George Mason University

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Academic Calendar 1987-1988
Academic Calendar, 1987-1988

Fall Semester 1987

(See below for National Testing Calendar)

Thursday, January 1.
Last day for filing international student (immigrant status) undergraduate admissions applications for fall 1987.

Sunday, February 1.
Last day for filing freshman undergraduate admissions applications for fall 1987.

Sunday, March 1.
Last day for filing D.N.Sc. admissions applications for fall 1987.

Sunday, March 15.
Last day for filing transfer undergraduate admissions applications for fall 1987.

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

Wednesday, April 1.
Last day for filing Ph.D. Biology, Ph.D. Economics and D.P.A. Public Administration admissions applications for fall 1987.

Friday, April 3.
Music major auditions (by appointment).

Tuesday, April 7.
University Day.

Monday, April 13, through Friday, April 17.
Foreign language placement testing for undergraduates for fall 1987.

Wednesday, April 15.
Spring master’s theses and doctoral dissertations due in Office of the Graduate Dean.

Monday, April 27, and Tuesday, April 28.
Foreign language placement testing for undergraduates.

Friday, May 1.
Last day for filing master’s and Ph.D. Information Technology admissions applications for fall 1987.

Friday, May 1.
Last day for filing Graduate School fellowship applications for master’s students.

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

Monday, May 18, through Friday, May 22.
Foreign language placement testing for undergraduates.

Monday, June 8.
Music major auditions (by appointment).

Wednesday, June 10, through Friday, June 12.
Foreign language placement testing for undergraduates.

Monday, June 15, through Friday, June 19.
Orientation programs and placement testing for undergraduates; early registration for certain newly admitted students (by invitation only); English composition proficiency exam (Thursday only).

Wednesday, June 17.
Evening orientation for adult/working students (by appointment).

Wednesday, July 1.
Last day to apply for acceptance to the School of Business Administration for fall 1987.

Wednesday, July 1.
Opening date for submission of undergraduate application for 1988 spring and 1988 fall semesters.

Friday, July 3.
Independence Day observed; University closed.

Monday, July 6, through Friday, July 10.
Orientation program and early registration for certain newly admitted students (by invitation only).

Monday, July 13.
Start counseling for fall Extended Studies enrollees. Call for appointment on or after July 6.

Monday, July 13.
Dance major auditions (by appointment).

Monday, July 13, through Friday, July 17.
Orientation program and early registration for certain newly admitted students (by invitation only).

Tuesday, July 14, through Thursday, July 16.
Foreign language placement testing for undergraduates.

Wednesday, July 15.
Music major auditions (by appointment).

Thursday, July 16.
Last day for taking Nursing proficiency exams for academic year 1986-87.

Friday, July 17.
Last day for mail-in/hand-in registration for fall. Registration in person continues by priority groups.
Monday, July 20, through Friday, July 24.
Orientation program and early registration for certain newly admitted students (by invitation only).

Friday, July 24.
Summer master’s theses and doctoral dissertations due in Office of the Graduate Dean.

Thursday, August 6.
Tuition and fees due for early registered students (payment with late fee will be received until August 13).

Monday, August 17.
Fall registrations canceled for early registered students who have not made arrangements for payment with Cashier (canceled students who are canceled or cancel and do not reregister for fall classes are assessed a $20 administrative fee).

Wednesday, August 19, through Thursday, August 27.
Registration and adjustment (for times and priorities, see Schedule of Classes).

Friday, August 21.
BIOL 124-125 examination for nurses.

Monday, August 24.
Music competency placement tests (by appointment).

Monday, August 24, and Tuesday, August 25.
Choral auditions (by appointment).

Monday, August 24, and Tuesday, August 25.
Welcoming days, orientation programs for new faculty and for certain newly admitted students (by invitation only); English composition proficiency examination (Monday only).

Monday, August 24, through Friday, August 28.
Foreign language placement testing.

Monday, August 24, and Wednesday, August 26.
Music major auditions and choral auditions (by appointment).

Tuesday, August 25.
Evening orientation for adult/working students (by appointment).

Thursday, August 27.
Choral auditions (by appointment).

Monday, August 31.
Symphony Orchestra and Concert Band auditions (by appointment).

Monday, August 31.
First day of classes.

Monday, August 31, through Friday, September 4.
Foreign language placement testing.

Wednesday, September 2.
Jazz Ensemble auditions (by appointment).

Monday, September 7.
Labor Day; University closed.

Tuesday, September 8, through Monday, September 28.
Pick up winter bachelor’s degree and certificate applications at the Office of the Registrar (application must be completed and returned with fee no later than September 28).

Tuesday, September 8.
Last day for a full tuition refund (less $20 fee).

Tuesday, September 8.
Second deferred tuition payment due.

Tuesday, September 15.
Last day for schedule adjustment for fall classes.

Tuesday, September 15.
Last day for a partial tuition refund—second week.

Tuesday, September 22.
Last day for partial tuition refund—third and final week.

Friday, September 25.
Patriots Day.

Monday, September 28.
Last day for filing winter degree and certificate applications (master’s and doctoral) in Office of the Graduate Dean.

Thursday, October 1.
Last day to apply for acceptance to the School of Business Administration for spring 1988.

Thursday, October 1.
Last day for filing Ph.D. Economics admissions applications for spring 1988.

Tuesday, October 6.
Third deferred tuition payment due.

Sunday, October 11, through Tuesday, October 13.
Recess (Note: Monday classes and laboratories meet on Wednesday this week only).

Wednesday, October 14.
Monday classes and laboratories meet on Wednesday at Monday scheduled times and places. Wednesday scheduled classes and laboratories do not meet this week.

Tuesday, October 27.
Spring Semester Schedule of Classes (registration calendar) distributed.

Friday, October 30, through Friday, December 4.
Mail-in/hand-in registration for designated categories of students. For times and priorities, see Schedule of Classes.

Sunday, November 1.
Application deadline for submission of undergraduate application for admission for international students on nonimmigrant visas for 1988 spring semester.

Sunday, November 1.
Last day for financial aid applications for spring 1988.

Sunday, November 1.
Last day for filing master’s and Ph.D. Biology and Ph.D. Information Technology admissions applications for spring 1988.
Friday, November 6.
Music major auditions (by appointment).

Monday, November 16.
Winter master's theses and doctoral dissertations due in Office of the Graduate Dean.

Monday, November 16.
Deadline for application for junior standing in Nursing for spring semester.

Monday, November 16.
Start counseling for spring Extended Studies enrollees. Call for appointment on or after November 2.

Monday, November 16, through Friday, November 20.
Foreign language placement testing.

Thursday, November 26, through Sunday, November 29.
Thanksgiving recess; University closed.

Monday, November 30, through Friday, December 4.
Foreign language placement testing for undergraduates.

Tuesday, December 1.
Application deadline for submission of undergraduate applications for admission for the 1988 spring semester.

Thursday, December 3.
Orientation and registration for new undergraduates (by invitation).

Friday, December 4.
Last day for mail-in/hand-in registration for spring 1988. Registration in person continues by priority groups.

Saturday, December 12.
Last day of classes.

Monday, December 14.
Tuition and fees due for early registered students. Payment with late fee will be accepted by mail if received by January 7 (but University offices will be closed December 24-January 3).

Monday, December 14, through Monday, December 21.
Examinations (for times, see Schedule of Classes).

Thursday, December 17.
Early registration ends.

Thursday, January 7.
Last day for payment with late fee for early registered students for spring.

Spring Semester 1988

Friday, January 1.
Application deadline for submission of undergraduate application for admission from freshmen international students for the 1988 fall semester.

Friday, January 8.
BIOL 124-125 examinations for nurses.

Friday, January 9, and Monday, January 12.
Welcoming days; orientation programs and early registration for new undergraduates; English composition proficiency examination for undergraduates.

Monday, January 11.
Spring registrations canceled for early registered students who have not made arrangements for payment with Cashier (canceled students who do not reregister for spring are assessed a $20 administrative fee).

Wednesday, January 13, through Thursday, January 21.
Registration and schedule adjustment (for times and priorities, see Schedule of Classes).

Thursday, January 14, and Friday, January 15.
Foreign language placement testing for undergraduates.

Monday, January 18.
Music competency placement tests (by appointment).

Monday, January 18.
Dance major auditions (by appointment).

Monday, January 18, through Friday, January 22.
Foreign language placement testing for undergraduates.

Monday, January 18.
Music major auditions (by appointment).

Monday, January 18, and Tuesday, January 19.
Choral auditions (by appointment).

Thursday, January 21.
Choral auditions (by appointment).

Monday, January 25.
Symphony Orchestra and Concert Band auditions (by appointment).

Monday, January 25.
First day of classes.
Wednesday, January 27.
Jazz Ensemble auditions (by appointment).

Monday, February 1.
Application deadline for submission of freshmen applications for admission for the 1988 fall semester.

Monday, February 1.
Last recommended date for new students filing the Financial Aid Form (FAF) for fall 1988.

Monday, February 1.
Last day for a full tuition refund (less $20 fee).

Monday, February 1.
Last day to apply for acceptance to the School of Business Administration for fall 1988.

Monday, February 1.
Last day for filing D.A.Ed. admissions applications for fall 1988.

Friday, February 5, through Sunday, February 28.
Pick up spring bachelor’s degree and certificate applications at Office of the Registrar. (Application must be completed and returned with fee no later than February 28.)

Monday, February 8.
Last day for schedule adjustment for spring classes.

Monday, February 8.
Last day for partial tuition refund—second week.

Wednesday, February 10.
Second deferred tuition payment due.

Monday, February 15.
Application deadline for submission of applications for admission for the 1988 fall semester from transfer international undergraduate students on nonimmigrant visas for the 1988 fall semester.

Monday, February 15.
Last day for a partial tuition refund—third and final week.

Monday, February 15.
Last day for filing Psy.D. admissions applications for fall 1988.

Sunday, February 28.
Last day for filing spring degree and certificate applications (master's and doctoral) in Office of the Graduate Dean.

Tuesday, March 1.
Last day for filing master's admissions applications for summer session.

Tuesday, March 1.
Last day for filing the Financial Aid Form (FAF) for transfer students for fall 1988.

Tuesday, March 1.
Last day for filing D.N.Sc. admissions applications for fall 1988.

Monday, March 7, through Monday, 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).

Wednesday, March 9.
Third deferred tuition payment due.

Sunday, March 13, through Sunday, March 20.
Mid-semester recess.

Monday, March 14.
Registration begins for summer session.

Tuesday, March 15.
Application deadline for submission of application for admission from undergraduate transfer students for the 1988 fall semester.

Tuesday, March 15.
Deadline for application for junior standing in Nursing for fall 1988.

Friday, March 25.
Fall Semester Schedule of Classes distributed.

Monday, March 28.
Last day for filing summer degree and certificate applications (master's and doctoral) in Office of the Graduate Dean.

Tuesday, March 29, through Friday, July 15.
Mail-in/hand-in registration for designated categories of students. For times and priorities, see Schedule of Classes.

Friday, April 1.
Decision notification date for freshmen applicants who completed their application by February 1 for the 1988 fall semester.

Friday, April 1.
Deadline for financial aid applications for summer 1988.

Friday, April 1.
Last recommended date for filing the Financial Aid Form (FAF) for returning upperclassmen, fall 1988.

Friday, April 1.
Last day for filing D.P.A. Public Administration, Ph.D. Biology, and Ph.D. Economics admissions applications for fall 1988.

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

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

Thursday, April 7.
University Day.

Monday, April 11, through Friday, April 15.
Foreign language placement testing for undergraduates.

Friday, April 15.
Spring master's theses and doctoral dissertations due in Office of the Graduate Dean.

Friday, April 22.
Mason Day.
Sunday, May 1.
Candidate reply date for freshmen who have been offered admission for the 1988 fall semester.

Sunday, May 1.
Last day for upperclassmen to submit completed financial aid requirements for priority consideration of aid for fall 1988.

Sunday, May 1.
Last day for filing master’s and Ph.D. Information Technology admissions applications for fall 1988.

Sunday, May 1.
Last day for filing Graduate School fellowship applications for master’s students.

Monday, May 2, and Tuesday, May 3.
Foreign language placement testing for undergraduates.

Friday, May 6.
Music major auditions (by appointment).

Saturday, May 7.
Last day of classes.

Monday, May 9, through Monday, May 16.
Examinations (for times and snow day make-up, see Schedule of Classes).

Saturday, May 21.
Spring commencement.

Monday, May 23, through Friday, May 27.
Foreign language placement testing for undergraduates.

Monday, May 30.
EXCEL application deadline.

Monday, May 30.
Memorial Day observed; University closed.

Tuesday, May 31.
Summer session begins.

Wednesday, June 15.
Decision notification date for individuals placed on a waiting list for the 1988 fall semester.

Wednesday, June 15.
Last day to apply for Communication program for fall 1988.

Monday, June 20, through Friday, June 24.
Foreign language placement testing for undergraduates.

Monday, June 20, through Friday, June 24.
Orientation and registration for new undergraduates (by invitation).

Friday, July 1.
Opening date for submission of undergraduate applications for admission for the 1989 spring and 1989 fall semesters.

