:3). Prereq SPAN 311 or Pol. Study in depth of a selected theme, topic, period, or genre. May be repeated for cr with PoD.

497, 498 Senior Honors Tutorial (3:0:0), (3:0:0). Prereq 84 hr as a major in Spanish, with a GPA of 3.00 and 3.00 in the major field. Students meeting these req are admitted to candidacy upon submission of a letter of application to the department Honors Committee in the second half of the junior year, supported by a faculty rec and an interview by and with the approval of the Honors Committee. In the first sem, weekly meetings with a faculty member to discuss readings from a comprehensive list prepared by the Spanish faculty. In the second sem, independent research and completion of an honors essay under the supervision of a member of the Spanish faculty.

500 History of the Spanish Language (3:3:0). Scientific study of the evolution of the Spanish language from its origin in vulgar Latin to its present forms.

501 Applied Spanish Grammar (3:3:0). Analysis of Spanish grammar as a basis for teaching language skills. Terminology and methodology for the teaching of syntax are stressed.

502 Hispanic Sociolinguistics (3:3:0). Intro to sociolinguistics with emphasis on bilingualism and language contact in the Spanish–speaking world, incl the United States.


520 Studies in Medieval Spanish Literature (3:3:0). Intensive study of a major work or a literary genre of this period.

525 Studies in Renaissance Literature (3:3:0). Study of a literary movement or selected authors of the Spanish Renaissance.


540 Studies in Nineteenth–Century Literature (3:3:0). Study of a writer, genre, theme, or movement of this period.

545 Studies in Hispanic Literature (3:3:0). Study of major writers in a particular generation or movement.

551 Special Topics in Spanish (3:3:0). Special studies in Spanish or Latin American language, literature, or culture. Specific topics are announced in advance. May be repeated for cr with the PoD.


565 Studies in Spanish American Drama (3:3:0). Study of playwrights who have made a major contribution to the development of the genre.


Statistics Courses (STAT)

Systems Engineering

102 Introductory Statistics with Business Applications (3:3:0). Prereq MATH 108. Frequency distributions, probability, probability distributions, sampling distributions, estimation. Students who have received cr for MATH 250, 256, or 351 may not receive cr for this course.


250 Introductory Statistics (3:3:0). Elementary intro to statistics with emphasis on applications and model formulation. Topics incl descriptive statistics, sampling and sampling distributions, inference, correlation and regression, and survey sampling methods.
262 An Introduction to Computer Statistical Packages (3:3:0). Prereq CS 161 and a course in statistics. Use of computer packages in the statistical analysis of data. Topics incl data entry, checking and manipulation, as well as the use of computer statistical packages for analysis and analysis of variance.


351 Probability (3:3:0). Prereq MATH 213 or 215. Random variables, probability functions, special distributions, limit theorems.

352 Statistics (3:3:0). Prereq MATH 351. Estimation, decision theory, testing hypothesis, correlation, linear models, and design.

353 Intermediate Applied Statistics for Management (3:3:0). Prereq DESC 202. Several of the more advanced statistical methodologies of importance in business application, incl survey sampling, experimental design, multiple regression and correlation. Techniques are applied to areas such as marketing, personnel, accounting, auditing, and finance. Use of computer packages for analysis.

452 Forecasting Methods for Management (3:3:0). Prereq DESC 202. Intro to forecasting, examining alternative models and their application to a variety of business applications. Topics incl trend analysis, moving averages, exponential smoothing, adaptive models, multiple regression and correlation, time series analysis.

Systems Engineering Courses (SYST)

Systems Engineering

390 Engineering Economy (3:3:0). Prereq ENGR 107 and ENGR 205. Intro to economic decision process in engineering design and analysis. Topics include methodology for selection of alternatives, measures of investment worth, income and cost evaluation, depreciation methods, benefit–cost and cost-effectiveness techniques, and applications of decision trees to capital investment.


Theatre Courses (THR)

Performing Arts

101 (160) Introduction to the Theatre Experience (3:3:0). Overview of the theatre as the composite art of playwright, director, actor, designer, and technician; and an examination of the interrelationship of play, physical theatre, and audience through the study of representative plays of various periods of theatre history.

207, 208 Color (3:0:6), (3:0:6). [Same as ART 207, 208] First sem covers studies in color as pigment—examination of various color theories and their application, using aqueous paints and color paper; the second sem covers theories of color in light and their application using a variety of light sources and color media.

220 Acting I (3:3:0). Basic training in acting, emphasizing the actor’s use of voice and body in theatre games, improvisation, nonscripted situations, and short scenes.

222, 223 Voice for the Theatre I & II (3:3:0), (3:3:0). Prereq Pol. A two-semester course developing the voice as an effective instrument for stage characterization, with emphasis on voice production, flexibility, strength, and control.

224, 225 Movement for the Theatre I & II (3:3:0), (3:3:0). Prereq Pol. A two-semester course developing the body as an effective instrument for stage characterization, with emphasis on relaxation, physical sensitivity, alignment, and control.

230 Introduction to Theatre Technology (3:3:0). Fundamentals of theatre technology. Provides a knowledge of the tools, materials, and techniques used in stage carpentry, metalworking, rigging, painting, special effects, sound, lighting, and technical management.

239 Stage Management (3:3:0). Prereq Pol. Lecture and lab in the techniques and problem-solving skills necessary for stage management of plays and other performing arts events.

240 Stage Makeup (3:3:0). Lecture and lab in theories, principles and practice of stage makeup.

245 Introduction to Costume Technology (formerly Stage Costume and Makeup) (3:3:0). Lecture and lab in fundamentals of costume-craft, providing a knowledge of the tools, materials, and techniques for the construction of costumes for the stage.

270 Theatre Criticism (3:3:0). Basic understanding of how the elements of theatre work together, to facilitate critical appraisals of theatre productions and to enhance enjoyment of the theatre experience. Attendance at productions; discussion and evaluations of productions; professional reviews of productions; the writing of reviews.

302 Scripts in Performance (3:3:0). Designed for non-majors. Emphasis on awareness and understanding of the process. Attendance at productions and rehearsals, interviews with directors, actors, designers and playwrights. Especially appropriate for students in literature who want or need additional work in how that literature becomes performance.

320 Play Performance Practicum (1–2:0:0). Prereq Pol. Study and practice of acting and directing through rehearsal and public performance. Approximately 45 hr of rehearsal and performance per cr hr. Graded S–NC only. May be repeated for a maximum of six hr cr.

325 Acting II (3:3:0). Prereq THR 220 or Pol. Scene-playing in a variety of genres and styles. Extensive work in subtext, characterization, ensemble playing; designed to extend the principles acquired in Acting I.


327 Asian Theatre Techniques (3:3:0). Prereq THR 220 or Pol. Lab—performance course. Study and adaptation of techniques used in several Asian theatre genres. Experimentation in the application of Asian methods—such as body movement, voice production, using masks and makeup, handling of costumes and scenic elements—to scenes from Asian and Western plays.

330 Scene Design (3:3:0). Prereq THR 230 or Pol. Basic scene design and scenicographic drawing. Analysis of a script for visual interpretation; the devising of a stage setting that will accommodate movement, dramatic action, character, and mood. The drafting of floor plan, builder’s and painter’s
elevations. Experience with perspective drawing, color renderings and scale models.

331 Scene Design Studio (3:0:3). Prereq THR 330 or Pol. Intermediate level lecture. Lab in scene design and scenographic drawing. Emphasis on creation of workable visual metaphors, communication of design ideas, experience with perspective and mechanical drawing, color rendering, and scale models.

332 (231) Stage Lighting Design (3:3:0). Prereq THR 230 or Pol. Fundamentals of stage lighting design. Knowledge of tools, equipment and techniques of stage lighting and an intro to lighting design process. Incl terminology, basic electricity, design theories, projections, and specialized drafting techniques.

333 Lighting Design Studio (3:0:3). Prereq THR 332 or Pol. Intermediate-level lab. Lab in lighting design with concentration on light as an artistic medium, creation of workable lighting metaphors and communication of ideas.

336 Advanced Theatre Technology (3:3:0). Prereq THR 230 or Pol. Technical theatre beyond the intro level. In-depth examination of specialized materials and techniques, unusual stage machinery, safety practices, theatre sound, personnel management, and technical direction.

340 Play Production Practicum (1-2:0:0). Prereq Pol. Study and practice of theatre production techniques through rehearsal and performance. 45 hr of production work per cr. Graded S–NC only and can be counted toward total hr needed for degree. May be repeated for a maximum of six cr.

341 Costume Design (3:3:0). Prereq THR 245 or Pol. Lecture–lab in fundamentals of costume design for the stage. Costume is studied in relation to historical periods and the artistic demands of scripts.

342 Costume Design Studio (3:0:3). Prereq THR 341 or Pol. An intermediate–level lecture–lab course in costume design, with emphasis on visual metaphors, communication of design ideas, color rendering, and material selection.

351, 352 Survey of Theatre History (3:3:0), (3:3:0). Prereq THR 101. Development of the theatre from its beginnings to the present, with reference to theatrical movements, playwrights, producers, designers, actors, and companies. Emphasis on social, cultural, and philosophical factors shaping the theatre in successive historical periods.

353 Black Theatre in the United States (3:3:0). Prereq 54 hr or Pol. History, sources, literature, themes, and techniques of the theatre among Afro-Americans.

356 Theatre of India and Southeast Asia (3:3:0). Prereq 54 hr stdg or Pol. Literature, theory, and practice of selected theatrical genres of India and Southeast Asia.

357 Theatre of East Asia (3:3:0). Prereq 54 hr or Pol. Literature, theory, and practice of selected theatrical genres of China and Japan.

360 Directing I: Basic Concepts (3:3:0). Prereq THR 101 (160), 220 and 230, or Pol. Basic concepts and techniques of directing for the stage. Emphasis on close textual analysis of script for use of space, characterization, tempo, and mood. Attention to reading ground plans, audition and rehearsal procedures, integrating production elements, and the historical evolution of the director. Practice in blocking, line reading, staging short scenes.

361 Directing II: Practicum (3:0:3). Prereq THR 360 or Pol. A lab course intended to complement Directing I, providing extensive application of basic concepts, culminating in production for public performance.

374 Creative Dramatics and Oral Interpretation in the Elementary School (3:3:0). Investigation and practice in effective communication in creative dramatics and oral interpretation of children’s literature. Emphasis on didactic development in these areas. Students who have taken LAC 355 or 361 cannot take this course.

376 Puppets, Plays and Poems: Theatre Techniques for Children and Young People (3:3:0). Prereq Pol. Experiences in theatre techniques and activities such as storytelling, puppetry, improvisation, theatre games, the uses of fantasy and creative movement; the application of these techniques to work with children and young people. Each student designs a project related to specific needs and background. Although this course may be taken by majors as an elective, it is designed primarily for non–majors, especially students who plan to work with children and young people or who are already working with them.

380 Playwriting Workshop (3:0:3). Prereq 12 hr of English or Pol. A practical workshop in writing plays, with emphasis on the one–act form. May be repeated once, but only three hr are accepted in the theatre major.

385, 386 Special Topics in Theatre (3:3:0), (3:3:0). Prereq THR 101 or Pol. Topics such as theatre as a political weapon, street theatre, avant–garde theatre, the use of masks.

420, 421 Acting Styles I & II (3:0:3), (3:0:3). Prereq THR 223, 225, 326 or Pol. A two–sem advanced lab–performance course given to the intensive study of acting period styles from Greek Tragedy to the present.

422, 423 Acting Problems (3:0:3), (3:0:3). Prereq 54 hr, Pol and permission of the theatre faculty. An advanced lab–performance course given to in–depth individual or group research into specialized areas of acting theory and/or style.