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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 will be available early in March.
**Testing Calendar**

**On-Campus Testing Calendar for 1987-1988**

<table>
<thead>
<tr>
<th>Test</th>
<th>Dates</th>
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<tbody>
<tr>
<td>CLEP</td>
<td>Monthly except February and December</td>
</tr>
<tr>
<td>GMAT</td>
<td>10/18; 1/24; 3/21</td>
</tr>
<tr>
<td>GRE</td>
<td>10/11; 12/13; 2/7; 4/11</td>
</tr>
<tr>
<td>LSAT</td>
<td>9/27; 12/6; 2/21</td>
</tr>
<tr>
<td>MAT</td>
<td>First Friday of every month.</td>
</tr>
<tr>
<td>MCAT</td>
<td>9/13; 4/25</td>
</tr>
<tr>
<td>National Teacher Examination</td>
<td>7/12; 10/25; 11/8; 3/7; 3/28; 6/27</td>
</tr>
<tr>
<td>TOEFL</td>
<td>7/11; 8/2; 8/5; 9/19; 10/25; 11/15; 12/12; 1/10; 2/13; 3/12; 4/10</td>
</tr>
</tbody>
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**Programs of Study**

**Undergraduate Degrees, Certificates, and Preprofessional Study**

Existing, or planned for 1987-88. (See Reference Section for further information.)

**Undergraduate Degrees**

- Accounting B.S.
- American Studies B.A.
- Anthropology B.A.
- Area Studies B.A.
- Art B.A.
- Biology B.A., B.S.
- Business Administration B.S.
- Chemistry B.A., B.S.
- Classical Studies B.A. (beginning 1988-89)
- Computer Science B.S.
- Dance B.A., B.F.A.
- Decision Sciences B.S.
- Early Education B.S.Ed.
- Economics B.A., B.S.
- Electronics Engineering B.S.
- English B.A.
- Finance B.S.
- French B.A.
- Geography B.A.
- Geology B.S.
- German B.A.
- Government and Politics B.A.
- Health Education B.S.Ed.
- History B.A.
- Individualized Study B.I.S.
- International Studies B.A.
- Law Enforcement B.S.
- Management B.S.
- Marketing B.S.
- Mathematics B.A., B.S.
- Medical Technology B.S.
- Middle Education B.S.Ed.
- Music B.A., B.M.
- Nursing B.S.N.
- Parks, Recreation, and Leisure Studies B.S.
- Philosophy B.A.
- Physical Education B.S.Ed.
- Physics B.A., B.S.
- Psychology B.A., B.S.
- Public Administration B.S.
- Social Work B.S.
- Sociology B.A.
- Spanish B.A.
- Speech Communication B.A.
- Systems Engineering B.S.
- Theatre B.A., B.F.A.
- Vocational Education B.S.Ed.
Certificate Programs
Applied Archaeology
Canadian Studies
Cartography
Earth Science Teaching
Environmental Management
Geochemistry
Geoscience Programming
Gerontology
Psychology Technician
Real Estate and Urban Development

Preprofessional Study
Predental
Predivinity
Prelaw
Premedical
Prepharmacy
Preveterinary
Profile of George Mason University
Profile of George Mason University

George Mason University 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, internationally aware 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 about a 30-minute 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. 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 Education and Human Services, the School of Business Administration, the School of Nursing, the School of Information Technology and Engineering, the Graduate School, and the School of Law. It offers graduate, professional, and undergraduate degree programs of national and international scope 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 1,700 students are available. 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 is complemented by a sports and entertainment arena, the Patriot Center, seating 10,000 persons. In addition, a Humanities Center for the performing arts is under construction.

Major programs are offered in the fine and performing arts, with George Mason's 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 a wide variety of computers and microcomputers, all connected via a telecommunication network.

Students and faculty can access any one of the central facility academic computers (a Control Data CYBER 180/835, a Digital VAX 8500, a Pyramid 90x), the library computer, and departmental minicomputers from campus computer labs, dorm, or home. On campus, the University provides several open-access microcomputer labs, specialized instructional labs (such as for computer graphics and artificial intelligence applications), and several open-access terminal facilities.

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, a growing number of part-time undergraduate and graduate students at George Mason are 25 years of age or older. International students, representing more than 90 different countries, compose 8 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. Advisory services are available for international students, as are
intercultural events intended to add to their understanding of American culture and allow American students to appreciate other cultures. 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 for 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 480,000 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 databases 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 human cultural diversity. Dedicated to these goals, George Mason is moving forward with confidence into the twenty-first century.

Mission

"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 responsive 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 add 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, Hazeltown 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.

Academic Structures and Programs

The University has seven academic units: Arts and Sciences; Education and Human Services; Graduate School; Information Technology and Engineering; Business Administration; School of Law; and School of Nursing. 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 16 departments—Art, Biology, Chemistry, Communication, Economics, English, Foreign Languages and Literatures, Geology, History, Mathematical Sciences, Performing Arts, Philosophy and Religious Studies, Physics, Psychology, Public Affairs, and Sociology and Anthropology.

With more than 400 faculty members, 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 Education and Human Services

The College of Professional Studies was created in 1972 by the division of George Mason College into two colleges. On July 1, 1986, the college name was changed to College of Education and Human Services. 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, Sport, and Leisure Studies; and Social Work—offer seven undergraduate degree programs leading to B.S. and B.S.Ed. degrees and eight graduate degree programs leading to the M.Ed., D.A.Ed, and M.S. degrees.

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.

Graduate faculty membership is based on 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 Graduate Catalog.

Administrative offices are in Academic III.

School of Information Technology and Engineering

The School of Information Technology and Engineering integrates the disciplines of electrical and computer engineering, computer and information sciences, and systems engineering. The School offers three undergraduate programs that prepare students for a bachelor of science degree. Five master’s programs and a cross-disciplinary doctoral program are coordinated by the Graduate School. Graduates of the School of Information Technology and Engineering are trained to design systems for human interaction through enhanced efficiency and effectiveness of knowledge organization and to work with the hardware and software aspects of these systems.

Administrative offices are located in Module D.

School of Law

George Mason University School of Law, located at the University’s Metro Campus in Arlington, Virginia, is convenient to Washington, D.C., and surrounding communities via public transportation and major highways.

The School of Law is one of three Virginia law schools accredited by the American Bar Association and directed by state institutions. It offers a full curriculum, described in a separate catalog, for both full- and part-time students. All programs consist of studies leading to the juris doctor degree.
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 480,000 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 280,000 book volumes, 450,000 microforms, and subscribes to 3,400 periodicals. The Law Library at the Metro Campus includes more than 230,000 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 work stations.

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, and the 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 TDD 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, compact discs, 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 is 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 premier 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, radiographs, costuming, 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, 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.

- The George Mason University Archives.

For further information about Fenwick Library, call (703) 323-2393 or the main reference desk at (703) 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).

University computing facilities are extensive. Academic Computing Services (ACS) operates a
Control Data Corporation Cyber 180/830 mainframe computer, and DEC VAX 8500 and Pyramid 90x minicomputers. A large-scale, state-of-the-art computer system of the VAX 8700 class will be in place soon. ACS also manages several microcomputer laboratories containing IBM and IBM-compatible personal computers. ACS maintains four public terminal clusters, two faculty terminal clusters, and combined graphics and artificial intelligence laboratories. A wealth of both mainframe and microcomputer software is available. Consultant support is also available for students and faculty.

Computer systems at the University are connected by MasonNet, the George Mason local computer network. This state-of-the-art Sytek broadband communications network enables individuals across campus to access computers located in Thompson Hall; it also permits access to off-campus computers and networks by way of a dial-out capability. Faculty and students may also use ACS computers through telephone dialup.

Special-purpose computer facilities exist for faculty research. This includes the Pyramid 90x Unix minicomputer noted above. Access is available to BITNET, USENET, and other national/international computer data networks through the ACS computer systems. The Computer and Information Sciences Department operates one Hewlett-Packard 1000 minicomputer and a DEC PDP 11/44. The Electrical and Computer Engineering Department operates a DEC PDP 11/24 minicomputer and a microcomputer development system, plus special laboratory microcomputers. Other University departments have microcomputers designed for specific purposes.

ACS publishes Presenting Academic Computing Services, a 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.

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

Electron Microscopy Laboratory

This facility provides high-resolution transmission and scanning electron microscopic facilities for the University community. The laboratory supports faculty research in such areas as investigations of fine structure of marine bacteria, fern ultrastructure, and fine structure of epithelial and muscle cells in animals, and also serves several local agencies. An ultrastructure course offered each year provides graduate and undergraduate instruction for use of the facility.

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 prosenium theatre houses dance events, music concerts, recitals, theatre productions, and major conference events.

Robinson Professors

Since 1984, a bequest from the late Clarence Robinson has allowed George Mason University to appoint to the faculty distinguished scholars in the liberal arts and sciences. Six of these scholars are now on campus. Ultimately, there will be twenty. Robinson professors are outstanding scholars who are dedicated to undergraduate teaching, and whose teaching and scholarship concern broad and fundamental intellectual issues. They have chosen to come to George Mason University from senior positions at prestigious universities elsewhere to become closely involved with the education of undergraduate students. Students should consult the class schedule each semester for details about courses currently being offered by Robinson Professors. The following are Robinson Professors:

Shaul Bakhash

Writer and commentator Shaul Bakhash has made a study of the Near and Middle East his life's work. With a B.A. in history and literature from Harvard University in 1959, he returned to his native Iran to work for six years as a reporter, then as editor in chief for Kayhan Newspapers. He returned to Harvard for an M.A., then went to Oxford where he earned a Ph.D. in modern Iranian history. His books include Iran: Monarchy, Bureaucracy and Reform under the Qajars and The Reign of the Ayatollahs.

Paul D'Andrea

Scholar turned playwright Paul D'Andrea began his career at Harvard, earning a B.A. in mathematics and physics. He followed this with a year at Oxford, then returned to Harvard for an M.A., then a Ph.D. in English literature. That intellectual training distinguishes his work as a playwright. His plays include The Trouble with Europe, A Full Length Portrait of America, and Einstein. He has taught at Harvard, the University of Chicago, and the University of Minnesota, where he earned the Morse-Amoco Foundation Award for Outstanding Contributions to Undergraduate Teaching.

Hugh Heclo

Recognized as an expert on the governments and social policies of western European nations and the United States, Hugh Heclo has earned many distinctions in his career. His publications include the award-winning Comparative Public Policy, A Government of Strangers, and Modern Social Politics in Britain and Sweden, for which he was granted the Woodrow Wilson Award in 1975. Heclo is chairman of the Ford Foundation's Research Committee on Social Welfare and the American
Thelma Lavine

A reporter called her a wizard, probably because Thelma Lavine's interests range across the spectrum of philosophy, psychology, history, the social sciences, and literature. She has written and presented a television series, "From Socrates to Sartre," which resulted in a book, From Socrates to Sartre: The Philosophic Quest. Lavine is currently involved in a major study of changes in American thought and values in the 20th century, a project supported by an NEH grant. A graduate of Radcliffe, Lavine earned an M.A. and a Ph.D. at Harvard. She has taught at Wells College, the University of Maryland, and George Washington University, earning outstanding professor awards from the last two.

Roberto Marquez

Writer/translator Roberto Marquez sees the Americas, taken as a whole, as standing at the center of his intellectual and professional life. He has made significant contributions in particular to the study of Latin American and Caribbean history and literature, translating the works of poet Nicolas Guillen and compiling an anthology of Latin American revolutionary poetry. He is the founder/editor of the award-winning publication Caliban, a Caribbean review known for its essays featuring the works of poets, critics, sociologists, and cultural commentators. After earning a B.A. at Brandeis University, Marquez gained an M.A. and Ph.D. at Harvard.

John N. Paden

A distinguished Africanist, John N. Paden has spent his career studying and teaching comparative government, international development, urban studies, and what can generally be described as the African experience. His publications range from a highly acclaimed interdisciplinary textbook series on African studies to a prize-winning study of Nigerian political culture and a biography of a Nigerian Muslim leader. Paden's achievements are many. A Rhodes Scholar, Danforth Fellow, Ford Fellow, and Rockeefeller Fellow, he has also earned Mellon, Lilly, Kettering and NEH grants. Paden has an M.A. from Oxford University and a Ph.D. in political science from Harvard.

Educational Centers

American Society of Cybernetics/The Cybernetics Center

ASC members include social scientists, cyberneticians, mathematicians, computer systems specialists, and others professionally involved in cybernetics—the analysis of the flow of information in electronic, mechanical, and biological systems. Located in the Decision Sciences Department, the Cybernetics Center is committed to introducing integrative studies in the field by applying cybernetics to practical problems of business, system design, and public policy. The Cybernetics Center also publishes the journal Cybernetics.

Center for the Beginning Teacher Assistance Program (BTAP)

The Northern Virginia Regional Center for the Beginning Teacher Assistance Program (BTAP) is located in the Department of Education at George Mason University. Funded by the State of Virginia, the role of BTAP is twofold: (1) to assess beginning teachers in the classrooms to ensure that they possess certain minimum competencies; and (2) to provide assistance to those teachers in meeting those competencies. Successful completion of BTAP is required for a teacher to receive a five-year renewable Collegiate Professional Certificate.