430, 431 Design Problems (3:0:3), (3:0:3). Prereq 54 hr, Pol and permission of the theatre faculty. Advanced course into specialized areas of theatrical scenery design, lighting design, design history or costume design.

435 History of Scene Design (3:3:0). Prereq THR 351, 352 or Pol. A study of the philosophy and practice of theatrical design from Classical Greece to the present with special emphasis on contemporary scenic solutions.

439 Performing Arts Management (3:3:0). Prereq 54 hr or Pol. An in–depth study of the economic and administrative aspects of a performing arts organization.

445 The History of Costume Design (3:3:0). Prereq THR 351, 352 or Pol. A study of the philosophy and practice of fashion and theatrical costume design from Classical Greece to the present, with special emphasis on contemporary costume design solutions.

457 Theories of the Theatre (3:3:0). Prereq THR 351, 352 or Pol. Theories of production from Aristotle to Brecht in the West and India, and Japanese theories from Asia.

460, 461 Directing Problems (3:0:3), (3:0:3). Prereq 54 hr, Pol and permission of the theatre faculty. Advanced directing intended to complement Directing I and Directing II. Extensive applications of concepts in productions for public performance. The directing of two or more short plays or one long play.

480, 481, 482, 483 Seminar in Shapers of the Modern Theatre (3:3:0). Prereq THR 351 and 352 or Pol. Opportunity for intensive study of the ideas and practices of three or four directors, designers, playwrights, or theorists who have significantly influenced Western theatre, such as Brecht, Artaud, and Grotowski. Multiple numbers allow seminars designed around outstanding theatre practitioners in any of the following areas of the program: directing and acting, designing, theory, and playwriting.

494 Field Experience (3:0:0). Prereq 54 hr, Pol and permission of the theatre faculty. An off–campus experience with educational community or professional theatre to provide the student with an opportunity to apply classroom training, knowledge, skills, and theory to an actual situation.

497, 498 Independent Study (3:0:0). Prereq Open only to theatre majors with 84 hr and by special Pol. Individual research or a creative project in close consultation with instructor. Selection from projects in performance, directing, technical theatre and design, or theatre history and criticism.
University Courses (UNIV)

Academic Affairs

407 Introduction to Irish Studies (3:3:0). This course introduces participants to the literature, folklore, music, and art of Ireland, and to the history of the Irish people from the Celts to today’s diaspora. Each participant will be expected to take a final examination and write a research paper. Offered Spring 1979 and Fall 1984. Professor C.D. Owens.


411 Electronic Communication (Television) and the Representation of Reality (3:3:0). Image of the political process as it is projected by news and public affairs programming, the ideal of the family as it appears in prime-time drama and the prevailing assumptions about male/female roles as embodied in dramatic characterizations. Offered Fall 1980. Professor J. E. Foreman.

412 Family Law (3:3:0). Examination of the salient aspects of the law as it affects the family in our changing society. Topics include the history of marriage and divorce, sources of family law, the constitutional aspects of family law, the nature and formalities of the marital relationship, modifications of the marital contract, the support obligation, intrafamily torts and crimes, annulment, divorce, alimony, child custody and support, adoption, separation agreements and tax aspects of separation and divorce. Offered Fall 1980. Professor R. L. Coffinberger.

413 Life in the Universe (3:3:0). Structure of the universe, the origin of matter and chemical evolution and the formation of stars and planetary systems. Physical and chemical basis of life; the origin of life in the solar system; prospects of life in other planetary systems; the possibility of interstellar communication and interstellar travel; UFOs and the question of whether the earth has been visited by alien beings. Offered Fall 1980. Professor M. Kafatos.


416 Intelligence in the Universe (3:3:0). Origin and structure of the universe and of life on earth up to modern man; the nature of intelligence and its evolution. Areas considered include the human brain and brains of other higher species; human psychology; the subconscious and the dream states, as well as the meditative state and its relationship to the other states; attempts to understand human intelligence in the philosophies and modern science of the West as well as in the theoretical and practical systems of the East; the emergence of major religions and their quest for a Universal Intelligence. Prospects of the existence of life and intelligence elsewhere in the universe and the possibility of communicating with it. Offered Fall 1981. Professor M. Kafatos.

417 Energy Alternatives for the 1980s (3:3:0). Projections of future energy needs and ways to meet them. The consequences of these choices on our economic, social, moral and physical state. Guest speakers. Offered Fall 1981. Professor W. F. Lankford.

418 Corporate-Government Relations in the International Environment (3:3:0). Legal, political and economic aspects of U.S. business-government interface in international transactions. The course establishes where we are today and how we arrived at this point, and presents options for the 1980s. In particular, it reviews existing legal rules and traditional American ideas toward international business and today’s business reality with substantial attention to the existing disincentives currently existing concerning greater international trade by U.S. firms. Offered Fall 1981. Professor S. S. Malawer.

420 Nuclear War (3:3:0). Thinking about the unthinkable—an objective non-ideological examination of topics related to this most important issue now facing mankind, incl: effects of nuclear war, likelihood of nuclear war, politics, strategy and morality of nuclear war and nuclear weapons, weapons systems now and in the future, nuclear proliferation, arms-control agreements. Every attempt is made to treat the material in a nonideological way. Nevertheless, ample opportunity is provided for informed exchanges of views. Offered Spring 1982 and Fall 1984. Professor R. Ehrlich.

421 Archaeoastronomy (3:3:0). The astronomy of ancient peoples is examined using sites in Europe, Asia and the Americas. Emphasis on naked-eye observations of the moon, sun, constellations, bright stars and planets. Some implications of ancient astronomy for modern astrophysics will be explored. Students are expected to be able to deal with some elementary mathematics. Offered Spring 1982. Professor V. F. Rader.

422 Popular Movements and Active Nonviolence in the United States (3:3:0). The tradition of active nonviolence in popular social movements in the USA. Focus on the actions and theory behind various forms of nonviolent direct action used in the abolition, suffrage, labor, civil rights and peace movements. The nature of nonviolent direct action, history in mass movements and its record for achieving significant social change. Offered Spring 1982. Professor R. Ehrlich.

423 Consciousness and Modern Physics (3:3:0). Examines the nature of consciousness and its connection to modern physics. Twentieth-century physics has introduced consciousness in a definite way: Quantum mechanics implies that the nature of something cannot be independent of the act of observing it. Similarly, the theory of relativity of Einstein states that perceptions of the physical reality are relative. These trends in modern physics have prompted some physicists to proceed to new avenues where consciousness is more directly related to the physical universe. Biological models of perception and the way the brain works parallel the new physics developments. What is most surprising, though, is that all the mystical traditions of all cultures and particularly those of the East view the nature of reality in close approximation to the way physicists view the universe. The connection between these two points of view will be made. Students are expected to participate in class presentations and are required to write a term paper. Introspection is an integral part of the course. Offered Fall 1982. Professor M. Kafatos.

424 South Africa: Crisis and Conflict (3:3:0). An interdisciplinary analysis of current conditions in the Republic of South Africa in a historical context and, as a case study of fundamental socioeconomic and ethical issues of worldwide contemporary importance. Offered Fall 1983. Professor B. K. Beyer.

425 Utopias and Utopian Thought in the Western World (3:3:0). Survey of utopian thought (and critiques of this thought); study of the nature and success of a few utopian experiments and attempts to assess the significance of the idea of utopia in western thought and experience. Offered Spring 1984. Professor J. B. Radner.

426 Human Allegiances and Modernization (3:3:0). This course explores what happens to individual and group loyalties, allegiances, and commitments in societies and states affected by economic, social, and political changes. This important topic includes such contemporary phenomena as the resurgence of ethnic identity which finds its expression among such groups as the Basque, Moslem fundamentalism, and the Quebecois. Theoretical issues to be explored include the power and cogency of such popular
theories as modernization and assimilation theory. Alternative theories such as the world political economy model will be considered. The course will focus on particular case studies in Western Europe, Northern America, the Third World and in communist states. The final section of the course will raise basic questions about the wisdom of trying to suppress premodern loyalties and will look at pressures related to ethnic resurgency within and across state boundaries. Offered Spring 1983. Professor A.K. Sherman.

427 Understanding Modern Japan: Its Social, Economic, and Political Characteristics and Interactions (3:3:0). To examine the complex historical development of Japan with an emphasis on the period after 1868; the nature and characteristics of Japan and its emergence as a major economic power in the postwar world; the problems facing U.S.–Japan economic, political and military relations. Offered Spring 1984. Professor N. Tsukui.

428 Understanding the Brain (3:3:0). A survey course covering both traditional knowledge of the brain and some of the most recent developments in brain science. Topics to be covered include neural conduction, structure of the brain, information processing, learning, effect of the environment on the developing brain, disorders of the brain. It is recommended that students have a background in Biology 103–104 or 113–114 or 124–125. Offered Fall 1983. Professor J.M. Finn.

429 Security in the Nuclear Age (3:3:0). An interdisciplinary course studying the issues of war and peace in today’s world. The technical basis for national defense is explained and the current state of military preparedness is studied in its historical perspective. The various proposals for a peaceful solution to the nuclear dilemma are explored and their political, economic and social implications are analyzed. Offered Spring 1984. Professor W. F. Lankford.

430 Where Have the Heroes Gone? (3:3:0). Today the notion of heroism seems to be in decline. This course investigates the reasons for this decline by examining several traditional heroic types, including the warrior, the king or political leader, the martyr, the thinker. We will look at the origins and transformations of these types in specific cultural settings, using literary and historical readings and visual images. Students will investigate fictional or historical figures they themselves admire. Offered Spring 1985. Professor L.E. Doherty.

Vietnamese Courses (VIET)

Foreign Languages and Literatures

301, 302 Vietnamese Culture and Civilization (3:3:0), (3:3:0). Prereq 54 hr or Pol. Survey of Vietnamese culture and civilization, incl language, philosophy, religion and family life and discussion of the problems of cross-cultural understanding. Course work in English. May be taken toward fulfillment of the non–W Culture req for B.A. Degree.

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Administration and Faculty

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Dennis W. Webster, Ph.D., Assistant Director and Coordinator of Black Peer Counseling

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Robert Charles Krug, B.S., M.S., Ph.D., Emeritus Professor of Chemistry.
James Louis Jackson, B.A., M.A., Ph.D., Emeritus Professor of English.

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Henry P. Adams, B.S., Professor.
Louis John Aebischer, B.S., M.S., Ed.S., Associate Professor of Health and Physical Education.
Virginia Larose Austin, B.S.M., M.Ed., Assistant Professor of Education.
Marion Bartlett, B.S., Ph.D., Associate Professor of Psychology.
Nancy Cook Brooks, B.A., M.A., Assistant Professor of Spanish.
Evelyn Ellis Cohelan, B.S., M.S., Ed.D., Professor of Nursing.
Hubert Merrill Cole, B.S., M.S., Associate Professor of Mathematics.
Arlette Raymonde Evans, B.A., M.S., Assistant Professor of French.
Hyman I. Feinstein, A.B., M.A., Associate Professor of Chemistry.
Frances Rawls Flach, B.S., A.M., Assistant Professor; Academic Counselor, Division of Continuing Education.
Philip S. Fox, B.S., M.A., Ed.D., Professor of Health and Physical Education; Chair, Department of Health and Physical Education.
John Walter Godbold, B.A., M.P.A., Assistant Professor of Government.
William Cargill Johnston, A.B., M.S., Ph.D., Professor of Physics; Dean of the Summer Session.
Angela Jurdak Khoury, B.A., M.A., Ph.D., Associate Professor of Government and Politics.
Karl Kreilkamp, B.A., M.A., Ph.D., Professor of Philosophy.
Ralph W. Morgan, A.B., M.A., D.S.W., Associate Professor of Social Work.
Maxine Richardson, B.S., M.A., Associate Professor of Health and Physical Education.
Clayton Moss Schindler, A.B., M.S., Ph.D., Professor of Education.
Helen Ludwig Sehrt, A.B., A.M., Assistant Professor of German.
James Max Snyder, B.S.Ed., M.A., Ed.D., Professor of Education.

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Faculty 1984–85

Ackerman, Helen J., Director of Public Relations. B.A. 1968, University of Western Australia.

Adamkewicz, Susan Laura, Assistant Professor of Biology. A.B. 1962, Stanford University; Ph.D. 1968, University of Virginia.


Agne-Traub, Charlene E., Assistant Professor of Health Education. B.A. 1967, Concordia Teachers College; A.M. 1970, University of Northern Colorado; Ph.D. 1981, Texas Woman’s University.


Allinger, Rita Louise, Associate Professor of Nursing. B.S. 1961, M.S. 1963, Boston University; M.A. 1972, Ph.D. 1974, The Catholic University of America.


Allen, John Ashley, Associate Professor of Psychology. A.B. 1963, Duke University; M.S. 1969, Ph.D. 1971, North Carolina State University.


Alexeev, Michael, Assistant Professor of Economics. Ph.D. 1984, Duke University.

Ambler, John Alden, Lecturer in Computer Science. B.S./M.E. 1968, University of South Florida; M.S. 1970, University of Southern California; M.B.A. 1971, Golden State University.


Anderson, Karl Eric, Adjunct Associate Professor of Geography. B.S. 1967, Purdue University; M.S. 1969, Northwestern University; Ph.D. 1978, Northwestern University.

Anderson, Wayne F., Distinguished Professor of Public Administration. B.S. 1948, M.S. 1949, University of Wisconsin, Madison.


Andrykovitch, George Eugene, Associate Professor of Biology. B.S. 1962, M.S. 1965, University of Pittsburgh; Ph.D. 1968, University of Maryland.


Anthony, Robert A., Professor of Law. B.A. 1953, Yale University; B.A. Juris. 1956, Oxford University; J.D. 1975, Stanford University.


Avruch, Kevin Andrew, Associate Professor of Anthropology. B.A. 1972, University of Chicago; M.A. 1973, Ph.D. 1978, University of California at San Diego.


Baker, Anne B., Assistant Professor of Nursing. B.S. 1975, Long Island University; M.S.N. 1980, University of Alabama in Birmingham.

Banks, Richard C., Adjunct Professor of Biology. B.S. 1953, Ohio State University; M.A. 1958, University of California, Berkeley; Ph.D. 1961, University of California, Berkeley.

Baraniecki, A.Z., Assistant Professor of Engineering. M.Sc. 1970, Warsaw Technical University, Poland; Ph.D. 1980, University of Windsor, Canada.


Barocas, Ralph, Professor of Psychology. B.A. 1957, Hunter College; M.S. 1960, Ph.D. 1964, Pennsylvania State University.

Barringer, Henry C., Senior Lecturer in CRAS, Associate Director of the Center for Conflict Resolution. B.A. 1942, University of Michigan.

Barsby, Steven, Lecturer in Economics. Ph.D. 1968, University of Oregon.


Baum, Richard Frederick, Associate Professor of Computer and Information Sciences. B.A. 1962, Oberlin College; M.S. 1964, Ph.D. 1969, University of Michigan.

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Reference
In order to promote a stronger sense of mutual responsibility, respect, trust, and fairness among all of the members of George Mason University, and with the desire for greater academic and personal achievement, we, the members of George Mason University, have set forth the following code of honor:

I. The Honor Committee

Duties of the Honor Committee:
The Honor Committee is to be a group of students elected from the student body whose primary and indispensable duty shall be to instill the concepts and spirit of the Honor Code within the student body. The secondary function of this group shall be to sit as a hearing committee on all alleged violations of the code.

II. Extent of the Honor Code

The Honor Code of the George Mason University shall deal specifically with:
A. Cheating and attempted cheating
B. Plagiarism
C. Lying
D. Stealing

A. Cheating encompasses the following:
1. The willful giving or receiving of an unauthorized, unfair, dishonest, or unscrupulous advantage in academic work over other students.
2. The above may be accomplished by any means whatsoever, including, but not limited to, the following: fraud, duress, deception, theft, trick, talking, signs, gestures, copying from another student, and the unauthorized use of study aids, memoranda, books, data, or other information.
3. Attempted Cheating.

B. Plagiarism encompasses the following:
1. Presenting as one’s own the words, the work, or the opinions of someone else without proper acknowledgment.
2. The borrowing of the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment.

C. Lying encompasses the following:
The willful and knowledgeable telling of an untruth or falsehood, as well as any form of deceit, attempted deception, or fraud in an oral or written statement relating to academic work. This includes, but is not limited to:
1. Lying to administration and faculty members.
2. Falsifying any University document by mutilation, addition, or deletion.
3. Lying to Honor Committee members and councils during investigation and Hearing. This may constitute a second charge with the Committee members (who are acting as judges during that specific hearing) acting as Accusers.

D. Stealing encompasses the following:
The taking or appropriating without the right or permission to do so, and with the intent to keep or to make use of wrongfully, property belonging to any member of the George Mason community or any property located on the University campus. (This section is relevant only to academic work and related materials.)

III. Responsibility of the Faculty

In order to alleviate misunderstanding, each professor is required to delineate at the beginning of each semester what constitutes a violation of the Honor Code in his class. This should include an explanation of:

A. The extent of group participation that is permissible in preparing term papers, laboratory exhibits or notebooks, reports of any kind, tests, quizzes, examinations, homework, or any other work;

B. The extent to which the use of study aids, memoranda, books, data or other information is authorized during recitations, tests, quizzes, examinations, reports of any kind, laboratory sessions, or any other work; and
C. The nature of plagiarism.
Each professor is required to send the Honor Committee a written copy of his policy, which will be kept on file.
Any faculty member who witnesses an Honor Code violation should proceed as outlined under Procedures for Reporting a Violation.

IV. Responsibility of the Students

Students should request a delineation of policy from each professor if none is given at the beginning of each semester. Students should also request an explanation of any part of the delineation that they do not understand. It is the responsibility of the student to understand his professor’s policies with regard to the Honor Code. It is also the responsibility of the student to understand the provisions of the Honor Code.

All students in the University have the duty, as participating members of this community, to report to a member of the Honor Committee any violations of the Honor Code within the prescribed time as outlined under Procedures for Reporting a Violation. This duty is of importance not only because it enforces the Honor Code, but also because it gives each student the opportunity to express his respect for personal integrity and an honest academic community.

V. Procedure for Reporting a Violation

Any student or faculty member witnessing or discovering a violation of the Honor Code shall enlist, wherever and whenever possible, one or more corroborating witnesses to the overt act. The accuser(s) (student or faculty) will, within 15 working days from date of realization, inform the suspected party with a letter of accusation provided by the Honor Committee.

The Honor Committee shall retain a copy of the accusation letter. The letter must inform the suspected party that he has four working days to contact a member of the Honor Committee and be advised of his rights and options, or the Honor Committee shall commence an investigation, this investigation not involving a presumption of guilt on the part of the accused. Any member of the George Mason University Academic Community who has knowledge of but does not report an Honor Code Violation may be accused of lying under the Honor Code.

VI. Counsel for the Accused and Accuser

Counsel for the Accused and accuser may be provided by any member of the George Mason University student community, excluding members of the Honor Committee.

VII. Appearance of Witnesses

The Honor Committee may require any member of the University community to appear as a witness before the Committee at the time of the hearing. All requests for such appearances shall be issued by the Chairman of the Honor Committee. (The appearance of the accuser is required unless otherwise exempted by the request of both counsels, or the Chairman of the Honor Committee.)

VIII. Verdict

In order to find a student guilty of an honor violation, all of the voting members must vote for a verdict of “guilty.” If the vote is not unanimous, the defendant shall be acquitted.

A student may not be tried more than once for the same offense except when an appeal is granted.

IX. Penalty

If the accused is found guilty of an honor violation, the Honor Committee shall determine the nature of the penalty by majority vote.

The Honor Committee is not restricted to any one kind of penalty but will determine a penalty commensurate with the seriousness of the offense. Typical of the range of penalties that may be given are:

A. Oral Reprimand:
An oral statement to the student by the Chairman of the Honor Committee. No entry is made on the student’s scholastic record.

B. Written Reprimand:
A written censure, which is placed in the confidential files of the Honor Committee, and made part of the student’s academic file, but not the student’s scholastic transcript records.

C. Nonacademic Probation:
Exclusion from holding an elected or appointed office in any student activity or organization. A student on nonacademic probation will be ineligible to participate in any athletic or other activity representing the University and will be ineligible to
serve as a working staff member of any student organization. This action is noted in the Judicial Administration's file but not made a part of the student's scholastic record.

D. Failing Grade:
Recommendation in writing to the instructor of a grade of F for the work involved, or for the entire course, is made. The student's permanent record will reflect the academic evaluation made by the instructor.

E. Suspension from the University for One or More Semesters:
A student's scholastic record would read: "Nonacademic suspension (date to date)." This penalty will be recommended to the Judicial Administrator only in extraordinary circumstances, such as for repeated offenses.

X. Appeal
A written request for an appeal, detailing new evidence, procedural irregularities, or other sufficient grounds, which may have sufficient bearing on the outcome of the trial, must be presented to the Chairman of the Honor Committee within seven working days after the date on which the verdict was rendered.

XI. Keeping of Records
In the event that the accused is found "not guilty," the Chairman of the Honor Committee will destroy all records of the hearing.

If the accused is found guilty, the records of the hearing shall be kept in the file of the Honor Committee. These records shall include a full transcript of the hearing and all evidence presented at the hearing; if the evidence belongs to any person other than the defendant, the original shall be returned to the owner and a copy shall be kept with the records of the Honor Committee.

XII. Composition of the Committee
The Honor Committee shall be proportionally composed of students from each school and faculty adviser(s), although the latter shall be a nonvoting member. Undecided majors, B.I.S. students, and continuing education students shall be considered together as a school. The total number of members, exclusive of freshmen, shall be as close to 17 as practicable. Four freshmen will be appointed in the Fall to serve until the following Spring election. One or more clerks will be appointed by the Committee from the student body who will serve as aides to the Chairman.

The Chairman of the Committee will be elected by majority vote of the Committee members. For a particular hearing, five members of the Honor Committee will be designated as voting members.

The Faculty Adviser, as a nonvoting member of the Committee, should sit with and advise the Committee at all hearings. The Faculty Adviser shall be chosen by the Honor Committee.

Previous Honor Committee members may serve during the Summer term.

XIII. Eligibility of Members
Any student who maintains a 2.0 grade-point average and is in good standing with the University shall be eligible for the Honor Committee. A Committee member must maintain a 2.0 average to continue in office.

XIV. Election of the Honor Committee
The Honor Committee shall be elected in the Spring semester. The term of office shall begin upon election and run until the following Spring election.

In the Fall semester, the chairman shall appoint new members to fill any vacancies that have occurred and to fill the four freshman seats on the Committee.

All appointments made by the Chairman are subject to majority vote of approval by the remaining members.

XV. The Challenging and Voluntary Withdrawal of a Member of the Committee from Participation in a Particular Hearing
An accused who challenges the right of any member of the Honor Committee to sit in judgment on him must present cause to the Chairman of the Hearing.