Center for Bilingual/Multicultural Teacher Preparation

Supported by George Mason's Education Department, in collaboration with the English and Foreign Languages and Literatures Departments, the center helps meet the needs of Northern Virginia school districts by training bilingual/ESL (English as a Second Language) educators fluent in English and either Spanish, Korean, or Vietnamese. Once trained, these teachers aid the cultural adjustment of "language minority" school children with limited English proficiency, with the goal of mainstreaming them into the general student population as quickly as possible.

Center for Conflict Resolution

Affiliated with the Sociology and Anthropology Department, the Center for Conflict Resolution has three objectives: to continue to offer a master of science degree program in conflict management that trains professional conflict intervenors for mediating disputes at all levels of society, interpersonal to international; to demonstrate the potential of conflict management by developing community, state, national, and international programs; and to
establish a resource base of knowledge, research, institutions, and individuals adept at specific problem solving.

**Center for Economic and Social Education**

One of five centers affiliated with the Virginia Council on Economic Education, the Center for Economic and Social Education dispenses information about economics and other social studies to elementary and secondary school teachers and administrators. The center maintains a lending library and provides educators with consultations, research reports, and inservice courses and programs.

**Center for Government, Society, and the Arts**

Encouraging research and academic programs that explore the reciprocal relations, past and present, between government, society, and the arts, this center acts as a clearinghouse of information on current programs and studies, and fosters scholarly, artistic, and educational projects. A primary resource is the Institute on the Federal Theatre Project (FTP) and New Deal Culture (see listing).

**Center for Health Promotion**

Working with area citizens, health professionals, and health-related organizations, the center offers technical advice and assistance on health issues and disease prevention in Northern Virginia. As a regional center for health promotion and education, it also sponsors health and fitness programs for community residents of all ages. The center is affiliated with the Health, Sport, and Leisure Studies Department.

**Center for Interactive Educational Technology**

The Center for Interactive Educational Technology, housed in the Education department, features a blend of the old and the new in instructional resources. The center has a microcomputer laboratory and will soon add a center for the study of videodiscs and robotics. Students are able to evaluate current instructional software or develop their own for particular subjects or classes. An audiovisual production laboratory is available to those interested in more traditional approaches, as well as a K-12 curriculum center that houses both print and nonprint materials.

**Center for Interactive Management**

The Center for Interactive Management stresses the application of technology to organizational management, with an emphasis on the solution of complex management problems. The top priority is to provide a management service that assists clients in resolving problems that have failed to yield to conventional approaches. In addition, the center conducts research aimed at new and advanced forms of computer-assisted participative management, and integrates field experience into classes, seminars, and training courses.

**Center for Middle East Studies**

Through its 42-hour undergraduate degree program in Middle East Studies, the center promotes a comprehensive examination of the art, culture, history, religions, and politics of this region, and prepares students as Middle East specialists for careers in teaching, with the foreign service, and with international charitable and educational institutions. Throughout the year, the center generates research on the Middle East and sponsors conferences and lectures featuring authorities in the field. It is affiliated with the Public Affairs Department.

**Center for Productive Use of Technology**

Formerly the Center for Improvement of Productivity, the Center for the Productive Use of Technology promotes a more effective use of information resources by conducting research and providing consultative support in such areas as technology transfer, technical information networking, and knowledge diffusion and utilization. It is located at the Metro Campus.

**Center for Real Estate and Land Use Analysis**

Affiliated with the Finance Department in the School of Business Administration, the Center for Real Estate and Land Use Analysis supports the SBA’s real estate and urban development program. Self-supporting, it promotes faculty research, sponsors seminars, and funds student research and class projects.

**Center for Robotics and Control**

Affiliated with the Institute for Information Technology, the center promotes research in robotics and control, focusing on efforts which are largely analytical or algorithmic.

**Center for the Study of Constitutional Rights**

The Center for the Study of Constitutional Rights examines the formation of the Bill of Rights and the ways that landmark document was influenced by George Mason of Gunston Hall. Established in 1981 as the Project for the Study of Human Rights, the center coordinates an annual lecture series, “The Legacy of George Mason,” and publishes these lectures through the George Mason University Press. Past lectures have focused on the histories of states and countries that have established bills of rights, the effects of the First Amendment, and natural law and natural rights. The center is sponsored by Gunston Hall, the Fairfax Bar Association, the George Mason School of Law, the Division of Continuing Education, the Virginia Foundation for the Humanities and Public Policy, the Alexandria Bicentennial Center, the Northern Virginia Association of Historians, and the departments of History, Public Affairs, American Studies, and Philosophy and Religious Studies.

**Center for the Study of Market Processes**

Market process economists strongly emphasize “spontaneous order,” the unplanned social order created through voluntary exchange. Based on the theories of the Austrian School of economic thought, the center trains students for careers in academia, government, policy institutions, and business and industry. In addition to publishing a scholarly
newsletter, *Market Processes*, the center's members conduct research on such topics as free banking, antitrust laws, socialist economic policies, and the economics of law. It is affiliated with George Mason University's Economics Department.

**Center for Study of Public Choice**

Based on the "public choice" economic theory developed by executive director James Buchanan and economics professor Gordon Tullock, the center applies scientific economic methods to the "public choice behavior" of voters, party leaders, lobbyists, politicians, and bureaucrats. It also encourages education and research programs in public choice theory, publishes research results, and, where relevant, formulates proposals for basic institutional-research projects here at George Mason. The center is affiliated with the Economics Department.

**Character Recognition Center**

The Character Recognition Center focuses on the conversion of hand-printed information directly to digital computer input. Such a capability, in a handheld, moderate-cost instrument, has potential applications in businesses that now hand-letter forms and records for later computer analysis.

**Citizens Applied Research Institute**

To stimulate regional interest in research, the Citizens Applied Research Institute works with Northern Virginia government, industry, and civic organizations on projects of mutual interest to, or at the request of, those organizations. The institute is affiliated with the Public Affairs Department.

**Educational Study Center**

A community outreach program, the Educational Study Center offers tutoring and career counseling services to children and young adults in Northern Virginia, while training graduate students enrolled in the Education Department's reading, special education, and guidance counseling programs.

**English Language Institute**

Unique in Northern Virginia, the English Language Institute aids foreign-born members of the community by providing weekly, noncredit instruction in grammar, reading, culture, history, composition, and communication. The institute is administered by the Office of International Programs and Services.

**George Mason Institute of Science and Technology**

Directed by 45 board members representing the University and Northern Virginia high-tech industry, the George Mason Institute (GMI) supports student internships, the executive/faculty exchange program, and endowed professorships and research fellowships in engineering and information technology. With donations of more than $1 million in funds and equipment, GMI has helped produce a statewide faculty resource data bank and helped develop high-technology curricula and research projects here at George Mason.

**George Mason University Faculty Writing Project (FWP)**

A branch of the NVWP, the George Mason University Faculty Writing Project 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.

**History Research Center**

The History Research Center is a consolidation of several established projects supporting the historical interests of the University and Northern Virginia. These projects include directing the Northern Virginia Association of Historians (NVAH), a regional agency with approximately 400 members and 40 organizational affiliations, and producing its monthly newsletter, *The Courier of Historical Events*. Affiliated with George Mason's History Department, the center also produces a journal of local history, *Northern Virginia Heritage*, which has more than 1,000 subscribers, and helped to establish the George Mason Project for the Study of Human Rights. In recent years, the center has broadened the scope of its project on local oral history and expanded its collection of books and manuscripts on Northern Virginia history and culture.

**Indochina Institute**

Established as an outreach program to the Indochinese community of the metropolitan area, the Indochina Institute encourages research on Indochina and its refugees; serves as a clearinghouse for information and research; organizes and sponsors conferences, lectures, and workshops; and sponsors the publication of research papers. The institute is affiliated with the Public Affairs Department.

**Institute for Cross-Cultural Understanding**

Promoting an understanding between people of different ethnic and cultural backgrounds is the focus of the Institute for Cross-Cultural Understanding. Affiliated with the Sociology and Anthropology Department, the institute promotes research, scholarly inquiry, and publications. It also conducts educational activities, supports cross-cultural studies, and encourages the practical application of research findings.

**Institute for Humane Studies**

The Institute for Humane Studies, located at Tallwood House at the northeast corner of campus, is a 25-year-old independent, nonprofit organization dedicated to advancing interdisciplinary scholarship in the humane sciences: ethics, history, economics, psychology, sociology, and moral, legal and political philosophy. The institute's goal is to discover, develop, and support scholars and intellectuals with an appreciation for individual liberty and the classical liberal tradition of natural rights, private property, and free exchange. It accomplishes this through a program of seminars and fellowships for undergraduates, graduate students, and faculty members. It also serves as a clearinghouse of information for its worldwide network of distinguished scholars.

**Institute for Information Technology**

The Institute for Information Technology promotes research at George Mason University by serving as a
liaison between the GMU research faculty and private research sponsors in such areas as library automation, applied artificial intelligence, advanced database research, and software engineering management.

Institute on the Federal Theatre Project and New Deal Culture

A clearinghouse of information on 1930s culture and politics, the Institute on the Federal Theatre Project and New Deal Culture coordinates exhibits and discussions of the Depression-era Federal Theatre Project, including programs co-presented with the Smithsonian’s Air and Space Museum and National Museum of American History. The mainstay of the institute is the FTP archival collection, on permanent loan from the Library of Congress, which contains more than 7,000 original stage production scripts, 2,500 radio scripts, 500 posters, and hundreds of original stage and costume designs and photographs of FTP-sponsored Depression-era theatre productions. In addition, the institute has gathered and organized existing audio tapes on all Works Progress Administration (WPA) arts projects. The institute publishes a newsletter, Federal One, which is mailed to more than 1,000 subscribers.

Law and Economics Center

With the goal of furthering the development of law and economics as intellectually related disciplines, the Law and Economics Center (LEC) seeks to demonstrate the applicability of economics scholarship to legal policy and to relate economics to the substance and procedures of law. Located at the George Mason University School of Law in Arlington, the LEC offers residential programs for federal judges and law professors that provide participants with an introduction to economics. Comparable programs introducing academic economists to law are also offered. In addition, the center publishes Lexicon, a quarterly newsletter listing working papers, lecture series, conferences, and other programs, and sponsors a series of interdisciplinary symposia in which current topics in law and economics are explored.

Metropolitan Area Assessment Center

Supported by grants from the Virginia Department of Education, the center assesses the administrative skills of prospective school principals. Part of a nationwide program developed by the National Association of Secondary School Principals, the center annually trains 24 individuals to assess the skills of 48 candidates for positions in the Arlington, Alexandria, Falls Church, Fairfax, Prince William, and District of Columbia school systems.

Northern Virginia Writing Project

A statewide effort to improve the writing skills of Virginia students, kindergarten through university, the Virginia Writing Project has branches at public universities throughout the commonwealth. During the summer, teachers selected from each writing project area attend an intensive five-week program, examining problems in effectively teaching good writing skills. Participants demonstrate successful teaching techniques, study research on writing, and write papers. After the summer institutes, the teachers return to their schools and lead seminars for other teachers in their districts.

Project for the Study of Young Children

Established by faculty members in the College of Education and Human Services, the Project for the Study of Young Children offers a cognitive-developmental program for preschool children and their families. In this environment, George Mason students and faculty members, Fairfax County public school teachers, and the parents of children enrolled in the program can study the educational development of these children. The project promotes collaborative, multidisciplinary research among students and faculty members; provides a program which encourages children’s involvement with their environment by focusing on problem solving, discovery-learning and cognitive skill development; and provides research and development services to Fairfax County public schools, the University community, Northern Virginia, and the state. The project is located in Fairfax High School.

Psychology Clinic

Operated by the clinical faculty of the Psychology Department, the Psychology Clinic offers psychological assessment services to members of the campus community and the Northern Virginia community. It not only serves as a site for faculty research but also provides graduate students with opportunities for direct service experience under professional supervision.

Public Management Institute

The Public Management Institute, a service and research branch of the Public Affairs Department, promotes a more effective exchange among government managers, business organizations, and the academic community by emphasizing the contributions each can make toward improving management in government. Drawing on University resources, the institute provides technical assistance to outside organizations by developing and conducting management education and training programs, organizing and leading conferences and workshops, and undertaking applied research to address current management problems.

Self Care Institute

Affiliated with George Mason’s School of Nursing, the Self Care Institute examines the decision processes people use when monitoring their own health care. Founded in 1976 in Northern Virginia, the institute moved to George Mason in 1986 and plans to use its research results to teach consumers how to best use the health care system and teach health care professionals how to gear treatments to their patients’ lifestyles.

Writing Research Center

A program of the NVWP, the Writing Research Center 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

http://catalog.gmu.edu
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 NWWP to design and coordinate
special training programs for their faculties.

Metro Campus Professional and
Conference Center

The Metro Campus Professional and Conference
Center is located in Arlington on the third floor at
the Metro Campus, 3401 North Fairfax Drive,
adjacent to the Virginia Square-GMU Metro Station
(Orange Line).