The Hearing Committee shall then decide the validity of the challenge with the challenged member abstaining from voting. A simple majority shall decide the validity of any challenge. A successfully challenged Committee member shall not be present during the hearing.

A member of the Honor Committee shall withdraw from a specific hearing if he feels that he is prejudiced as to the facts in the case.
XVI. Provisions for Amendments

Upon petition of 20 percent of the student body, a committee shall be appointed by the Student Government to consider amendments to, or revisions of the Honor Code, said amendments and/or revisions to be then voted on by the student body as a whole. A two-thirds majority of the votes cast shall be necessary for acceptance of any amendment or revision.

The Honor Committee may also propose amendments to be voted on by the student body as described in paragraph one of this section.

Approved amendments will take effect immediately except that new provisions will not be applied to cases initiated prior to amendment.

Revised April 15, 1981.

Section 23–7.4 of the Code of Virginia

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding a section numbered 23–7.4 as follows:

§23–7.4. Eligibility for in-state tuition charges.—A. For purposes of this section the following definitions shall apply:

“Date of the alleged entitlement” means the first official day of class within the term, semester, or quarter of the student’s program.

“Dependent student” means one who is listed as a dependent on the federal or state income tax return of his parents or legal guardian or who receives substantial financial support from his parents or legal guardian.

“Domicile” means the present, fixed home of an individual to which he returns following temporary absences and at which he intends to stay indefinitely. No individual may have more than one domicile at a time. Domicile, once established, shall not be affected by mere transient or temporary physical presence in another jurisdiction.

“Domiciliary intent” means present intent to remain indefinitely.

“Emancipated minor” means a student under the age of eighteen on the date of the alleged entitlement whose parents or guardians have surrendered the right to his care, custody, and earnings and who no longer claim him as a dependent for tax purposes.

“Full-time employment” means employment resulting in, at least, an annual earned income reported for tax purposes equivalent to 50 work weeks or 40 hours at minimum wage.

“Independent student” means one whose parents have surrendered the right to care, custody, and earnings, have ceased to support him, and have not claimed him as a dependent on federal and state income tax returns for at least 12 months prior to the date of the alleged entitlement.

“Special arrangement contract” means a contract between a Virginia employer or the authorities controlling a federal installation or agency located in Virginia and a public institution of higher education for reduced rate tuition charges as described in paragraph G of this section.

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"Substantial financial support" means financial support in an amount which equals or exceeds that required to qualify the individual to be listed as a dependent on federal and state income tax returns.

"Unemancipated minor" means a student under the age of eighteen on the date of the alleged entitlement who is under the legal control of and is financially supported by either of his parents, legal guardian or other person having legal custody.

"Virginia employer" means any employing unit organized under the laws of Virginia or having income from Virginia sources regardless of its organizational structure, or any public or nonprofit organization authorized to operate in Virginia.

B. In order to become eligible for in-state tuition, an independent student shall establish by clear and convincing evidence that for a period of at least one year immediately prior to the date of the alleged entitlement, he was domiciled in Virginia and had abandoned any previous domicile, if such existed.

In order to become eligible for in-state tuition, a dependent student or unemancipated minor shall establish by clear and convincing evidence that for a period of at least one year prior to the date of the alleged entitlement, the person through whom he claims eligibility was domiciled in Virginia and had abandoned any previous domicile, if such existed.

In determining domiciliary intent, all of the following applicable factors shall be considered: continuous residence for at least one year prior to the date of alleged entitlement, state to which income taxes are filed or paid, driver's license, motor vehicle registration, voter registration, employment, property ownership, sources of financial support, location of checking or passbook savings accounts and any other social or economic relationships with the Commonwealth and other jurisdictions.

Domiciliary status shall not ordinarily be conferred by the performance of acts which are auxiliary to fulfilling educational objectives or are required or routinely performed by temporary residents of the Commonwealth. Mere physical presence or residence primarily for educational purposes shall not confer domiciliary status.

Those factors presented in support of entitlement to in-state tuition shall have existed for the one-year period prior to the date of the alleged entitlement.

C. The domicile of a married person shall be determined in the same manner as the domicile of an unmarried person.

The domicile of an emancipated minor shall be established in the same manner as any other independent student.

Any alien holding an immigration visa or classified as a political refugee shall also establish eligibility for in-state tuition in the same manner as any other student. However, absent congressional intent to the contrary, any person holding a student or other temporary visa shall not have the capacity to intend to remain in Virginia indefinitely and, therefore, shall be ineligible for Virginia domicile and for in-state tuition charges.

The domicile of a dependent student shall be rebuttably presumed to be the domicile of the parent or legal guardian claiming him as an exemption on federal or state income tax returns currently and for the tax year prior to the date of the alleged entitlement or providing him substantial financial support.

A matriculating student who has entered an institution classified as out-of-state shall be required to rebut by clear and convincing evidence the presumption that he is in the Commonwealth for the purpose of attending school and not as a bona fide domicile.

For the purposes of this section, the domicile of an unemancipated minor or a dependent student eighteen years of age or older may be either the domicile of the parent with whom he resides or the parent who claims the student as a dependent for federal and Virginia income tax purposes for the tax year prior to the date of the alleged entitlement and is currently so claiming the student. If there is no surviving parent or the whereabouts of the parents are unknown, then the domicile of an unemancipated minor shall be the domicile of the legal guardian of such unemancipated minor unless there are circumstances indicating that such guardianship was created primarily for the purpose of conferring a Virginia domicile on the unemancipated minor.

D. It is incumbent on the student to apply for change in domiciliary status on becoming eligible for such change. Changes in domiciliary status shall only be granted prospectively from the date such application is received.

A student who knowingly provides erroneous information in an attempt to evade payment of out-of-state fees shall be charged out-of-state tuition fees for each term, semester, or quarter attended and may be subject to dismissal from the institution.

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All disputes related to the veracity of information provided to establish Virginia domicile shall be appealable through the due process procedure required by paragraph H below.

E. A nonmilitary student whose parent or spouse is a member of the armed forces may establish domicile in the same manner as any other student. However, a nonmilitary student, not otherwise eligible for in-state tuition, whose parent or spouse is a member of the military stationed or residing in the Commonwealth pursuant to military orders and claiming a state other than Virginia on their State of Legal Residence Certificate, shall be entitled to in-state charges when the following conditions are met: (i) if the student is a child of a member of the armed forces, then the nonmilitary parent shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition charges, resided in Virginia, been employed full time and paid individual income taxes to Virginia. Such student shall be eligible for in-state tuition charges only if the nonmilitary parent claims him as a dependent for Virginia and Federal income tax purposes; or (ii) if the student is the spouse of a member of the armed forces, then such student shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition, resided in Virginia, been employed full time and paid individual income taxes to Virginia. Any student whose spouse or parent is a member of the armed forces shall be eligible for in-state tuition charges for so long as these conditions continue to be met.

F. Students who live outside this Commonwealth and have been employed full time inside Virginia for at least one year immediately prior to the date of the alleged entitlement for in-state tuition shall be eligible for in-state tuition charges if such student has paid Virginia income taxes on all taxable income earned in this Commonwealth for the tax year prior to the date of the alleged entitlement. Students claimed as dependents for federal and Virginia income tax purposes who live outside this Commonwealth shall become eligible for in-state tuition charges if the nonresident parent claiming him as a dependent has been employed full time inside Virginia for at least one year immediately prior to the date of the alleged entitlement and paid Virginia income taxes on all taxable income earned in this Commonwealth for the tax year prior to the date of the alleged entitlement. Such students shall continue to be eligible for in-state tuition charges for so long as they or their qualifying parent are employed full time in Virginia, paying Virginia income taxes on all taxable income earned in this Commonwealth and the student is claimed as a dependent for Virginia and federal income tax purposes.

G. Public institutions of higher education may enter into special arrangement contracts with Virginia employers or authorities controlling federal installations or agencies located in Virginia. The special arrangement contracts shall be for the purpose of providing reduced rate tuition charges for the employees of the Virginia employers or federal personnel when the employers or federal authorities are assuming the liability for paying the tuition for the employees or personnel in question and the employees or personnel are classified by the requirements of this section as out-of-state.

All special arrangement contracts with authorities controlling federal installations or agencies shall be to provide group instruction in facilities provided by the installation or agency.

Special arrangement contracts with Virginia employers may be for group instruction in facilities provided by the employer or in the institution’s facilities or on a student-by-student basis for specific employment-related programs.

Special arrangement contracts shall be valid for one year and shall be reviewed for legal sufficiency by the office of the Attorney General prior to signing. All rates agreed to by the public institutions shall be at least equal to in-state tuition and shall only be granted by the institution with which the employer or the federal authorities have a valid contract for students for whom the employer or federal authorities are paying the tuition charges.

All such contracts shall be registered with the State Council of Higher Education to assure accurate tabulation of the domiciles of the students.

H. Each public institution of higher education shall establish an appeals process for those students who are aggrieved by decisions on eligibility for in-state tuition charges. The Administration Process Act (§59–6.14:1 et seq.) shall not apply to these administrative reviews.

An initial determination shall be made. Each appeals process shall include an intermediate review of the initial determination and a final administrative review. The final administrative decision shall be in writing. A copy of this decision shall be sent to the student. Either the intermediate review or the final administrative review shall be conducted by an appeals committee consisting of an odd number of members. No person who serves at one level of this
areas of study leading to degrees

undergraduate

accounting
general, b.s. accounting
government, b.s. accounting
information systems, b.s. business administration
management, b.s. accounting
public, b.s. accounting

administration
business, b.s. business administration
public, b.s. public administration
taxation, b.s. accounting

american studies
b.a. american studies

anthropology
b.a. anthropology

art
art history, b.a. art
studio art, b.a. art

biology
b.a./b.s. biology

business administration
b.s. business administration

chemistry
b.a./b.s. chemistry

communication
interpersonal, b.a. speech communication
mass, b.a. speech communication
public, b.a. speech communication

community health
b.s.ed. health education

computer
computer science, b.s. computer science
engineering, b.s. computer and electronics

engineering
dance
b.f.a. dance

decision sciences
operations management, b.s. decision sciences
management science, b.s. decision sciences
information resource management, b.s. decision sciences

i. in order to ensure the application of uniform criteria in administering this section and determining eligibility for in-state tuition charges, the state council of higher education shall issue and from time to time revise guidelines, including a domiciliary status form to be incorporated by all state institutions of higher education in their admissions applications. these guidelines shall not be subject to the administrative process act (§§ 9-6.14:1 et seq.) of this code.

an advisory committee, composed of 10 representatives of the public institutions, shall be appointed by the council each year to cooperate with the council in developing the guidelines for determining eligibility or revisions thereof. the council shall consult with the office of attorney general and provide opportunity for public comment prior to issuing any such guidelines.

the first set of such guidelines shall be issued by september 1, 1984.

2. that §§ 23-7 of the code of virginia is repealed.

3. that if any clause, sentence, paragraph, subdivision, section, or part of this act shall be adjudged by any court of competent jurisdiction to be invalid, the judgment shall not affect, impair, or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, subdivision, section, or part thereof directly involved in the controversy in which the judgment shall have been rendered.
<table>
<thead>
<tr>
<th>Areas of Study Leading to Degrees</th>
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<tbody>
<tr>
<td>Economics</td>
</tr>
<tr>
<td>B.A./B.S. Economics</td>
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<tr>
<td>International, B.A. International Studies</td>
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<td>Education</td>
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<td>Trade/Industrial, B.S.Ed. Vocational Education</td>
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<td>Teacher Certification Program</td>
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<td>Secondary, B.S. specific discipline</td>
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<td>Vocational, B.S.Ed. Vocational Education</td>
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<td>Electronics Engineering</td>
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<td>English</td>
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<td>B.A. English</td>
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<td>European Studies</td>
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<td>B.A. Area Studies</td>
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<tr>
<td>Finance</td>
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<tr>
<td>General, B.S. Finance</td>
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<tr>
<td>Investments, B.S. Finance</td>
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<tr>
<td>Financial</td>
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<tr>
<td>Information Systems, B.S. Business Administration</td>
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<td>Institutions, B.S. Finance</td>
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<td>Management, B.S. Finance</td>
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<td>Fire Administration and Technology</td>
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<td>French</td>
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<td>Government/Politics</td>
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<td>Health Education</td>
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<td>Community Health, B.S.Ed. Health Education</td>
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<td>History</td>
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<td>B.I.S. Individualized Study</td>
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<td>Industrial Arts</td>
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<td>Economics, B.A. International Studies</td>
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<td>Studies, Comparative Regional, B.A. International Studies</td>
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<td>Financial, B.S. Finance</td>
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<tr>
<td>General, B.S. Management</td>
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<tr>
<td>Science, B.S. Decision Sciences</td>
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<tr>
<td>Small Business, B.S. Management</td>
</tr>
<tr>
<td>Marketing</td>
</tr>
<tr>
<td>General, B.S. Marketing</td>
</tr>
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<td>Industrial/Government, B.S. Marketing</td>
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<tr>
<td>Management, B.S. Marketing</td>
</tr>
<tr>
<td>Research, B.S. Marketing</td>
</tr>
<tr>
<td>Retail, B.S. Marketing</td>
</tr>
<tr>
<td>Sales, B.S. Marketing</td>
</tr>
<tr>
<td>Mass Communication</td>
</tr>
<tr>
<td>B.A. Speech Communication</td>
</tr>
<tr>
<td>Mathematics</td>
</tr>
<tr>
<td>B.A./B.S. Mathematics</td>
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Music  
B.A./B.M. Music

Nursing  
B.S. Nursing

Operations Management  
B.S. Business Administration

Parks, Recreation, and Leisure Studies  
B.S. Recreation

Personnel/Industrial Relations  
B.S. Management

Philosophy  
B.A. Philosophy

Physical Education  
B.S.Ed. Physical Education

Physics  
B.A./B.S. Physics

Politics  
Government, B.A. Government and Politics  
International, B.A. International Studies

Psychology  
B.A./B.S. Psychology

Public Administration  
B.S. Public Administration

Public Communication  
B.A. Speech Communication

Real Estate/Urban Development  
B.S. Finance

Retail Management  
B.S. Marketing

Russian Studies  
B.A. Area Studies

Sales Management  
B.S. Marketing

Secondary Education Certification  
B.A./B.S. Specific Discipline

Small Business Management  
B.S. Management

Social Work  
B.S. Social Work

Sociology  
B.A. Sociology

Spanish  
B.A. Spanish

Speech  
B.A. Speech Communication

Theatre  
B.A./B.F.A. Theatre

Urban Development/Real Estate  
B.S. Finance

Writing  
B.A. English

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General Regulations

Firearms

The unauthorized possession, storage, display, or use of any kind of ammunition, firearms, fireworks, explosives, air rifles, air pistols, or other lethal instruments is prohibited on University property. Any questions regarding this regulation should be directed to the Campus Police (323-2158).

Alcoholic Beverages

The possession or consumption of any alcoholic beverage is prohibited on University grounds unless the University has sanctioned the location and/or conditions for possession or consumption. Related regulations are described in the Policy on the Service of Alcoholic Beverages, available from the Student Activities office or the information centers in Student Unions I and II.

Smoking

Smoking is not permitted in classrooms, lecture halls, theaters, or in the University libraries. Lounge areas in the Student Building and other University buildings have been set aside for this purpose.

Drugs

Students at the University using or otherwise involved with illegal drugs may be subject to suspension or expulsion in addition to any action taken by local or state authorities.

Bicycles/Skateboards

Bike racks are provided at various locations on campus for the convenience of students who bike to and from the University. For resident students, storage areas for bikes are located near Buildings 2, 4, and 8. Bikes are to be parked only in these areas.

Bikes and skateboards are not permitted on sidewalks, ramps, foot paths, or grassy areas of campus or inside University buildings.

Pets

No pets are permitted in University buildings at any time. Additionally, pets that are on campus grounds must be on a leash and under supervision at all times.

Solicitors and Salesmen

Solicitors and salesmen, except on official business with the University, are not permitted on the campus.
Notices

Although this catalog was prepared on the basis of the best information available at the time of publication, all information, including statements of tuition and fees, course offerings, admissions and graduation requirements, is subject to change without notice or obligation.

Admission Policy

Admission to the University and acceptance into a particular degree program are competitive.

Space available is determined largely by the availability of resources. Demand for resources is balanced to meet the University's many educational responsibilities. The University, therefore, engages in qualitative evaluation of students and makes selections based on performance and evidence of prospects for success.

Acceptance into junior-level courses, in particular, is limited in business, communication, education, nursing, and social work (See appropriate catalog sections.). Junior-level applicant selection is competitive with priority placed on potential for success. Grades are important and necessary, but may not be the only evidence used by selection committees.

Accreditation

University

George Mason University is fully accredited by the Southern Association of Colleges and Schools.

Chemistry

B.S. Degree.
This program is accredited by the American Chemical Society.

Education

The following programs have been approved by the Virginia State Department of Education and the National Council for Accreditation of Teacher Education:

Undergraduate
Early Childhood Education—Nursery School through Grade 3
Upper Elementary Education—Grades 4 through 7
Secondary Education—Grades 7 through 12
(Certification only)
Special Certification (Music Education, K–12; Health Education, 7–12; and Physical Education, K–12)

Graduate
Elementary Education
Guidance and Counseling
Reading
School Administration and Supervision
Secondary Education
Special Education

Nursing

B.S.N. and M.S.N. Degrees
These Nursing Programs are accredited by the Virginia State Board of Nursing and by the National League for Nursing.

Social Work

B.S. Degree
The Social Work Program is accredited by the Council on Social Work Education.

Privacy of Student Records

Annually, George Mason University informs students of the Family Educational Rights and Privacy Act of 1974. This Act, with which the institution intends to comply fully, was designed to protect the privacy of education records, to establish the right of students to inspect and review their education records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. Students also have the right to file complaints with the Family Educational Rights and Privacy Act office (FERPA) concerning alleged failures by the institution to comply with the Act.

Local policy explains in detail the procedures to be used by the institution for compliance with the provisions of the Act. The Office of the Registrar keeps a copy of the policy and also maintains a Directory of Records listing all education records maintained on students by this institution.

Questions concerning the Family Education Rights and Privacy Act may be referred to the Office of the Registrar.

Equal Opportunity / Affirmative Action

George Mason University is an Equal Opportunity/Affirmative Action institution committed to the principle that access to study or employment

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opportunities afforded by the University, including all benefits and privileges, be accorded to each person—student, faculty, or staff member—on the basis of individual merit and without regard to race, color, religion, national origin, sex, age, or handicaps (except where sex or age is a bona fide occupational qualification). Appropriate procedures have been adopted for the promotion of this principle in every phase of University operations. Furthermore, affirmative action will be taken to ensure that opportunities afforded by the University are fully available to ethnic minorities, women, and the disabled. The University will make every reasonable accommodation to enable the handicapped to undertake work or study for which they qualify.

The University is also committed to the principles set forth in the Rehabilitation Act of 1973, Section 504, regarding disabled students.

Students, employees, or applicants for admission or employment who believe that they have not been dealt with by this University in accordance with the principles and requirements stated above may address the Office of Affirmative Action, George Mason University, stating the facts that occasioned the complaint, presenting any relevant documents or correspondence, and requesting assistance in resolution of the matter.

Student Consumer Information

Prospective and enrolled students may obtain information related to the cost of attending the University, financial aid programs available, and academic programs by consulting the appropriate office. For information related to the cost of attending the University and tuition refund policies, contact the Office of the Cashier (Finley Building, Room 100; 323-2119). For information related to financial aid programs and developing personal expense budgets, contact the Office of the Director of Student Aid (Student Union, Room 354; 323-2176). For information related to graduate academic programs, requirements, and related matters, contact the Office of Graduate Admissions (Robinson Hall, Room 2202; 323-2104); for undergraduate information, contact the Office of Admissions (Finley Building, Room 117; 323-2102); for other questions, contact the University switchboard, 323-2000.

George Mason University Catalog

May 1985

The University Catalog is published annually by George Mason University, 4400 University Drive, Fairfax, Virginia 22030. Preparation and editing by Design and Publications Services in conjunction with the Office of Academic Affairs.

Summer Session

Summer Session consists of several terms, ranging in length from five to eight weeks, during the period May 31 through August 6. Classes are offered during both day and evening hours. For details, consult the Summer Session Catalog which is available mid-March.
Campus Map
Visiting the Campuses

Visitors are always welcome at the University, and prospective students are especially encouraged to visit the campuses, preferably while the University is in session. Administrative offices are open Monday through Friday, but because hours vary, it is best to make appointments.

Enforced parking regulations are in effect Monday through Friday from 7:30 a.m. to 5:30 p.m. Visits to the campuses during these times require a special parking permit. Special parking places are also provided for disabled persons. Parking permits and assistance in parking are available at each campus through the University Parking and Traffic Office. University buildings are fully accessible to persons in wheelchairs, except as noted below.

1. Finley Building
   (First floor only accessible to wheelchairs.)
   Admissions (Undergraduate and Graduate)
   Affirmative Action
   Board of Visitors
   George Mason Institute
   Graduate School
   Office of Research
   Information/Switchboard
   President
   Public Relations Services
   Senior Vice President
   University Activities
   University Relations
   Vice President, Academic Affairs
   Vice President, Business and Finance

2. Krug Hall
   (Ground and first floors only accessible to wheelchairs.)
   Chemistry Department

3. West Building
   (Ground and first floors only accessible to wheelchairs.)
   Physics Department

4. East Building
   (First floor only accessible to wheelchairs.)
   BIS/MAIS Degree Programs
   Consortium
   Dean, Continuing Education
   Extended Studies Enrollment
   In-Service Education Coordinator
   Off-Campus Coordination
   Public Service
   Summer Session

5. Fenwick Library
   Main Library Entrance

6. Lecture Hall

7. University Parking and Traffic Office

8. Thompson Hall
   Center for Interactive Management
   Communication
   Computer Science and Information Systems
   Dean, Arts and Sciences
   Duplicating Services
   ELI Faculty
   Foreign Languages and Literatures Department
   Institute for Information Technology
   Media Services (distribution)
   PAGE (Plan for Alternate General Education)
   System Engineering Department
   University Computing Services
   WGMU

9. Administrative Offices (Modular)
   Accounting and Payroll
   Cashier
   Comptroller
   Credit Union
   Payroll Offices
   Personnel
   Registrar
   Registration Site
   Student Accounts

10. Greenhouse

11. Student Union I
    Academic Advising Center
    Academic Testing
    Arts and Crafts Center
    Bank
    Broadside (student newspaper)
    By George? (yearbook)
    Cafeteria (fast food)
    Campus Ministry
    Career Services
    Cooperative Education

Facilities Planning
Library Collections and Services
Library Offices
Media Services Center
Special Collections and Archives
South Entrance
Center for Historical Studies
Design and Publications
Government, Society, and the Arts Center
History Department
Philosophy and Religion Department
Social Work Department

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12. Robinson Hall I
Art Department
Child–Youth Study Center
Composition Tutorial Center
Dean, Professional Studies
Education Department
English Department
Instructional Resource Center
Northern Virginia Writer’s Project
Nursing Department
Public Affairs Department
The Writing Place