The Professional Center offers a selection of
graduate and undergraduate courses, including
several liberal arts undergraduate classes. Courses
are scheduled in three-hour megablocks from 9 a.m.
to 9 p.m. weekdays and 9 a.m. to noon Saturdays.
More than 3,000 credit and noncredit students are
served by the Professional Center.

The 200-seat Conference Center serves an additional
30,000 persons, annually, who participate in
University and community programs and business
and professional conferences. Also, the Metro
Gallery is host to 12 professional art shows annually
and is the site of many community cultural events.

The GMU Information Center on the Kirkwood Drive
side of the building provides University publications
and information on programs and activities at the
Metro Campus and the Main Campus. Catalogs and
applications are available. The Information Center
telephone number is (703) 841-2604. Hours are from
9 a.m. to 9 p.m. weekdays.

George Mason University Press

Under the guidance and administration of the
Graduate School, the George Mason University
Press was established in April 1983 to provide a
scholarly publishing dimension in the overall
mission of the University to create and disseminate
knowledge through teaching, research, and
publication. Administered by a director under the
supervision of a faculty editorial board, the GMU
Press welcomes manuscripts in all areas of
scholarship and seeks to publish monographs,
books, research reports, conference proceedings,
symposia, or reference works developed by local
faculty and by authors throughout the world of
scholarly endeavor. Among its publications, the
Press issues the annual series of lectures presented
on The Legacy of George Mason. GMU Press books
are advertised, exhibited, promoted, and sold
worldwide by its exclusive agent, University
Publishing Associates.

University Offices and Information

Equal Opportunity/Affirmative Action

George Mason University is an Equal Opportunity/
Affirmative Action institution committed to the
principle that access to study or employment
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 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 disabled individuals.
The University will make every reasonable
accommodation to enable handicapped persons 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 assisting resolution of the
matter. Disabled students or applicants may also
contact the Adviser to Disabled Students.

Consortium Membership

George Mason University is the host institution of the
Consortium for Continuing Higher Education in
Northern Virginia. The other members are
Marymount University, 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 invites 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 all University graduates. In addition, it assists in the publication of a quarterly 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.

Alumni Association Officers for 1986-87:

- President: Frances F. Batchelder, M.Ed., '78
- President-Elect: Ann C. Trichilo, M.Ed., '76
- Vice-President: Frank Doherty, B.A., '82
- Secretary: Steffanie Dyke, B.A., '83
- Treasurer: Ana Maria Boitel-Bucher, B.A., '83

Office of Alumni Relations:

- Director: Joseph S. D'Agostino, Ph.D.
- Associate Director: Kathleen M. Kelley, B.A., '83

University Development

The Office of University Development is responsible for the University's advancement program. It coordinates advancement activities of the various schools and colleges, runs the University Phonathon, and accepts contributions and grants for the benefit of the University through the George Mason University Foundation.

Public Relations Services

Public Relations Services, located in Room 214 of the Finley Building, handles press and publicity for the University and produces a 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.

Design and Publications

Design and Publications is responsible for the layout, design, editing, 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. A state vehicle registration card must be provided at time of registration. 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, and in SUB I, second floor, old Patriots Locker.

Fees are as follows:

- $50 Full Academic Year, September 1 through August 31 ($20 for a second vehicle).
- $35 Semester, fall or spring ($20 for a second vehicle)
- $20 Summer Session ($20 for a second vehicle)
- $15 Motorbikes

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 Support Services
Student Support Services

George Mason University provides many support services designed to enhance the college experience and enable students to take full advantage of the University's educational and personal enrichment opportunities.

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 Associate Vice President and Dean for Student Services, the Adviser for Students with Disabilities, and the Director of Minority Student Services; the Offices of Student Health Services, Student Activities, Student Unions, Housing Services, Career Services, Cooperative Education, Veterans Services, 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 services are available on the lower level of Student Union I. The bookstore is located on the lower level of Student Union II. In addition to course textbooks and reference materials, the bookstore stocks supplies, health and beauty aids, and gift items. The bookstore buys used books from students every day the store is open. During the regular academic year hours are Monday–Thursday 8 a.m. to 7:30 p.m.; Friday 8 a.m. to 4 p.m.; Saturday 10 a.m. to 3 p.m. For additional information, contact the bookstore at (703) 323-2696 or (703) 425-3992.

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 Unions (or throughout the University) by contacting 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.

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 monospot 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 1986-87 included blood pressure checks, Pap testing, and cardiopulmonary resuscitation instruction.

Staffing consists of a director, one full-time nurse, a part-time nurse, and a consulting physician. The Student Health Service is on the Main Campus in Student Union I, Room 232 (323-2584).

Health Insurance and Dental Plan

All students of George Mason University are eligible, on a voluntary basis, to enroll in the University-endorsed 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, outpatient 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 232, (703) 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 (703) 323-2523 (Voice/TDD) for more information.

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Housing

The University has on-campus housing for 1,750 students, with the recent addition of a new 500-bed dormitory-style housing complex. All campus facilities are modern, air-conditioned buildings staffed by members of the professional staff of the Department of Housing and Residential Life.

Commonwealth and Dominion Halls each house 250 residents in double occupancy rooms. Between every two rooms is a private bath that serves up to four persons. 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, and 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.

University Commons is an eight-building complex accommodating 500 students. Each building accommodates between 52 and 78 students in single and double bedrooms. There is a common bathroom on each floor. Each bedroom is furnished with the appropriate number of desks, beds, chairs, wardrobes, and chests of drawers. A central building consists of a study lounge, game room, television lounge, vending and laundry areas, and a mailbox area.

University Park Townhouses is a 36-unit complex located a quarter mile from the Main Campus. Each townhouse consists of two bedrooms, a full kitchen, a dining-living area, and two-and-a-half baths. Four students are assigned to each unit.

Complete information about the University's on-campus housing is available from the Director of Housing and Residential Life, George Mason University, Fairfax, Virginia 22030, (703) 323-2354.

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

Counseling Center Services

The purpose of the Counseling Center is to provide services that enable students to successfully achieve their academic, social, and personal goals. Specifically, the center staff helps students to (1) make realistic and appropriate choices concerning education and work; (2) develop the study skills and habits needed to succeed in the demanding intellectual environment of the University; and (3) acquire interpersonal and coping skills in order to control and manage personal problems and concerns that interfere with learning.

Staffing and Hours. The Counseling Center is staffed by qualified professional counselors. Services are available at no charge to all University students. The main office is located in Room 364, Student Union I, and is open Monday through Friday from 8:30 a.m. to 5 p.m. Evening hours are available on Tuesday and Wednesday. For information about the following Counseling Center services or assistance, call 323-2165 or the number listed for each service.

Mental Health. Meeting the mental health needs of George Mason University students is the central mission of the Counseling Center. The goal of this service is to help reduce problems and promote the adjustment and success of the student. The objectives of the mental health services are to (1) assist students in managing and coping with personal problems that interfere with learning and educational progress; (2) provide groups and workshops for students to acquire personal and social skills; (3) provide crisis assistance to students experiencing more severe personal problems; (4) provide consultation to students and parents of students; and (5) provide consultation to faculty and staff. Located in Room 364, Student Union I, 323-2165.

Learning Services. The goal of Learning Services is to provide the learning skills and support needed for students to successfully complete their academic requirements. The service provides workshops and seminars to help students improve their study habits and acquire specific skills such as note taking, organizing a study schedule, improving reading speed and comprehension, and preparing for exams. Students may learn these skills and attitudes in a wide range of structured workshops or through individual consultation with a professional counselor. Tutoring in a wide variety of subjects, including calculus, chemistry, and statistics, is available on a referral basis to enrolled George Mason University students. Located in Room 350, Student Union I, 323-2018.

Self-Assessment. Many students come to the University with undefined goals for their future. Often this is a result of lack of information about self, conflicting influences from family and friends, changing personal values, and uncertainty about potential choices. The role of the self-assessment component of the Counseling Center is to help students review and assess their interests, values, and capabilities in order to gain increased understanding of themselves and to make informed decisions about their educational options and future life-goals. Located in Room 364, Student Union I, 323-2165.

Black Peer Program. Attracting and retaining minority students is a major goal of George Mason University. In addition to traditional methods of

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increasing retention, the Counseling Center provides a peer support and monitoring program that directs students to the resources of the Counseling Center and other University offices that will enhance their opportunities for success within the institution. The Black Peer Program utilizes undergraduate peer assistants and a staff counselor to make personal contact with all black students in order to assess the student’s need for a particular service, and to help those students contact and utilize that service. Located in Room 235, Student Union I, 323-2131.

Re-Entry Program. Women and men returning to the University after extended absences from higher education have special needs. Frequently these students have multiple roles (family, spouse, job), which can lead to unusual stress, or they may have ambivalent feelings about their decision to return to university life. Support services for these students have proven valuable. The goal of the Re-Entry program is to provide an information and support network to facilitate successful integration of these students into the academic environment. For more information, call (703) 323-2165.

University Consultation/Support. Staff, faculty, and students often consult the Counseling Center staff for problems involving a particular student’s adjustment to university life, his or her learning difficulties, or mental health. The goal of this consultation service is to assist the individual in helping the student who is having difficulty.

Training and Supervision. The Counseling Center provides training to practicum and intern students in George Mason University graduate programs to assist in their development as beginning mental health professionals and to expand the range and depth of services offered by the center.

Referral. The Counseling Center maintains a wide range of information and resources for students, faculty, and staff seeking referral to community mental health professionals and other social service agencies. Located in Room 364, Student Union I, 323-2165.

Accreditation. The University Counseling Center is accredited by the International Association of Counseling Services, the accrediting body established by the American Association of Counseling and Development.

Confidentiality and Client Welfare. The University Counseling Center subscribes to the Ethical Standards and Guidelines of the American Psychological Association and the American Association for Counseling and Development. All professional counseling services provided to students are held in confidence and no information is released without the student’s written consent.

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 during the fall and spring semesters. For information call 323-2476. The following major services are offered:

Career Counseling. In individual counseling sessions and workshops, students learn a career-planning decision-making process that can be used throughout their lives. Thorough self-assessment of personal interests, skills, values, and motivations is emphasized prior to researching appropriate majors and relevant career opportunities. Counselors are also available to assist students with various aspects of their job search.

Career Seminars and Workshops. These include Career Identification, Choosing/Changing Majors, Adult 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 Resource Library. This specialized library contains information on career fields; graduate and professional schools; government employment; researching employers; and job hunting. A computerized career guidance system is available, as well as handouts on resume writing and many other relevant subjects.

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 Resource 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
Credential File. Graduating students and alumni may establish credential files containing references, resumes, and course listings to support application for employment or graduate school.

Veterans Services

The Veterans Coordinator in the University's Office of Veterans Services 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.)

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 University by providing continuity to services for minority students. Helping students to understand their academic needs and then find appropriate ways to meet them is an important function of the office. Minority Student Services is located in Room 352 of Student Union I, (703) 323-2383.

International Student Services

The International Student Services, located in the Office of International Programs and Services, is responsible for assisting international students to enter George Mason University and to resolve the problems of study and life in an American university. Services consist of the following:

1. Evaluating overseas credentials of prospective international students and advising on admission as well as on transfer credit.
2. Advising international students and scholars on immigration and visa requirements; cross-cultural understanding; and academic, housing, and personal problems.
3. Organizing activities for international students and scholars to integrate them into the academic process, the campus student population, and the surrounding community.
4. Conducting intercultural events on campus, such as International Week, United Nations Day, Ethnic Days, International Coffee Hour, films, and lectures.
5. Representing international students at GMU before the U.S. Immigration and Naturalization Service, the State Department, government agencies in international education, and foreign embassies.
6. Establishing links between international students and the local community through program activities and holiday hosting.
7. Disseminating information via newsletters and other publications of importance to international students and their American counterparts.

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, Greek, international, special interest, law, 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 or run for 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.

Athletic Activities

The intercollegiate athletic program of 19 men’s and women’s sports at George Mason University offers student athletes competition with universities 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 and the Colonial Athletic Association. To be eligible for athletics, 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 either earning 24 credit hours toward a particular degree from the beginning of a sport season to the beginning of the subsequent sport season, or by averaging 12 semester hours in each semester a student-athlete is enrolled.

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

Intercollegiate athletic competition for women includes basketball, cross-country, indoor and outdoor track and field, tennis, soccer, volleyball, and softball.

Athletic scholarships and financial aid (based on need) are available to both male and female student athletes.

Historical athletic highlights include the following. GMU’s first NCAA championship—women’s soccer...
Student Support Services


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. 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: Collegiate Chorus, University Chorale, Gloriana Singers, Symphonic Chorus, Symphony Orchestra, Symphonic Band, Jazz Ensemble, Show Choir, Pep Band, 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 11 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 Nation" for the past 11 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 56 finalists in various events. The George Mason Forensics Team set a national record by winning more than 900 awards in the 1985-86 season. During the past 11 years, the Forensics Team has won a total of more than 6,000 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 more than 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 practicing attorneys.

The Debate Team has enjoyed considerable success over the past few years, including winning the National Championship in Junior Varsity Debate in five out of the last eight years. In invitational tournaments, the GMU debaters consistently win top awards and have "closed out," winning both first and second place in many tournaments over the past ten years.

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

Student Organizations

Approximately 130 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, academic, 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.