13. Robinson Hall II
Accounting and Business Legal Studies
Center for Conflict Resolution
Decision Sciences
Economics Department
Media Services (distribution)
Finance Management
Marketing
Quick Copy Center
School of Business Administration
Sociology and Anthropology

14. Harris Theatre

15. Student Apartments

16. Physical Education Building
Health and Physical Education Department

17. Field House and Track
Athletics
Patriot Club
Sports Information

18. Residence Halls

19. Physical Plant

20. Academic III
Biology
Electrical and Computer Engineering
Engineering
Geology
Psychology
Grants and Contracts
Televised Engineering
Telecommunications (TV Studio)

21. Student Union II
Bookstore
Cafeteria
Scheduling Coordinator

22. George’s Hall
Center for the Study of Public Choice

23. University Development and Alumni Relations House
President’s Residence

24. Metro Campus
3401 N. Fairfax Dr., Arlington
Admissions (Law)
Cafeteria
Campus Police (Metro Campus)
Dean, School of Law
Library (Law)
Professional/Conference Center

25. Tallwood House
Community Services
Public Management Institute

26. Humanities Module
(Located next to Academic III)

27. Humanities I
(Under Construction)

28. Arena (PE III)
(Under Construction)

29. Fine Arts Module
(Located near Student Union I)

30. Patriot Village (Student Housing)

31. Future Residence Halls

32. University Development/Alumni Relations House
GMU Foundation, Inc.

33. Administrative/Faculty Offices
Auditors
Duplicating Office

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Institutional Resource Management
Mailroom
Math Department
Property Control
Purchasing
Telecommunications
Word Processing

34. Field House Module
Dance Department
ROTC

Central Shipping and Receiving
is located at 10675 Lee Highway, 691-7923
Absence from final examinations, 50
Academic advising, 53
Advising Center, 47
advising policy, 46
good standing, 52
load, 46
period, duration of, 52
probation, 52
standing, 52
suspension, 52
warning, 52
Academic Affairs courses: UNIV, 225
Academic Programs, 8, 264
Academic structures and programs, 13
Academic testing, 43
Accompanying B.M. concentration, 95
Accounting and Business Legal Studies B.S. degree requirements (major in accounting), 133
concentrations, 136
courses:
ACCT, 157
BULE, 164
faculty, 136
Accounting courses: ACCT, 157
Accreditation, 268
Acting emphasis within theatre B.F.A., 100
Activities athletic, 24
performing arts, 25
student, 24
Admission and Extended Studies Enrollment, 41
and Summer Session enrollment, 41
Bachelor of Individualized Study (B.I.S.) application and acceptance, 144
computer science, 77
international students, 41
junior standing nursing deadlines, 130
notice of acceptance, 42
policies, 40
policy, 268
requirements, freshman, 40
requirements, transfer, 40
right to withdraw offer, 42
social work, 112
student teaching, 119, 124, 126
teacher education programs, 118, 123, 126
test requirements, 42
Admissions committee, 42
Advanced placement examinations, 44
Advanced placement program with credit, 44
Adviser's permission to register, 47
Advising, academic, 46, 53
engineering students, 80
Affirmative Action, 20
Air Force ROTC, 46
Alcoholic Beverages, 267
Alumni Association of GMU, 20
Alumni Relations, 20
American Studies B.A. degree requirements, 62
courses: AMST, 157
faculty, 62
in a double major, 63
American Symphony Orchestra League Archives, 15
Anthropology B.A. degree requirements, 113
courses: ANTH, 158
Appeal of grade, 51
Application for degree, 55
Applied anthropology concentration within anthropology B.A., 113
Applied solid state physics concentration within physics B.S., 105
Arabic courses: ARAB, 159
Archaeology courses: ANTH, 158
Archaeology concentration within anthropology B.A., 113
Architecture courses: ARTH, 159
Area Studies, 64
courses:
EUST, 184
LAS, 198
RUSS, 217
European, 64
Latin American, 65
Russian, 67
Army ROTC, 45
Army ROTC Scholarships, 36
Art B.A. degree requirements, 68
courses:
ARTH, 159
ARTS, 160
faculty, 68
Art History courses: ARTH, 159
Art Studio courses: ARTS, 160
Arts and Sciences, College of, 13, 57
administration, 58
deptments and programs, 58
Astronomy courses: ASTR, 161
Athletic Activities, 24
Attendance policies, 50
Auditing a course, 49
Awards, 37
Baccalaureate Degree, 53
Bachelor of Arts degree requirements, 59
Bachelor of Fine Arts degree requirements, 60
Bachelor of Individualized Study (B.I.S.), 144
B.I.S. degree requirements, 145
eligibility, 144
Bachelor of Individualized Study course: BIS, 161
Bachelor of Music degree requirements, 60
Bachelor of Science degree requirements, 60
Bicycles, 267
Bilingual/Multicultural Education, 120
Biology
B.A. degree requirements, 70
B.S. degree requirements, 70
courses:
  BIOL, 161
  for non-majors, 72
  MTCH, 201
  faculty, 70
  PAGE students, 71
Black Peer Counseling, 28
Buildings, 272
Business Administration
courses:
  ACCT, 157
  BULE, 164
  DESC, 170
  FNAN, 184
  INFS, 197
  LOGS, 199
  MGMT, 199
  MKTG, 200
  REUD, 215
Business Administration, School of, 14,131
Education, 132
B.S. degree requirements, 133
Business Legal Studies courses: BULE, 164
Business Logistics concentration in Marketing, 138

C. Harrison Mann Collection, 15
Calendar, 1
Campus Map, 270
Campus Ministry, 29
Campus Visitors, 272
Canceling registration, 48
Career Services, 29
Cartography
certificate program, 149
courses:
  GECA, 187
  GEOG, 187
Catalogs
and changed requirements, 54
other institutions, 46

University, prior years, 54
Center for Bilingual/Multicultural Teacher Preparation, 18
Center for Government, Society and the Arts, 17
Center for Interactive Educational Technology, 18
Center for the Improvement of Productivity, 17
Center for the Study of Market Processes, 17
Center for Study of Public Choice, 17
Certificate programs
  bachelor's level, 148
cartography, 149
gerontology, 148
master's level, 148
post-baccalaureate level, 148
psychology technician, 148
Certificate programs listed, 8
Certificates and University Courses, 147
Certification
  in athletic training, 125
Certification to Teach Music, Virginia, 96,99
Change of status and address, 48
Changes in Business Administration programs, 133
Checks, 33
Chemistry
  accreditation, 268
  B.A. degree requirements, 74
  B.S. degree requirements, 74
courses:
  CHEM, 164
  faculty, 74
  requirement for education majors, 74
  requirement for Nursing majors, 74
Chinese courses: CHIN, 165
  Classics courses: CLAS, 165
Classification of students, 51
College Level Examination Program (CLEP), 43,44
College of Arts and Sciences, 13,57
College of Professional Studies, 13,115
Commencement, 55
Communication
  B.A. degree requirements (major in speech communication), 75
courses:
  COMM, 165
  faculty, 75
  requirement in business administration, 133
Community Services, 142
Composition
  B.M. concentration, 96
  Composition Tutorial Center, 43,53
Computer and Electronics Engineering
  B.S. degree requirements, 79
Computer and Information Sciences
courses:
  CS, 169
  INFS, 197
  faculty, 77
Computer Engineering courses: ENGR, 177

Computer Science
admission, 77
B.S. degree requirements, 77
courses:
CS, 169
for non-majors, 77
reserved for majors, 77

Computer System, 16

Conduct, 31

Conference Center, 19

Consortium for Continuing Higher Education, 20,146
Consortium membership, 20

Consumer information, 269

Continuing Education, Division of, 14,139
administration, 140
Community Services, 142
nursing noncredit courses, 144
programs and services, 140

Continuous registration, 48

Contract courses, 143

Core requirements
all baccalaureate degrees, 53

Counseling Center, 27

Credit
advanced placement program, 43
and grading, 50
by examination, 44,129,130
earned at other institutions, 34,45
Extended Studies applicable to degree, 141
non-traditional, in B.I.S., 145
off-campus instruction, 142
transfer, 45
Credit earned at nonaccredited colleges, 45

Dance
as concentration within theatre B.A., 93
B.A. degree requirements (major in theatre), 94
B.F.A. degree requirements, 93

Dance courses: DANC, 170

Dean’s List, 52

Debate Team, 25

Decision Science courses: DESC, 170

Decision Sciences
B.S. degree requirements, 136
concentrations, 136
faculty, 136

Deferred Payment Plan, 33

Degree programs listed, 8

Degree requirements
academic, 54
all baccalaureate degrees, 53
Bachelor of Arts, 59
Bachelor of Fine Arts, 60
Bachelor of Music, 60
Bachelor of Science, in College of Arts and Sciences, 60
catalog choice, 54
English composition, 53
literacy, 53
residence, 54
University, 58

Design and Publications, 21

Design/Theatre Technology
as emphasis within theatre B.F.A., 100

Disabled Persons
services, 27,273

Dismissal, 52

Division of Continuing Education, 14,139

Domicile, 261

Drama courses: THR, 223

Dropping a course, 48

Drugs, 267

Early Childhood and Upper Elementary Education
courses: EDUC, 172

Early Education
B.S.Ed. degree requirements, 119

B.A. degree requirements, 78
B.S. degree requirements, 78
faculty, 78

Education accreditation, 268
B.S.Ed. degree requirements
early education, 119
middle education, 119
courses:
EDUC, 172
HEAL, 193
MUSI, 202
PHED, 210

elementary/secondary
courses: EDCI, 176
faculty, 117
reading
courses: EDRD, 177

special education courses: EDSE, 177

Educational Centers, 17

Educational Child/Youth Study Center, 18

Electrical and Computer Engineering
B.S. degree requirements (major in Computer and Electronics Engineering), 79
courses:
ENGR, 177
PHYS, 211
faculty, 79