Recognized student organizations are also members of larger umbrella organizations. These clusters of organizations facilitate coordinated development of campus activities, interaction with other student organizations, and fee funding for student organizations. They also provide 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 recognizes ten fraternities and six sororities. 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, students should contact the Director of Organizations, on-campus student organizations, or a channel of communication with the University administration regarding support services for student organizations.

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sororities at George Mason, contact the Student Activities office, 305 Student Union I, (703) 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 obtained 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 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, (703) 323-3578, Thompson Hall, 111B, or the Station Manager, (703) 323-3592, Thompson Hall 216.

Broadside is the University's student-run newspaper. The paper provides opportunities in news writing, sports reporting, feature writing, editing, layout, advertising, public relations, and many other areas. Contact faculty adviser Scoobie Ryan or Broadside staff in the Broadside office, (703) 323-2168 in Student Union I.

Campus Ministry

The Campus Ministry is an ecumenical group available on campus to assist students, faculty, and staff. Their ministry includes religious counseling, Bible study, social-action opportunities, educational programs, social activities, seminars, retreat weekends, and fellowship gatherings.

The Campus Ministry offices are located in Student Union I, Rooms 207 and 229, and are open daily for discussion and assistance of any kind. For more information, call 323-2160 or contact the individual ministries: United College Ministries (820-2144); Assemblies of God (323-2160); Baptist (323-3848); Episcopal (323-4217); Greek Orthodox (671-1515); International Students, Inc. (385-6729); Jewish (323-3848); Mormon (323-2160); Navigators (323-2160); Roman Catholic (323-4218 or 425-0022).

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 and Dean 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 and Dean for Student Services, located in Room 302 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. On their application for admission, students sign a statement agreeing to conform to and uphold the Honor Code. Therefore, it is the responsibility of the students to understand the provisions of the code. In the spirit of the code, a student's word is a declaration of good faith acceptable as truth in all academic matters. Therefore, attempted cheating, plagiarism, lying, and stealing (of academic work and related materials) constitute Honor Code violations. To maintain an academic community according to these standards, students and faculty must report all alleged violations of the Honor Code to the Honor Committee. Any student who has knowledge of, but does not report, an Honor Code violation may be accused of lying under the Honor Code.

The Honor Committee is independent of the Student Government and the University administration. It is made up of students selected by the student body and has the primary duty of espousing the values of

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the Honor Code. Its secondary 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 policy regarding the Honor Code. They must also explain the extent to which aid, if any, is permitted on academic work.

The Honor Code appears in the Reference Section at the back of this catalog. Any questions regarding the Honor Code should be referred to the Honor Committee office located in Room 250 of Student Union I (323-2195).

Drug and Alcohol Policy

The abuse of drugs and alcohol by members of the George Mason community is incompatible with the goals of the University. By providing educational programs to create an awareness of drug and alcohol related problems, the University attempts to prepare individuals to act responsibly regarding this issue. Those in need of assistance in dealing with such problems are encouraged to seek the confidential services of the University's counseling center or the student health service.

Drugs. The University prohibits the possession and use of illegal drugs on campus. Illegal possession, sale, use, or distribution of controlled substances, including marijuana, violates both federal and state laws. Individuals involved in the sale, use, or distribution of controlled substances are subject to arrest and/or University disciplinary action.

Alcohol. The use of alcoholic beverages on campus is at the discretion of the University, subject to state alcoholic beverage regulations. Unless the University has specifically sanctioned the location and conditions of alcohol use, the possession and consumption of alcoholic beverages on campus and in its facilities are prohibited. Individuals who are found to be in violation of University regulations or State laws are subject to University disciplinary action.

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 fees. 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 residents. 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. Requests for reclassification must be filed prior to the first official day of classes of the semester or term for which in-state rates are sought.

Tuition, room, meal plans, and other applicable fees for early registered students are due and payable at the Cashier's office on or before August 6, 1987, for the fall semester, and December 14, 1987, for the spring semester (regardless of postmark). Failure to receive a bill does not waive the requirement for payment when due.

Early registered students who cannot attend classes during the semester for which they are registered should cancel their registration by written notice to the Office of the Registrar as outlined under Undergraduate Policies and Procedures.

Payment of tuition from early registered students will be accepted until August 13, 1987, for the fall semester and until January 7, 1988, for the spring semester, with late payment resulting in an additional charge of $10. If payment has not been received by these dates, registration will be cancelled for the applicable semester. In this instance, it is necessary to reregister or incur a $20 administrative fee. These students may attempt to build a new schedule on a space-available basis. Tuition and fees for courses added after the cancellation date must be paid on the same day courses are added. Failure to make payment on that date will result in a $10 late charge, but will not result in course cancellation. Students who register and then withdraw from the University prior to the beginning of classes or during the first week of classes are charged a $20 administrative fee.

Methods of Payment

By act of registration, students accept the responsibility for the charges of the entire semester,
regardless of the payment method used. In the absence of arrangements for an alternative method of payment, payment in full must be received at the Cashier’s Office on or before the due date.

Credit Cards. Payment may be made by VISA, MasterCard, or Choice. These payments may be made in person by presenting your card at the Cashier’s office or by returning a copy of your bill with the appropriate information filled in. In other cases, you are requested to provide the Cashier’s office with a daytime telephone number in case of processing difficulties.

Installment Payment Plan. A monthly installment payment plan is offered through the Academic Management Services (AMS) of Pawtucket, Rhode Island, for the 1987-88 academic year.

This plan allows a student to pay all or part of his or her annual tuition in 10 equal monthly installments without interest charges. Participation is renewable each year at an annual cost of $45. The enrollment fee also covers the cost of a Life Benefit Insurance plan, which guarantees payment of the balance of the budgeted amount, in the event of the death of the parent who is contractually responsible for the payments.

Students should contact AMS at their toll-free number (800) 556-8884 for further information.

<table>
<thead>
<tr>
<th>In-State Students</th>
<th>Out-of-State Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Fee</td>
<td>$15</td>
</tr>
<tr>
<td>Tuition and Fees, full-time (12 through 17 semester hours) per semester</td>
<td>$912*</td>
</tr>
<tr>
<td>Tuition and fees, part-time (11 semester hours or less) per semester, per hour</td>
<td>$76</td>
</tr>
<tr>
<td>Laboratory Breakage Deposit</td>
<td>$5b</td>
</tr>
<tr>
<td>Graduation Fee</td>
<td>$15</td>
</tr>
<tr>
<td>Special Registration Fee</td>
<td>$15c</td>
</tr>
<tr>
<td>Private Instruction (music)</td>
<td>†</td>
</tr>
</tbody>
</table>

* For each hour over 17, add $76 for in-state and $152 for out-of-state.

Deferred Payment Plan

A deferred payment plan is available for students whose tuition and fees for the semester exceed $456. Students using a deferred payment plan must return a signed copy of the deferred payment promissory note to the Student Accounts office by no later than August 17, 1987, for the fall semester and January 11, 1988, for the spring semester. There is a $20 administrative fee for this service. Students must pay at least one-half of the total fees or $456 (whichever is greater) as the initial payment, with the remaining payable in two equal installments. Bills for installment payments are not prepared.

Students are responsible for ensuring payment of installments on or before the published due dates.


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 Cashier’s office are placed on financial suspension without further notice.

Financial Suspension

All academic credit is withheld for students who are not in good financial standing with the University. This means that no transcripts of record are issued, no diplomas are released, and no registrations for a subsequent semester or term are permitted until

For each hour over 17, add $76 for in-state and $152 for out-of-state.
outstanding obligations, including the reinstatement fee, have been paid in full. In those instances where the outstanding financial obligation that caused the financial suspension is in excess of $50, a reinstatement fee of $25 is imposed.

Failure to Meet Financial Obligations

Late Fee. Failure to make any payment on or before the due date results in a late charge of $10.

Other Actions

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 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 may not return to good financial standing with the University until all outstanding obligations—including late charges plus a $25 reinstatement fee—have been paid.

Refunds

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

The following dates are used to compute refunds:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Date</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 1987</td>
<td>September 8, 1987</td>
<td>Last day of week 1</td>
</tr>
<tr>
<td></td>
<td>September 15, 1987</td>
<td>Last day of week 2</td>
</tr>
<tr>
<td></td>
<td>September 22, 1987</td>
<td>Last day of week 3</td>
</tr>
<tr>
<td>Spring 1988</td>
<td>February 1, 1988</td>
<td>Last day of week 1</td>
</tr>
<tr>
<td></td>
<td>February 8, 1988</td>
<td>Last day of week 2</td>
</tr>
<tr>
<td></td>
<td>February 15, 1988</td>
<td>Last day of week 3</td>
</tr>
</tbody>
</table>

Tuition and fees are refunded on a graduated scale for subsequent voluntary drops and withdrawals during the second and third weeks. The calculation of the amount of refund is based on the date of the drop or withdrawal as certified by the Registrar.

Refund scale for rooms and meal plans

<table>
<thead>
<tr>
<th>Refund Scale (Per Tuition Hour)</th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>$76.00</td>
<td>$152.00</td>
</tr>
<tr>
<td>(100%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 2</td>
<td>$50.70</td>
<td>$101.40</td>
</tr>
<tr>
<td>(66.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 3</td>
<td>$25.40</td>
<td>$ 50.70</td>
</tr>
<tr>
<td>(33.3%)</td>
<td></td>
<td></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 31, 1988.

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 $50 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.

Change of Domicile Classification

Students requesting a change of classification from out-of-state to in-state must file the required form before the first day of the semester for which in-
state status is sought. Forms are available in the Admissions office, room 117 Finley.

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 Student Union Building I, Room 354, the office is open Monday through Friday from 9 a.m. until 4:30 p.m., and Tuesday 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:

<table>
<thead>
<tr>
<th>1988-89 Academic Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>March 1, 1988</td>
</tr>
<tr>
<td>Returning Students</td>
<td>May 1, 1988</td>
</tr>
<tr>
<td>Summer 1988</td>
<td>April 1, 1988</td>
</tr>
<tr>
<td>Transfer Students</td>
<td>March 1, 1988</td>
</tr>
</tbody>
</table>

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 sponsored 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 enrolled 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.

Guaranteed Student Loan Program. Students must demonstrate need and be enrolled in a degree program half time to qualify. While most loans are made by commercial lenders, some states are also lenders. The state lending agency for Virginia is the Virginia Education Loan Authority.

Undergraduates may borrow up to $2,625 as freshmen and sophomores and $4,000 for upper-level undergraduate study, with cumulative limits of $17,250. The government pays the 8 percent interest until the repayment period begins, six months after the student leaves school. Interest remains 8 percent through the fourth year of repayment and increases to 10 percent beginning the fifth year of repayment. Applications may be obtained from the Financial Aid office or most commercial banks in Virginia or the student's home state.

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 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.

The Virginia College Scholarship Assistance Program (CSAP). This program uses both federal and state funds to provide aid to needy students who are full-time undergraduate students and legal residents of Virginia.

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 15 days; overdue payment results in a late charge of $5 for each 15 days past due. Failure to repay the loan within 15 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. In addition, 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 (703) 525-4087.

Veterans Services

Veterans Educational Benefits

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

1. Veterans, active duty, and reserve personnel who have never received benefits must apply on Form 22-1990. The application should be turned in to the Veterans Services office on campus with a certified copy of the student's DD-214 (where applicable).

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 be certified for no more than two semesters while the GMU application is pending.

4. Students are responsible for notifying the Veterans Services 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 dependent
   d. change of address (notify VARO immediately)

http://catalog.gmu.edu
e. withdrawal from school (notify immediately)

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

5. VA benefits are paid on the following basis:

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

Students who are on active duty and those taking fewer than six undergraduate 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. The Veterans Administration will not pay for an audit course.

Public Law 98-525 established a new Gl Bill (Chapter 30) and also a new educational assistance program for members of the Selected Reserve (Chapter 106). Details may be obtained from the Veterans Services office on campus.

Tutorial Service for Veterans. The VA will pay $84 per month, not to exceed $1,008 per year, for needed tutorial services. For further information, see the Veterans office on campus.

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) have died as a result of injury or disease incurred in a time of armed conflict; or (c) be 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 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 and transfer students 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
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 (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 submit CEEB Achievement Test scores in three subjects, such as English, science, and mathematics (Level 1 or 2), and foreign languages. Test scores in French, German, Greek, Latin, Russian, and Spanish are used for placement.

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)
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).

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, physics, chemistry, and mechanical or engineering drawing.

Early Decision

Freshman applicants for fall semesters who apply for admission before January 1 will be reviewed automatically for early decision. Successful candidates will be notified beginning in December and continuing until February 1. If an early decision cannot be given, the student’s application will be considered at the time all other applications are reviewed and evaluated.

Early Admission

Rising high-school juniors who have either completed high-school graduation requirements or have only senior English and government to complete, may, with the recommendation of their high-school guidance counselor, principal, or headmaster, apply for admission and thereby enter the University one year early. Applicants should present above-average grades, SAT/ACT scores, and a high-school course of study demonstrating a rigorous academic preparation for university-level work. Candidates for this program must arrange an interview with the director of admissions.

Concurrent Enrollment (Enrichment)

Advanced high-school students may apply for admission as part-time students in the concurrent enrollment program. Applicants should have at least a B grade-point average and have taken the ACT or SAT examination. Additionally, students must be recommended by their high-school guidance counselor, principal, or headmaster, and the appropriate department chair at GMU. Interested students may contact the Admissions office for more information.

Transfer Requirements

The University accepts qualified students by transfer from other colleges. An applicant for admission who
has attended a collegiate institution for any period of
time should request that the registrar of each
institution attended send two official transcripts of
records, 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
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 as a transfer student is
competitive. To be considered academically eligible
for consideration, a transfer student must present a
C average or better (2.0 on a 4.0 scale) on all
collegiate work attempted. Students on active social
or academic probation, suspension, or dismissal are
not eligible for admission as a transfer.

To be considered for admission to the computer
science, engineering, or mathematics programs, a
transfer applicant should present a cumulative GPA
of 2.5 (on a 4.0 scale) or better.

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

Admission of International
Students

General Requirements for International Students

Application for admission to the University by
international students holding or seeking F-1 or J-1
visas should be made directly to the Admissions
Office before January 1 for the subsequent academic
year. The deadline is enforced to ensure adequate
time to process applications. Applications from
international students will be considered for the fall
semester only and will be reviewed and evaluated
with all other applications.

Students in the English Language Institute (ELI)
should consult the Admissions Office for application
procedure.

Applicants with permanent residence in the United
States and nonimmigrant visa holders (A-1, G-4, etc.)
must meet freshman or transfer admission
requirements.

Admission to the University is competitive;
therefore, while minimum standards ensure that an
application will be considered, they do not guarantee
admission. The number of offers of admission that
the University can make in a competitive
environment is determined by the number of
applicants, the qualifications of the applicant pool,
and the amount of available space.

In addition to overall admission requirements, some
schools and colleges have individual requirements
for acceptance into the major. (See school or college
admission requirements.)

Freshman Requirements for International Students

1. If applicants have not completed a year of
collegiate work at a college or university in the
United States, they are required to submit a
satisfactory score on the Scholastic Aptitude Test
(SAT) or American College Test (ACT).

2. Individuals whose native language is not English
are strongly urged to take the Test of English as a
Foreign Language (TOEFL) in addition to the SAT or
ACT exam.

3. A minimum score of 570 on the TOEFL is required
for admission consideration. Official test scores must
be sent directly from the Educational Testing
Service. Information concerning the time and place
of the TOEFL can be obtained from TOEFL,
Educational Testing Service, CN 6151, Princeton, NJ
08541-6151, USA. Phone: (609) 882-6601.

In addition to the academic requirements mentioned
above, international students must meet the
following conditions:

1. An international student holding an F-1 or J-1 visa
must comply with current United States Immigration
and Naturalization Laws. Students who are out of
status with the United States Department of Justice
Immigration and Naturalization Service will not be
considered for admission.

2. With the application for admission, a student must
present certified documents on subjects studied,
grades received, examinations taken, and degrees
earned from all secondary schools, colleges, and
universities attended. Records of state or national
examinations and certificates are also required.
Students must establish that they have completed at
least the equivalent of a United States high school
diploma. Non-English documents must be presented
in original form, and with certified translations.

3. Applicants must also provide a completed and
notarized GMU financial statement that includes a
bank statement verifying that funds have been
earmarked for school expenses. Yearly expenses are
estimated to be $13,500 (subject to change).
International students may be required to have their
financial resources verified by an American banking
institution.

4. Students enrolled at the University on F-1 or J-1
visas must maintain full-time status each semester,
excluding summer session.

5. All new students at the University must submit
the Admissions Medical Form signed by a health
professional. The form must verify that the student
is in good physical and mental health and that his/
her inoculations are current.

6. Health insurance is mandatory for students on F-1
and J-1 visas. Students who do not enroll in the
University’s insurance program must show proof of
comparable coverage.

7. Students with F-1 or J-1 visas must initially attend
the educational institution that issued the Certificate

http://catalog.gmu.edu
of Eligibility (Form I-20 or IAP-66). Transfer from one United States educational institution to another must be authorized by the United States Immigration and Naturalization Service. Forms are available from the international student adviser.

8. The I-20 form is available to those who, after acceptance, require an F-1 student visa. Students sponsored by their government or the United States government are required to enter the United States on J-1 visas. The form IAP-66 will be provided by the University after admission, if necessary.

Transfer Requirements for International Students

A transfer student is a student who has completed a year of work at a college or university located in the United States. In addition to the above requirements, international transfer students must meet the standards listed below:

1. International students (F-1 or J-1 visa holders) transferring from American colleges or universities must complete the equivalent of a year of college-level academic work (24 semester hours or 36 quarter hours) before admission to George Mason University. The academic work must include a year of college-level English composition.

2. Transfer applicants who have not completed one year of English composition and one year of literature with grades of C or better must also submit satisfactory TOEFL, SAT, or ACT scores.

3. Transfer students from non-American colleges and universities will be required to submit satisfactory scores on the SAT examination. Transfer applicants whose native language is not English are strongly encouraged to take the Test of English as a Foreign Language (TOEFL) in addition to the SAT.

Summer Session Enrollment

Enrollment in the summer session does not constitute undergraduate admission to a regular (fall or spring) semester.

Summer EXCEL Program

EXCEL (Experience Collegiate Education and Living) is a month-long summer residential program designed to give academically advanced, college-bound students an opportunity to sample college life and learning. The program provides a first-hand experience in preparing for the academic and social challenges of college. EXCEL students are totally immersed in the University's learning community by taking one or two freshman-level summer courses and by participating in organized social, recreational, and learning activities.

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.
Procedures

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 February 1 for freshman applicants and March 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, (703) 323-2525.

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

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 applications 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), Dental Admission Test (DAT), and the Miller Analogies Test (MAT).

Test of Standard Written English (TSWE)

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.

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 nonnative 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 requirements.

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 School 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 School 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

The CEEB Achievement Test in a foreign language (normally given to high school students) is used for placement in French, German, classical Greek, Latin, Russian, and Spanish. This placement test is mandatory for all students who have studied one of these languages in high school and wish to continue study of the same language at the University.

Students who have taken the CEEB Achievement Test in a foreign language before admission may have their score used for placement. Students must either provide official test scores or take the test at George Mason. The testing dates are listed in the Academic Calendar. It is the student's responsibility to apply for and take the test before initial enrollment. Interested students should contact the Department of Foreign Languages and Literatures.

Students may not enroll for credit in a course at a level lower than the one in which they are placed. The foreign language requirement for the B.A. degree may be waived for international students who present satisfactory evidence of having studied for four or more years in an educational institution in which the primary language of instruction was other than English. No credit through the intermediate level is awarded when the foreign language requirement is waived.

College Board Advanced Placement Test scores may be used for advanced placement and credit, provided the test was taken during the three years prior to the student's registration at GMU.

On the basis of examinations administered by the department, students may be granted credit for undergraduate courses above the intermediate level 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 at other colleges must consult the department to determine their correct placement.

All students are urged to start or to continue foreign language study in their first year. Elementary and intermediate courses should be completed in immediate succession, preferably by the end of the sophomore year.

Effective September 1, 1987, credit by examination will no longer be awarded in elementary and intermediate foreign language courses.

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 allows students to broaden and enrich their education through approved overseas programs. Through the Office of International Programs and Services, the University assists students who wish to participate in overseas study programs administered in cooperation with academic departments.

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 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.

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 in the Academic Advising Center.

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 School of Nursing and in the departments of Biology, Chemistry, Education, Electrical and Computer Engineering, Foreign Languages and Literatures, Health and Physical Education, Performing Arts, Physics and Social Work 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 advisers concerning course registration.

Students who accumulate 24 unsatisfactory semester hours will be required to have a major advising session. That session should attempt to identify the source of the student's difficulties and to plan a realistic program of study. Such students will not be allowed to continue with registration until the requirement is fulfilled.

Advising Upon Entrance into the Upper Division

Effective with the 1988-89 academic year, every student must meet with an adviser upon entrance into the upper division to adopt a program of study. Among the things that are expected to happen at this session are (1) a review of the requirements for a particular degree and the major in which a student has enrolled; (2) a review of the student's record including any deficiencies which must be made up; (3) a discussion of the career and/or graduate study options open to the student enrolled in such a program; and (4) an opportunity for departmental faculty to evaluate the student's suitability to major in the chosen discipline. Both lower- and upper-division students will continue to be advised in the academic departments. Students will become eligible to fulfill the requirement during any semester at the end of which they will have completed 60 or more acceptable hours.

As inducement for students to complete this requirement promptly, those who do will enjoy a higher registration priority than students with the same number of hours who have not done so. To ensure that a student does not unduly delay fulfillment of this requirement, no student who has failed to complete the program planning advising session will be permitted to register beyond 83 hours. Once the adviser and student have worked out a program of studies, which has been approved as evidenced by the copy of the program of study signed both by the adviser and the student and placed in the student's file, the student is no longer required to seek the advice of an adviser. Each department should specifically assign each student a full-time faculty member as an adviser.

The same procedures as described above will also be used for change of major by upper-division students to ensure better advice for those students. Students who are in a lower-division status may change majors as in the current system. However, once a student has completed 60 hours, a change of major will require an extended session with an adviser in the new major before the change is complete. The above are minimal advising procedures, which would appropriately be followed by all undergraduate segments of the University.

http://catalog.gmu.edu
They are not intended, however, to prevent any department from requiring more and regular advising sessions than those proposed above.

**Academic Advising Center**

Students who have not yet decided on a major or who are considering a change of major are advised in 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.

**Medical Sciences Advisory Committee**

Students interested in medicine, dentistry, veterinary medicine, or a related medical field may receive guidance from a special advisory committee. The Medical Sciences Advisory Committee consists of faculty members from appropriate departments within the University who know the admissions requirements and standards of the professional medical science programs, and who will help students apply to professional schools. Students seeking guidance in gaining admission to a professional medical program may write the Chair, Medical Sciences Advisory Committee, c/o Dr. James Fletcher, Assistant Vice President for Academic Affairs, Finley Building, Room 202, George Mason University, Fairfax, Virginia 22030.

**Early Registration**

Early registration for the next semester is conducted commencing about midsemester 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 students cannot attend the first meeting, they must notify the department beforehand if they intend to continue in that section. Otherwise, their names 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 by the student registers. Cards may be picked up beginning the week before classes start or received by mail if not picked up 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 (Schedule Adjustment)

Once registered, students may change their registration only by using a Schedule Change Request Form, available in departmental offices and at the registration site. Registration changes should be completed within the schedule adjustment period defined below and shown in the Academic Calendar. Permission to enter a closed section must be obtained in writing from the academic department offering the course on a Permission to Enter a Closed Section form 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.

The last day for adding or dropping a 14-week course is two calendar weeks after and including the first day of classes.

After the date listed in the Academic Calendar for the end of the schedule adjustment period, 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).

Withdrawal from a Semester

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

Upon withdrawal after the end of the schedule adjustment period the following notation is made on the student's permanent record: "Withdraw voluntarily for nonacademic reasons on (date) in the (number) week of a (number)-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 schedule adjustment 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 courses.

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, falling).

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 incompletes 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 treated as satisfactory grade by 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 follows: 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 meet 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 (for academic or nonacademic reasons) 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 Reenrolled Student
A student reenrolling 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 23. That period then ends on Monday, January 6. The next period begins on Tuesday, January 7.

A student whose eligibility for an activity requires the completion of a semester will have fulfilled that requirement when the student’s publicly scheduled exams are over, unless the student’s continued eligibility depends on the grades received. In the latter case, the student will not become eligible until the end of the semester as defined for probation and suspension purposes.

Effect of Academic Standing on Student Activities
Only students in good academic standing are eligible to hold or run for 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.

Effective with the 1988-89 academic year, every student must meet with an adviser upon entrance into the upper division (completed 60 or more acceptable hours) to adopt a program of study. (See Advising upon Entrance into the Upper Division for complete details.)

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.

Effective with the 1988-89 academic year, once a student has completed 60 hours, a change of major will require an extended session with an adviser in the new major before the change is complete. (See Advising Upon Entrance into the Upper Division for complete details.)

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 each major.

The applicant should present to the involved department chairs a detailed program showing the curriculum to be pursued. This program must be approved by the appropriate department chairs and 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.

**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 Requirement). Of the remaining 18 hours, 6 must be in each of the following three areas:

**Area A**
- Art
- Communication
- English
- Foreign Languages
- Literature
- Performing Arts
- Philosophy
- Religion
- Speech

**Area B**
- Astronomy
- Biology
- Chemistry
- Computer Science
- Engineering
- Geology
- Mathematics
- Physics

**Area C**
- Anthropology
- Economics
- Geography
- Government
- History
- Linguistics
- Psychology
- Regional Cultures
- Sociology

**Graduation**

**Catalog Requirements**

Bachelor’s degree candidates may elect to graduate under the provisions of the catalog in effect at the time of admission or under the provisions of a catalog subsequent to admission if the student has been enrolled in a continuous progression from date of admission to the receipt of a degree (summer sessions and one-semester absences are excluded). A student who fails to register for two or more consecutive semesters must meet either the requirements of the catalog in effect at the time of initial admission or readmission.