Electron microscope, 16
Electronics
concentration within physics B.S., 105
Elementary/Secondary Education
courses: EDCI, 176
Emergency Loan Program, 36
Engineering
computer, 79
electrical, 79
electronics, 79
other, 79
Engineering courses: ENGR, 177
English
B.A. degree requirements
    English–philosophy double major, 103
    writing program, 81
courses: ENGL, 180
    faculty, 81
    in a double major, 81
    with philosophy, 81
English Composition, 53
English Language Institute, 30
Enrollment
    Extended Studies, 49, 140
    Guest Matriculant, 49, 141
    in graduate courses by undergraduates, 49
    senior citizens, 49, 142
Entrepreneurship and Small Business management
concentration within management B.S., 138
Environmental management
certificate program, 150
Equal Employment Opportunity, 20
Equal Opportunity, 268
European Studies
B.A. degree requirements (major in Area Studies), 64
courses: EUST, 184
    faculty, 64
Evening program, 142
Examinations
    advanced placement, 44
    comprehensive, 55
    credit by examination, 44, 129, 130
    registered nurses, 129
    final, 50
    health, for nursing students, 129
Extended Studies Enrollment, 49, 140
    and admission, 41
    procedures, 141
    requirements, 141
Facilities
    computer, 16
    federal, 18
    library, 15
    reserving University, 24
    Faculty Writing Project, 18
Failure to Meet Financial Obligations, 33
Federal Theatre Project (FTP) Collection, 15
Final examinations policies, 50
Finance/Real Estate and Urban Development
courses:
    FNAN, 184
    REUD, 215
Finance/Real Estate and Urban Development
    faculty, 137
Financial Aid
    emergency loans, 36
    federal programs, 35
    office, 35
    Veterans Benefits, 36
    Virginia State Programs, 35
    war orphans, 37
Financial Assistance, 35
Financial institutions
    concentration within finance B.S., 137
FinancialSuspension, 33
Firearms, 267
Foreign Language courses: FRLN, 185
Foreign language placement, 44
Foreign Languages and Literatures
B.A. degree requirements
    French, 83
    German, 84
    Spanish, 84
courses:
    ARAB, 159
    CHIN, 165
    CLAS, 165
    FREN, 185
    FRLN, 185
    GERM, 190
    GREE, 193
    ITAL, 198
    JAPA, 198
    KORE, 198
    LATN, 198
    PORT, 213
    RUSS, 217
    SPAN, 221
    VIET, 226
    faculty, 83
    general aims and guidelines, 83
Forensics Team, 25
Foundations and Associations, 37
French
    B.A. degree requirements, 83
    courses: FREN, 185
Freshmen
    admission requirements, 40
General Accounting
    concentration within accounting B.S., 136
General decision sciences
    concentration within decision sciences B.S., 136
General education requirements
Secondary Teacher Certification, 122
General finance
concentration within finance B.S., 137
General management
concentration within management B.S., 138
Geographic and Cartographic Sciences
courses: GECA, 187
Geography courses: GEOG, 187
Geology
B.S. degree requirements, 85
courses: GEOL, 188
faculty, 85
George Mason Institute, 17
George Mason University Foundation, Inc., 37
George Mason University Press, 19
German
B.A. degree requirements, 84
courses: GERM, 190
Gerontology
certificate programs, 148
courses:
EDUC, 172
NURS, 205
PHED, 210
PRLS, 207
PSYC, 213
SOCI, 219
Good academic standing, 52
Government Logistics
concentration within marketing, 138
Government and Politics
B.A. degree requirements, 109
courses: GOVT, 191
Grade point average, 51
Grade reports, 51
Grading policies, 50
Graduate
academic policies and procedures, 41
Graduate course enrollment by undergraduates, 49,82
Graduate School, 14
Graduation, 54
Graduation Appeals Committee, 55
Graduation with Distinction, 55
Graduation with Distinction and with Recognition, 55,82
Greek courses: GREE, 193
Group Counseling, 28
Guest Matriculant enrollment, 49,141
Harris Theatre, 16
Health and Physical Education
B.S. degree requirements
parks, recreation and leisure studies, 127
B.S.Ed. degree requirements
health education, 126
physical education, 123
courses:
HEAL, 193
PHED, 210
PRLS, 207
faculty, 123
Health education
B.S.Ed. degree requirements, 126
Health Education
courses: HEAL, 193
Health Insurance and Dental Plan, 27
Health Service, Student, 27
History
B.A. degree requirements, 86
courses:
HIST, 194
LAC, 216
faculty, 86
of University, 12
Holbert L. Harris Theatre, 16
Honor System and Code, 31,258
Housing, 27

Identity Card, 48
In–Service education, 143
In–State Tuition, 34
Individual Counseling, 28
Industrial Arts
specialty within vocational education B.S.Ed., 121
Information resource management (IRM)
concentration within decision sciences B.S., 136
Information Systems courses: INFS, 197
Interdisciplinary courses, 151
International Programs and Services, 30
International Student Exchange Program (ISEP), 45
International students
admission, 41
International Studies
B.A. degree requirements, 110
courses: GOVT, 191
Investments
concentration within finance B.S., 137
Italian courses: ITAL, 198

Japanese Courses: JAPA, 198
Journalism
courses:
COMM, 165
Junior standing
acceptance into
in nursing, 129

Knowledge of University Policies, 42
Korean courses: KORE, 198

http://catalog.gmu.edu
Laboratory Science

courses:
- ASTR, 161
- BIOL, 161
- GEOL, 188
- PHYS, 211

Latin American Studies

B.A. degree requirements (major in Area Studies), 66
- courses: LAS, 66, 198
- faculty, 65

Latin courses: LATN, 198

Law

courses:
- BULE, 164
- GOVT, 191
- School of, 14

Law Enforcement

B.S. degree requirements, 110
- courses: GOVT, 191

Learning Skills, 28

Leisure studies

option within parks, recreation and leisure studies
- B.S.Ed., 127

Libraries, 15

- career reference, 29

Literacy, 53

Literature

courses:
- CLAS, 165
- ENGL, 180
- FREN, 185
- GERM, 190
- KORE, 198
- RUSS, 217
- SPAN, 221
- VIET, 226

Literature program in English, 81

Loans and grants, 35

Loans, emergency, 36

Logic courses: PHIL, 208

Logistics

- concentration in marketing, 138

Major

- change of, 53
- declaration of, 53
- selection time, 53
- undergraduate, 53

Management

B.S. degree requirements, 138
- concentrations, 138
- faculty, 138

Management courses: MGMT, 199

Management science
- concentration within decision sciences B.S., 136

Marketing

B.S. degree requirements, 138
- concentrations, 138

- courses:
  - LOGS, 199
  - MKTG, 199
  - faculty, 138

Marketing management
- concentration within marketing B.S., 138

Mathematical Sciences

- admission, departmental, 88
- B.A. degree requirements (major in mathematics), 88
- B.S. degree requirements (major in mathematics), 88
- faculty, 88

Mathematics

- B.A. degree requirements, 88
- B.S. degree requirements, 88

- courses:
  - for non-majors, 88
  - MATH, 200
  - reserved for majors, 88

Medical Technology

B.S. degree requirements, 72
- courses: MTCH, 201

Metro Campus, 19

Middle Education

B.S.Ed. degree requirements, 119
- chemistry requirement, 74
- teacher education program, 118

Minority Student Services, 118

Mission of University, 11

Motor Vehicles Policy, 21

Music

- applied music faculty, 91
- audition required for major, 94
- B.A. degree requirements, 94
- B.M. concentrations, 95
- B.M. degree requirements, 95
- courses: MUSI, 202

Music Education

- B.M. concentration, 97

Music History and Literature

- B.M. concentration, 96

National Teacher Examinations, 45

Non–traditional

- degree program (B.I.S.), 144
- modes of learning, 145

Northern Virginia

and University, 12

Consortium for Continuing Higher Education, 20, 146

Northern Virginia Community College (NVCC),
121, 143

- law enforcement courses, 110

Northern Virginia Writing Project, 18

http://catalog.gmu.edu
<table>
<thead>
<tr>
<th>Notices, 268</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing</td>
</tr>
<tr>
<td>accreditation, 268</td>
</tr>
<tr>
<td>additional grade standards, 130</td>
</tr>
<tr>
<td>B.S.N. degree requirements, 128</td>
</tr>
<tr>
<td>chemistry requirement, 74</td>
</tr>
<tr>
<td>courses: NURS, 205</td>
</tr>
<tr>
<td>credit by examination, 129</td>
</tr>
<tr>
<td>faculty, 128</td>
</tr>
<tr>
<td>health examinations and immunizations, 129</td>
</tr>
<tr>
<td>junior standing in nursing, 129</td>
</tr>
<tr>
<td>noncredit courses, 144</td>
</tr>
<tr>
<td>personal liability insurance, 129</td>
</tr>
<tr>
<td>special quality standards, 129</td>
</tr>
</tbody>
</table>

**Off Campus**
- credit instruction, 142
- Ollie Atkins Photograph Collection, 15
- Operations management
  - concentration within Decision Sciences B.S., 136
- Operations Research courses: OR, 206

**PAGE, 61,90**
- biology majors, 71
- courses: PAGE, 207
- equivalencies to traditional programs, 90
- faculty, 90
- prerequisites, 90
- transferring to other universities, 90
- unique policies and procedures, 90
- Park resources
  - option within parks, recreation and leisure studies B.S., 127
- Park, Recreation and Leisure Studies courses: PRLS, 207
- Parks, Recreation and Leisure Studies
  - B.S. degree requirements, 127
  - options, 127
- Patriot Club, 37
- Peer counseling
  - training, 28
- Penalties, 34
- Performance
  - B.M. concentration, 95

**Performing Arts**
- activities, 25
- applied music faculty, 91
- B.A. degree requirements, 94
  - courses:
    - DANC, 170
    - MUSI, 202
    - THR, 223
  - dance
    - auditions required for B.F.A., 93
    - B.F.A. degree requirements, 93
  - faculty, 91
  - music
    - audition required for major, 94
    - B.M. concentrations, 95
    - B.M. degree requirements, 95
  - theatre
    - B.A. degree requirements, 100
    - B.F.A. degree requirements, 100
    - B.F.A. emphases, 100
- Personnel/industrial relations
  - concentration within management B.S., 138
- Pets, 267

**Philosophy**
- B.A. degree requirements
  - philosophy–English double major, 103
  - religion track in philosophy major, 103
  - traditional philosophy major, 102
- courses: PHIL, 208
  - in a double major
    - with English, 81

**Philosophy and Religion**
- B.A. degree requirements (major in philosophy), 102
- courses:
  - PHIL, 208
  - RELI, 216
  - faculty, 102

**Physical Education**
- B.S.Ed. degree requirements
  - with selected specialization, 124
  - with teacher certification, 124
- courses: PHED, 210

**Physical Education Courses, 62**

**Physics**
- B.A. degree requirements, 105
- B.S. degree requirements, 105
- courses:
  - ASTR, 161
  - for majors, 105
  - for non-majors, 106
  - PHYS, 211
  - faculty, 105
- Plan for Alternative General Education (PAGE), 61,71,90
- Plan for Alternative General Education courses: PAGE, 207

**Policies and procedures**
- academic advising, 46,53
- academic load, 46
- attendance, 50
- final examinations, 50
- grade point average, 51
- grading, 50
- graduate, academic, 41
- PAGE, 90
- student responsibility for knowledge of, 42
- undergraduate, 40
unique to PAGE, 90
Politics and Government
B.A. degree requirements, 109
Portuguese courses: PORT, 213
Predental students, 71,74
Premedical students, 71,74
Preveterinary students, 71,74
Privacy of student information, 47
Privacy of student records, 268
Private Music Instruction
courses: MUSI, 202
Probation, 52
Professional awareness programs, 143
Professional Center, 19
Professional Studies, College of, 13,115
academic policies, 116
administration, 116
degree requirements, 116
Proficiency examinations, 44
Psychological Clinic, 18
Psychology
B.A. degree requirements, 107
B.S. degree requirements, 107
B.S. specialty areas, 107
certificate program for psychology technician, 148
courses: PSYC, 213
faculty, 107
Public Administration
B.S. degree requirements, 111
courses:
    GOVT, 191
    PUAD, 215
Public Affairs
B.A. degree requirements
geography, 109
government and politics, 109
international studies, 110
B.S. degree requirements
law enforcement, 110
public administration, 111
cartography
certificate program, 149
courses:
    GECA, 187
    GEOG, 187
    GOVT, 191
    PUAD, 215
environmental management
certificate programs, 150
faculty, 109
Public Relations Services, 21
Re-Entry Student Program, 28
Reading Education
courses: EDRD, 177
Real estate and urban development
concentration within finance B.S., 137
Real Estate and Urban Development courses: REUD, 215
Recreation services
option within parks, recreation and leisure studies
B.S., 127
Rector and Board of Visitors of the University, 228
Refunds, 34
Regional Cultures courses: LAC, 216
Registration, 46
cancellation of, 48
early, 47
procedure, 47
Regulations
general, 267
student, 31
Religion
B.A. degree requirements (religion track in
philosophy major), 103
Religion courses: RELI, 216
Repeating a course, 49
Reserve Officers' Training Corps (ROTC), 45
Reserving University Facilities, 24
Residence, 54
ROTC Courses, 46
Russian courses: RUSS, 217
Russian Studies
B.A. degree requirements (major in Area Studies), 67
faculty, 67
Salesmen, 267
Sample schedules, 62
Satisfactory performance, 52
Schedule of Classes, 46
Scholarships
Army ROTC, 36
departmental, education, 37
departmental, music, 37
state nursing, 36
Virginia, 35
School of Business Administration, 14,131
administration, 132
School of Law, 14
Second Bachelor's Degree, 55
Secondary Education
courses: EDUC, 172
teacher education program, 117
Secondary Teacher Certification,
62,72,78,82,83,87,93,105,108,109,114,116,122
general education requirements, 125
Senior citizens enrollment, 49,142
Services
student, 27
to disabled persons, 27
Skateboards, 267
Smoking, 267
Social Work
accreditation, 268