When the University or one of its academic units makes changes in grading procedures and/or the level of qualitative performance expected of its students for acceptance into particular programs, academic standing, or graduation, the changes apply to all students enrolled in the University at the time of the implementation of the change and thereafter.

The Special Collections section of the Fenwick Library has a copy of all previous catalogs for use by staff and students. Copies may not be checked out but may be photocopied.

**Residence Requirements**

At least one-fourth of the total semester hours presented on the degree application must be

*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.
completed at the University and must include at least 12 semester hours of advanced-level courses (numbered 300 or above) in the major program.

In addition, students seeking a bachelor’s degree must apply at least 45 hours of upper-division 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.

Students seeking a bachelor’s degree must apply at least 45 hours of upper-division course work (numbered 300 or above) toward graduation requirements.

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 1978-1979 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 B.I.S. 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 16 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, 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

Rex A. Wade, Dean
Paula Gilbert Lewis, Acting Associate Dean
Michael R. Gabel, Acting Associate Dean
Mary K. Cabell, Assistant Dean for Student Affairs
Thomas H. Hill, 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

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>1. Communication</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. Written</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>ENGL 101, 302. Students admitted prior to fall 1983 may substitute ENGL 102 for 302. Nonnative 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.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Oral</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COMM 100, 101, 110, 120, or 130 Foreign Language</td>
<td>10-12</td>
</tr>
<tr>
<td></td>
<td>The student must demonstrate proficiency in one foreign language offered by the University through the intermediate level, either by examination or course work.</td>
<td></td>
</tr>
<tr>
<td>2. Analytical Reasoning</td>
<td>Logic (PHIL 173 or 376) or mathematics.</td>
<td>3</td>
</tr>
<tr>
<td>3. Humanities</td>
<td>a. Literature Any course in literature at the 200 level or above in English or Foreign Languages and Literatures.</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>b. Fine Arts Art, dance, film, music, or theatre (lecture, studio, ensemble, or private lessons).</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>c. Philosophy or religion A logic course does not satisfy this requirement.</td>
<td>3</td>
</tr>
<tr>
<td>4. Social Science</td>
<td>a. Economics, geography, government, history</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>b. Anthropology, psychology, sociology</td>
<td>6</td>
</tr>
<tr>
<td>5. Natural Science</td>
<td>A two-semester laboratory science sequence in astronomy, biology, chemistry, geology, or physics.</td>
<td>6</td>
</tr>
<tr>
<td>6. Non-Western Culture</td>
<td>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, 280, 319, 320 ENGL 432, 433, 434 FREN 451 GOVT 332, 333 HIST 130, 251, 252, 261, 262, 271, 281, 282, 328, 329, 353, 354, 356, 463, 464, 465, 466 KORE 450, 451 LAC 152, 153, 154 MUSI 103 RELI 211, 212, 213, 314, 315, 337, 490 RUSS 353, 354 THR 327 356, 357 VIET 301, 302</td>
<td></td>
</tr>
<tr>
<td>7. Major See appropriate departmental sections of the catalog for required credits.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Total minimum upper division hours</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>9. Total minimum semester hours</td>
<td>120</td>
<td></td>
</tr>
</tbody>
</table>

Bachelor of Science Degree Requirements

1. At least 12 semester hours of English and literature 12
   a. English Composition ENGL 101, 302. Students admitted prior to fall 1983 may substitute ENGL 102 for 302. Nonnative 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 12
   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 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 or psychology 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, Economics, Geology, Mathematical Sciences, Physics, Psychology, and Public Administration. | |
4. Total minimum upper-division hours | 45 |
5. Total minimum semester hours | 120 |

Bachelor of Music Degree Requirements

1. General Education 32
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 10–12
4. Total minimum upper-division hours 45
5. Total minimum semester hours 130

PAGE

Students enrolled at George Mason University may fulfill their general education requirements through the Plan for Alternative 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.

Equivalent Semester Hours

1. Communication 32
   a. Semesters I, II, and III (equivalent to English 101 or 100) 3
   b. Semester IV (equivalent to English 302 or 102) 3
   c. Semesters I, II, III, and IV (equivalent to Communications 100, 110, 120, or 130) 3
   d. Foreign Language (PAGE does not satisfy this requirement) 12

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

3. Humanities 12
   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 6
   a. PAGE Semesters II and IV (equivalent to Economics, Geography, Government, or History) 6
   b. PAGE Semesters I and III (equivalent to Anthropology, Psychology, or Sociology) 6

Bachelor of Fine Arts Degree Requirements

1. General Education 6
   a. ENGL 101, 302. Students admitted prior to fall 1983 may substitute ENGL 102 for 302. Nonnative 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. Literature 6. Any course in literature at the 200 level or above in English or in Foreign Languages and Literatures.
   d. Social Sciences 6.
   e. Additional Nonmusic Courses 8

2. Basic Musicianship 58

3. Music Concentration 18

4. Free Electives 22

5. Total minimum upper-division hours 45

6. Total minimum semester hours 130

(For details, see the music section under Department of Performing Arts.)
American Studies

Faculty
Bergmann, Beyer, Black, Brown, Brunette, Cassara, Cohen, J. Cohn, W. Cohn, Diner, Garson, Hammond, Hodges, Horton, Irvine, Jordan, Kaplan, Krech, Kuebrich (Chair), Lankford, Melosh, Nadeau, O'Connor, Rosenblum, Rosenzweig, Sherman, Stewart, Todd, Tsukui, Walker, Yocom

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 36 hours in American Studies divided as follows:

1. American history
Six hours in HIST 121-122.

2. Introductory Seminar
Three hours in AMST 302. It is 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, or other courses approved by advisor.
   a. Economics: ECON 310, 320, 365
   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.

Physical Education Courses
Activity courses offered by the Department of Health, Sport, and Leisure Studies, College of Education and Human Services, 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.
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 1987-88 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 (a) or (b) below:
   a. AMST 201, 202, 310, 320, 330, 340, 403, 490, 502.
   b. Two courses selected in consultation with the student’s adviser.

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 chair of American Studies. A sample schedule follows.

Sample Schedule for a Double Major in American Studies and History

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>HIST 121</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 100</td>
<td>3</td>
</tr>
<tr>
<td>COMM 100</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>3</td>
</tr>
<tr>
<td>AMST 253</td>
<td>15</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>ENGL 253</td>
<td>3</td>
</tr>
<tr>
<td>HIST 173</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 100</td>
<td>3</td>
</tr>
<tr>
<td>Natural science</td>
<td>4</td>
</tr>
<tr>
<td>AMST 201</td>
<td>3</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>15</td>
</tr>
<tr>
<td>ENGL 253</td>
<td>3</td>
</tr>
<tr>
<td>HIST 173</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 100</td>
<td>3</td>
</tr>
<tr>
<td>Natural science</td>
<td>4</td>
</tr>
<tr>
<td>AMST 201</td>
<td>3</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>16</td>
</tr>
<tr>
<td>AMST 320</td>
<td>3</td>
</tr>
<tr>
<td>AMST 333</td>
<td>3</td>
</tr>
<tr>
<td>HIST 300</td>
<td>3</td>
</tr>
<tr>
<td>HIST 328</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>3</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>15</td>
</tr>
<tr>
<td>AMST 320</td>
<td>3</td>
</tr>
<tr>
<td>AMST 333</td>
<td>3</td>
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<tr>
<td>HIST 300</td>
<td>3</td>
</tr>
<tr>
<td>HIST 328</td>
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</tr>
<tr>
<td>ENGL 302</td>
<td>3</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>15</td>
</tr>
<tr>
<td>AMST 330</td>
<td>3</td>
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<tr>
<td>AMST 368</td>
<td>3</td>
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<td>HIST 272</td>
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<td>HIST 435</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 105</td>
<td>3</td>
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<tr>
<td>Eighth Semester</td>
<td>15</td>
</tr>
<tr>
<td>AMST 340</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
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</tr>
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PAGE Students
The general education requirements (with the exception of foreign language) for the B.A. degree are satisfied by successful completion of the Program for Alternative General Education (PAGE). See PAGE category in this catalog, and see PAGE office (Thompson 222) for sample schedule for majors in American Studies.
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 Asian Studies, European Studies, Latin American Studies, Middle East Studies, or Russian Studies. Asian Studies is supervised by a faculty chaired by Dr. Nobuko Tsukui (acting) of the Department of English; European Studies by a faculty chaired by Dr. Amelia Rutledge 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. (The Asian Studies program is expected to be formally activated in 1987-1988.)

Asian Studies

Faculty

Chu (Education); Chung (Economics); Duara (History); Golomb (Sociology and Anthropology); Ho (Fenwick Library); Hoi (Foreign Languages and Literatures) Liu (Nursing); Mao (Fenwick Library); Nguyen (Public Affairs); Ro (Philosophy and Religion); Saeed (History); Tsukui (English), Acting Chair; Williams (Sociology and Anthropology).

Course Work

The Asian Studies faculty offers all course work designated ASST in the course dictionary of this catalog.

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

Asian 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 42 semester hours of course work in Asian studies as follows:

1. Nine hours in Asian Studies seminars: ASST 450, 460 (A or B), 470. These seminars may be taken in any order. See Asian Studies Courses (ASST) in the course dictionary of this catalog.

2. Thirty-three hours in the following four areas of concentration, at least three hours (or one semester course) to be taken in each of the four areas. At least 18 hours must be earned at the 300 level or above.

   a. Humanities
   b. Social Sciences
   c. Language/literature
   d. Cross-cultural studies

Approved Courses

Department of Art: ARTH 280

Department of Education: (with permission of Asian Studies Chairperson), EDCI 517, 518

Department of English: ENGL 432, 433, 434

Department of Foreign Languages and Literatures: CHIN 101, 102, 201, 202; JAPA 101, 102, 201, 202; KORE 361, 362, 450, 451; VIET 301, 302, 361, 362

Department of History: LAC 153; HIST 251, 252, 353, 354, 356, 390, 451, 463, 499

Department of Performing Arts: MUSI 103, 231; THR 327, 356, 357


Department of Public Affairs: GOVT 333

Department of Sociology and Anthropology: ANTH 114, 206, 211, 332

Sample Schedule for a B.A. in Area Studies Asian Studies

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition 3</td>
<td>Natural Science 4</td>
</tr>
<tr>
<td>Natural Science 4</td>
<td>Communication 100 3</td>
</tr>
<tr>
<td>Asian Language* 101 3</td>
<td>Asian Language 102 3</td>
</tr>
<tr>
<td>Religion 212 3</td>
<td>Music 103 3</td>
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<td>Philosophy 173</td>
<td>LAC 153 3</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology 114 3</td>
<td>Literature 3</td>
</tr>
<tr>
<td>History 251</td>
<td>History 3</td>
</tr>
<tr>
<td>Asian Language 201 3</td>
<td>Asian Language 202 3</td>
</tr>
<tr>
<td>Literature 3</td>
<td>Religion 213 3</td>
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<tr>
<td>GOVT 132</td>
<td>Art History 280 3</td>
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<table>
<thead>
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<th>Fifth Semester</th>
<th>Sixth Semester</th>
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</thead>
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<tr>
<td>English 433 3</td>
<td>English 434 3</td>
</tr>
<tr>
<td>GOVT 333 3</td>
<td>History 354 3</td>
</tr>
<tr>
<td>Anthropology 332 3</td>
<td>ASST 450 3</td>
</tr>
<tr>
<td>English 302 3</td>
<td>Theater 357 3</td>
</tr>
<tr>
<td>Religion 334 3</td>
<td>Religion 338 3</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>History 356 3</td>
<td>History 463 3</td>
</tr>
<tr>
<td>ASST 460 (A or B), Electives 9</td>
<td>ASST 470 3</td>
</tr>
<tr>
<td></td>
<td>Electives 9</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

*Japanese, Chinese, Korean, Vietnamese
## European Studies

### Faculty
Bergoffen, Brown, Brunette, Censer, Clark, Comito, D'Amico, DeNys, Deshmukh, Ebiasah, Elstun, ffolliott, Foster, Gittler, Gras, Jensen, Kolker, Lytton, Mattusch, Pierce, Rutledge (Chair), Tsukui, Wagner, Zaphiriou

### 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:

#### Department of Art:
ARTH 200, 201, 210, 320, 360, 362, 315, 332, 340, 341, 342, 344, 345, 420

#### Department of Performing Arts:
DANC 101; MUSI 101, 181, 381, 187, 387 (see below), *355, 336, 382, 385, 435, 436, 437, 438, 439, 440; THR 101, 351, 352, 457

*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.