http://catalog.gmu.edu
admission requirements, 112
B.S. degree requirements, 112
courses: SOCW, 218
faculty, 112
Sociological anthropology
congestion within anthropology B.A., 113
Sociology and Anthropology
B.A. degree requirements
anthropology, 113
sociology, 113
courses:
ANTH, 158
SOCI, 219
faculty, 113
Solicitors, 267
Spanish
B.A. degree requirements, 84
courses: SPAN, 221
Special Collections, 15
Special Education
courses: EDSE, 177
Speech communication
B.A. degree requirements, 75
courses:
COMM, 165
Statistics
MATH, 200
Student Activities, 24
and academic standing, 52
Student consumer information, 269
Student Health Service, 27
Student information, 47
Student Organizations, 26
Student Regulations, 31
Student Services, 27
Student teaching
admission, 119,123,126
application deadline, 119
courses: EDUC, 172
Student Unions, 24
Study abroad, 45
Summer Session, 7,14
Summer Session Enrollment, 41
Suspension, 52
delay pending grade appeal, 51
Systems Engineering
courses: OR, 206
Teacher certification, 116
dual level, 120
eyearly education level, 120
earth science, 85
health education, 126
middle education level, 120
physical education, 124
secondary school, see Secondary Teacher Certification
Teacher education programs, 117
admission, 118,123,126
secondary school, 117
Technician, psychology
certificate program, 148
Test
Mathematics Achievement, 40
of English as a Foreign Language (TOEFL), 41,43
of Standard Written English (TSWE), 42,43,53
requirements for admission, 40,41,42
Scholastic Aptitude (SAT), 40,42
Testing Center, 43
Theatre
B.A. degree requirements, 100
B.F.A. degree requirements, 100
B.F.A. emphases, 100
courses:
DANC, 170
THR, 223
Holbert R. Harris, 16
Theatre Technology/Design
emphasis within theatre B.F.A., 100
TOEFL, 41,43
Trade and Industrial Education
courses: EDUC, 172
specialty within vocational education B.S.Ed., 121
Transfer credit, 45
Transfer students
admission requirements, 40
and PAGE, 90
chemistry majors, 75
residence requirements, 54
biology majors, 71
TSWE, 42,43,53
Tuition and Fees, 32
Undergraduate
evening program, 142
policies and procedures, 39
Undergraduate Major, 53
University
and Northern Virginia, 12
courses:
committee, 151
recently offered, 151
UNIV, 225
Curriculum Matters committee, 151
history of, 12
mission of, 11
profile of, 9
Urban development, 137,150
Veterans Affairs, 29,36
Veterans Educational Benefits, 36
Virginia Certification to Teach Music, 96,99
Virginia, Northern
and University, 12
Visiting the campus, 272
Vocational Education
courses: EDUC, 172
program, 121
teacher education program, 117

Warning, 52
William Scott Papers, 15
Withdrawal, 48,49
Wolf Trap Foundation for the Performing Arts
Archive, 15
Writing program in English, 81
Writing Research Center, 18
Directory

The general information number for George Mason University is (703) 323-2000. The University exchange is "323" except where indicated.

Academic Affairs, Vice President ........................................ 2654
  David J. King, 203 Finley Building
Academic Advising Center .................................................. 2413
  Sara C. Looney, 348 Student Union I
Academic Computing Services ............................................. 2941
  Edward Heath, 29 Thompson Hall
Accounting/Business Legal Studies Department 2752
  A. J. Stagliano, Chair, 4634 Robinson Hall
Administration, Senior Vice President ................................ 3545
  J. Wade Gilley, 205 Finley Building
Administrative Information Systems .................................... 2941
  Jerry Jenkins, 29 Thompson Hall
Admissions ............................................................................. 2107
  Patricia M. Riordan, 115 Finley Building
  100 Finley Building
  Law ................................................................................... 841-2667
  Metro Campus
Affirmative Action/EEO ....................................................... 2519
  Frank L. Matthews, 205 Finley Building
Alumni Relations ..................................................................... 2136
  Joseph S. D'Agostino, 4502 Roberts Road
Area Studies ........................................................................... 2872
  Johannes D. Bergmann, Chair, 4535 Robinson Hall
Art Department ......................................................................... 2076
  Carol Mattusch, Chair, 1110 Robinson Hall
Athletic Director ..................................................................... 3462
  John E. Kvacz, 103-Field House
Biological Sciences Department .......................................... 2181
  Larry L. Rockwood, Chair, 3005 Academic III
Bookstore—Main Campus ...................................................... 2696
  Maureen Hogford, Student Union II
Business and Finance, Vice President ................................ 2114
  Maurice W. Scherrens, 201 Finley Building
Campus Ministry .................................................................... 2160
  229 Student Union I
  2158/2159
Campus Police ....................................................................... 2158/2159
  Arthur Jb. Sanders, Trailer 103, 107
  Metro Campus .................................................................... 841-2669
Career Services ................................................................. 2476/2535
  Patricia Carretta, 348 Student Union I
Cashier .................................................................................... 2119
  Florence A. Meyers, Module C
Chemistry Department ........................................................... 2191/2329
  Louis Meites, Chair, 240 Krug Hall
Communication ..................................................................... 3575
  Anita M. Taylor, Chair, 135 Thompson Hall
Composition Tutorial Center .............................................. 3471
  Marie Wilson, 4506 Robinson Hall
Computer and Information Systems, University .................. 3050
  Frederick H. Siff, 206 Finley Building
Continuing Education .......................................................... 2436
  132 East Building
Cooperative Education .......................................................... 2536
  Vickie Robinson, 348 Student Union I
Counseling Center ............................................................... 2165
  Ralph K. Roberts, 364 Student Union I
Dean, College of Arts and Sciences .................. 2652
  William P. Snavely, 206 Thompson Hall
Dean, College of Professional Studies .................. 2400
  Larry S. Bowen, 2237 Robinson Hall
Dean, Division of Continuing Education .............. 2341
  Robert T. Hawkes, Jr., 204 East Building
Dean, Graduate School ..................................................... 2123
  Averett S. Tombs, 102 Finley Building
Dean School of Business Administration ............. 2760
  Lloyd M. DeBoer, 4610 Robinson Hall
Director, Summer Session ............................................... 2300
  Donna Bafundo, 132 East Building
Decision Sciences Department ........................................... 2758
  Barry Render, Chair, 4661 Robinson Hall
Disabled Student Services ............................................... 2523
  Paul F. Bousel, 345 Student Union I
Economics Department ....................................................... 2344
  Karen Vaughn, Chair, 3655 Robinson Hall
Education Department ......................................................... 2421
  Jack Levy, Chair, 3305 Robinson Hall
Electrical and Computer Engineering .................. 2302
  W. Murray Black, Chair, 2067 Academic III
English Department ............................................................ 2221
  Terry Comito, Chair, 4565 Robinson Hall
Finance Department ........................................................... 2756
  Peggy Crawford, Chair, 4639 Robinson Hall
Food Service ........................................................................ 7990
  216 Student Union II
Foreign Languages and Literatures Department ...... 2231
  Martha P. Francescato, Chair, 231 Thompson Hall
Geology Department ............................................................ 2260
  Douglas Mose, Chair, 2080 Academic III
Governmental Affairs ......................................................... 2709
  Kenneth A. Fulmer, 211 Finley Building
  Ellamae S. Doyle
Health and Physical Education Department ............... 2322/2829
  John H. Cooper, Chair, 204 Physical Ed. Building I
History Department ............................................................. 2242
  Marion Deshmukh, Chair, 2535 Fenwick
Honors Committee ............................................................. 2195
  306 Student Union I
Housing Services ................................................................. 2354
  308 Student Union I
Information ................................................................. 2374
  Student Union I
  Joan Atkins, Student Union I
  Student Union II ............................................................. 3896
  Robert Shaw, Student Union II
  Switchboard, Finley Building .......................................... 2000
  Barbara H. Blundell, Finley Building
Information Management .................................................. 2132
  (See Computer Information Systems)
Directory, continued

International Programs and Services ................. 2001
  France Pruitt, 304 Student Union I
Library—Fenwick ........................................ 2616
  Charlene Hurt, Director, 2226 Fenwick
Library—Law ............................................. 841-2652
  Stephen Burnett, Metro Campus
Management Department ................................. 2750
  Jon English, Chair, 4635 Robinson Hall
Marketing Department ................................... 2754
  Richard L. Entrikin, Chair, 4647 Robinson Hall
Mathematical Sciences Department .................... 2577
  Stephen N. Saperstone, Acting Chair, Module A
Metro Campus Professional Center ..................... 841-2668
  Sandra Sweitzer, Metro Campus
Minority Student Services .............................. 2383
  Judy Pelham, 352 Student Union I
Nursing Department ........................................ 2403
  Rita M. Carty, Chair, 3350 Robinson Hall
PAGE Office ............................................ 2044
  Christopher Thaiss, Director, 222 Thompson Hall
Performing Arts Department ............................ 3900
  Joseph M. Kanyan, Chair, 117 Humanities Module
Personnel Office .......................................... 2111/2112
  Douglas First, Module D and E
Physics Department ........................................ 2303
  Robert Ehrlich, Chair, 142 West Building
Placement ..................................................... 2535
  Cynthia Sedgwick, 348 Student Union I
President ..................................................... 2120
  George W. Johnson, 208 Finley Building
Psychology Department ................................... 2172
  Jane M. Flinn, Chair, 2003 Academic III
Public Affairs Department ............................... 2272/2273
  Harold F. Gortner, Chair, 2203 Robinson Hall
Public Relations Services ............................... 2138
  Helen J. Ackerman, 214 Finley Building
Registrar ................................................... 2151
  Michael J. McDermott, Jr., Central Module (Mod. C)
ROTC .......................................................... 3768
  Maj. Peter Onosjko, Field House Module
Senior Vice President .................................... 3545
  J. Wade Gilley, 205 Finley Building
Social Work Department .................................. 2910
  Jirina S. Polivka, Chair, 3537 Fenwick
Sociology and Anthropology Department ............... 2900
  Joseph Scimecca, Chair, 3603 Robinson Hall
Student Affairs, Vice President ......................... 2134
  Donald J. Mash, 302 Student Union I
Student Aid .................................................. 2176
  Rita Bodie, 354 Student Union I
Student Health Services ................................... 2584
  Carol J. Sudol, 355 Student Union I
Student Government ....................................... 2196
  252 Student Union I
Student Publications ..................................... 2168/2481
  Student Union I
Testing Center .............................................. 2805
  Elizabeth Murnane, 117 Finley Building
Tutorial Services ......................................... 2367
  367-Student Union I
University Development .................................... 2443
  Elizabeth Carlson Dahlin, 4520 Roberts Road
Veterans Affairs ........................................... 2381
  Carol A. Elstad, 354 Student Union I