#### Department of Foreign Languages and Literatures:

**CLAS 250, 300**

- FREN 101, 102, 201, 202, 252, 325 (offered in English), 329 (offered in English), 353, 375, 376, 377, 378, 405, 413, 414, 421, 422, 431, 432, 441, 442, 480, 481 (by permission)
- FRLN 431 (offered in English)

- GERM 101, 102, 201, 202, 301 (offered in English), 305, 310, 325 (offered in English), 340, 350, 360, 370, 440, 441, 450, 451, 480
- GREE 101, 102, 201, 202
- LATN 101, 102, 201, 202, 321, 322
- PORT 101, 102, 201, 202
- RUSS 101, 102, 201, 202, 310, 311, 353 (offered in English), 354 (offered in English)
- SPAN 101, 102, 201, 202, 252, 303, 304, 325 (offered in English), 331, 333, 361, 431, 432, 435

#### Department of History:


#### Department of Philosophy and Religious Studies:

- RELI 251, 252

#### Department of Public Affairs:
- GEOG 320 (220), 330 (230)
- GOVT 132, 320, 321, 334, 340, 341, 342, 430, 444, 446, 490 (by permission)

#### Department of Sociology:
- SOCI 311, 340 (by permission)

### Sample Schedule for a B.A. in Area Studies

#### European Studies (Concentration: French and Government)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
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<tbody>
<tr>
<td>ENGL 101</td>
<td>FREN 102</td>
</tr>
<tr>
<td>FREN 101</td>
<td>BIOL 104</td>
</tr>
<tr>
<td>BIOL 103</td>
<td>HIST 102</td>
</tr>
<tr>
<td>HIST 101</td>
<td>PHIL 231</td>
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<tr>
<td>COMM 130</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>16</td>
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</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVT 132</td>
<td>GOVT 320</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>GOVT 320</td>
</tr>
<tr>
<td>FREN 201</td>
<td>FREN 202</td>
</tr>
<tr>
<td>EUST 300</td>
<td>PHIL 232</td>
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<tr>
<td>MATH 106</td>
<td>Elective</td>
</tr>
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<td>15</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Western culture (300+)</td>
<td>Non-Western culture (300+)</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>ARTH 201</td>
</tr>
<tr>
<td>FREN 255</td>
<td>EUST 350</td>
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<td>FREN 375</td>
<td>FREN 376</td>
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<tr>
<td>GOVT 340</td>
<td>GOVT 321</td>
</tr>
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<td>15</td>
</tr>
</tbody>
</table>

http://catalog.gmu.edu
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). Prereg 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). Required of senior LAS majors or permission of the instructor. Intereffect of an international program or project related to Latin American Studies, as determined by an individual student. 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 the 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 Religious Studies: PHIL 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

PAGE Students

The general education requirements (with the exception of foreign language) for the B.A. degree are satisfied by successful completion of the Program for Alternative General Education (PAGE). See PAGE category in this catalog, and see PAGE office (Thompson 222) for sample schedule for majors in English.
Middle East Studies

Faculty

Avruch (Sociology and Anthropology); Bakhash (History); Dawisha (Public Affairs); Friedlander (Public Affairs); Haddad (Foreign Languages and Literatures); Holsinger (History); Kramer (Public Affairs); Robbins (Foreign Languages and Literatures); Saeed (History)

Course Work

The Middle East faculty offers all course work designated MEST in the course dictionary of this catalog

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

Middle East 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 42 semester hours of course work in Middle East Studies as follows:

* 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.

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

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Literature</td>
<td>ENGL 302</td>
<td>PORT or SPAN 201</td>
<td>Core discipline</td>
<td>Core discipline</td>
<td>Core discipline</td>
<td>LAS 491</td>
</tr>
<tr>
<td>PORT or SPAN 101</td>
<td>PORT or SPAN 102</td>
<td>PORT or SPAN 202</td>
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<td>3</td>
<td>3</td>
<td>3</td>
<td>Electives (400)</td>
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<tr>
<td>Natural science</td>
<td>Natural science</td>
<td>HIST 272*</td>
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<td>3</td>
<td>3</td>
<td>3</td>
<td>Electives (300+)</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Logic or math</td>
<td>GEOG 316</td>
<td></td>
<td>3</td>
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<td>Electives (300+)</td>
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<td></td>
<td>13</td>
<td>13</td>
<td>15</td>
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Sample Schedule for a B.A. in Area Studies Middle East Studies

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME language 101</td>
<td>Science</td>
<td>ME language 201</td>
<td>History of the Middle</td>
<td>ME language 300</td>
<td>ME language</td>
<td>ME seminar 300</td>
<td>GOVT 132 or 133</td>
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<tr>
<td>ENGL 101</td>
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<td>HIST 281</td>
<td>East: ARAB</td>
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<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>(Logic) or math</td>
<td>101, 102, 201, 202</td>
<td>Electives (300+)</td>
<td>Electives (300+)</td>
<td>Electives (300+)</td>
<td>Electives (300+)</td>
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<td>16</td>
<td>16</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Russian Studies

Faculty

Andrews (Public Affairs), Alexeev (Economics), Clark (Public Affairs), Hecht (Foreign Languages and Literatures) (Chair), Jensen (History), Lavio (Economics), 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 and 381
c. Either RUSS 480 or 481 (preferably both)
d. Russian literature (two courses). (May be used to satisfy the literature requirement for the B.A. degree)
e. Three additional upper-division courses bearing the RUSS designator, of which two must be selected from the following list: 303, 310, 311, 401, 410, and 480 or 481 (whichever is not applied to the basic requirement)
f. Either RUSS 353 or HIST 328 (May be used to satisfy the non-Western culture requirement for the B.A. degree)
g. Either RUSS 354 or HIST 329 (May be used to satisfy the non-Western culture requirement for the B.A. degree)
h. GEOG 330.

Note: Qualified students are encouraged to participate in Study Abroad Programs in the Soviet Union, e.g., at Leningrad State University or the Pushkin Language Institute in Moscow. Students are asked to consult with Professor Levine or Professor Hecht, either of whom will assist them in the application process.

Courses

Department of Foreign Languages and Literatures:
RUSS 101, 102, 109, 201, 202, 209 (Subject to Language Proficiency Examination) RUSS 252, 300, 303, 310, 311, 325, 326, 327, 353, 354, 380, 381, 401, 402, 407, 410, 415, 480, 481, 490, 491

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>3 MUSI 103</td>
</tr>
<tr>
<td>RUSS 101</td>
<td>3 RUSS 102</td>
</tr>
<tr>
<td>COMM 100</td>
<td>3 PHIL 111</td>
</tr>
<tr>
<td>ARTH 120</td>
<td>3 PSYC 100</td>
</tr>
<tr>
<td>SOCI 101</td>
<td>3 MATH 106</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>3 BIOL 104</td>
</tr>
<tr>
<td>BIOL 103</td>
<td>4 RUSS 202</td>
</tr>
<tr>
<td>GEOG 330</td>
<td>3 RUSS 353</td>
</tr>
<tr>
<td>GOVT 132</td>
<td>3 ECON 104</td>
</tr>
<tr>
<td>RUSS 326</td>
<td>3 THR 180</td>
</tr>
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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>3 Elective</td>
</tr>
<tr>
<td>RUSS 310</td>
<td>3 RUSS 354</td>
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<td>3 RUSS 381</td>
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<td>HIST 328</td>
<td>3 RUSS 311</td>
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<tr>
<td>RUSS 380</td>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 270</td>
<td>3 RUSS 410</td>
</tr>
<tr>
<td>RUSS 303</td>
<td>3 RUSS 415</td>
</tr>
<tr>
<td>RUSS 480</td>
<td>3 Elective</td>
</tr>
<tr>
<td>RUSS 407</td>
<td>3 RUSS 300</td>
</tr>
<tr>
<td>RUSS 401</td>
<td>3 RUSS 481</td>
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<td></td>
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</tbody>
</table>

Note: Qualified students are encouraged to participate in Study Abroad Programs in the Soviet Union, e.g., at Leningrad State University or the Pushkin Language Institute in Moscow. Students are asked to consult with Professor Levine or Professor Hecht, either of whom will assist them in the application process.

Courses

Department of Foreign Languages and Literatures:
RUSS 101, 102, 109, 201, 202, 209 (Subject to Language Proficiency Examination) RUSS 252, 300, 303, 310, 311, 325, 326, 327, 353, 354, 380, 381, 401, 402, 407, 410, 415, 480, 481, 490, 491

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
Art

Faculty

Associate Professors: ffolliot, Kravitz, Mattusch (Chair), Ward

Assistant Professors: Clapsaddle, Hammond, Kendall, Todd

Adjunct Associate Professor: Sandell

Lecturers: Antholt, Denker, Mason, Paiewski, Richman, Sherman, Wyss

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)

Visual Thinking (3), or Arts Elective (3) with permission of the department
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.

Courses in support of Graduate Programs. Although a graduate degree program in ARTH is not currently available, these courses are offered 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>Visual Thinking</td>
<td>Art History</td>
</tr>
<tr>
<td>Studio Fundamentals</td>
<td>Studio Fundamentals II</td>
</tr>
<tr>
<td>English 101</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Social science</td>
<td>Social science</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Art history</td>
<td>Oral Communication</td>
</tr>
<tr>
<td>Drawing I</td>
<td>Drawing II</td>
</tr>
<tr>
<td>Sculpture I</td>
<td>Sculpture II</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>Printmaking I</td>
<td>Printmaking II</td>
</tr>
<tr>
<td>Painting I</td>
<td>Painting II</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>Social science</td>
<td>Social science</td>
</tr>
<tr>
<td>English 302</td>
<td>English 302</td>
</tr>
<tr>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>Pinhole Photography</td>
<td>Color Slide Photography</td>
</tr>
<tr>
<td>Studio or Art History electives</td>
<td>Graphic Design</td>
</tr>
<tr>
<td>Mathematics or Logic</td>
<td>Studio or Art History PHIL 366</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

### BA/SIC (Bachelor of Arts and Sciences Integrated Curriculum)

**Faculty**

Elliott and Mandes (co-directors), Adamkewicz, Albanese, Avruch, Bergoffen, D'Amico (team leader), DeNys, Fletcher, Friedlander, Holman, Holsinger, Horton, Jacobs, Kiley, Kolker, Levy, Looney, Lytton, Mose, Nelson, Radner (team leader), Rosenzweig, Smith, Stanley, Todd, Ward

**Aims of BA/SIC Program**

George Mason University is largely a nonresidential University drawing students of varying ages and backgrounds. The BA/SIC program is founded on the premise that the optimal baccalaureate degree for all students is not just an accumulation of miscellaneous credits. Ideally, students will follow a coherent curriculum, and the BA/SIC program is designed to help them do this. It aims to provide students with a setting in which they can integrate knowledge in different disciplines by taking pre-set clusters of 100- and 200-level courses, each of which fulfills requirements for the baccalaureate degree. Assignments in each cluster are designed to explore relationships among the disciplines of science, social science, and humanities. Like all required general education courses, BA/SIC courses seek to develop critical thinking and foster analytical problem-solving and decision-making skills. In addition, students will have an opportunity for increased interaction with faculty members through smaller classes and monthly luncheon meetings with the BA/SIC faculty. The structure of the BA/SIC curriculum will encourage the student to sustain a more active role in the learning process.

The BA/SIC program is funded through the State of Virginia’s Funds for Excellence in Higher Education.

**Academic Policies and Procedures Unique to BA/SIC**

**Admission:** Admission to the BA/SIC program is open to all full- and part-time undergraduate students on a space-available basis.

**Enrollment:** Each BA/SIC cluster of courses is assigned a package number. Students enrolling in a BA/SIC package are automatically enrolled in each of the courses assigned to that package. Students are expected to have met course prerequisites for all BA/SIC course offerings.

**Majors:** The BA/SIC clusters are individually designed to meet the general education requirements.
requirements for a bachelor of arts or a bachelor of science degree. Not all clusters are appropriate for both degrees. Because the general education requirements differ for these two degree programs, students should verify that the cluster in which they are enrolling satisfies the appropriate degree requirements.

Failures

George Mason University has policies on unsatisfactory work (grades D or F) and on incompletes that apply to all students in the University. For further information, see the Grading Policies section of this catalog.

How BA/SIC Differs from PAGE

BA/SIC is appropriate for any undergraduate student who needs to fulfill required general education courses. Thus, the BA/SIC program meets the needs of the newly admitted freshman and of the continuing student, regardless of the number of credit hours accumulated. In addition, BA/SIC students are free to enroll in courses outside of the BA/SIC curriculum.

Biology

Faculty

Professors: Emsley, Ernst, Hart, Johnston, Shaffer, Stanley, Taub, Tombes

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

Assistant Professors: Adamkewicz, Birchard, deFur, Gretz, Heliotis, Jonas, Oates

Adjunct Professors: Cook, Drohan, Freas, Mills, O’Brien, L. Skog

Lecturers: Bright, Egghart, Saab, Strong, Toth-Allen, Yanosky

Course Work

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

Opportunities in Biology

The B.A. or B.S. in biology provides a sound liberal education with substantial experience in quantitative and analytical thought along with preparation for a related profession. In addition to the strong background necessary for graduate study in the many fields of biological science, the broad course work selection at George Mason allows students to concentrate in the following career-related areas: environmental management, microbiology, molecular biology, biotechnology, genetics, secondary education, natural history, and medical technology. Alternatively, students may prepare for graduate-level studies in medicine, dentistry, veterinary medicine, wildlife management, fisheries biology, or marine science. Suggested courses for each of the above may be obtained in person or requested by mail or phone from the departmental office, (703) 323-2181.

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, 307, 311, and 383. 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 343, 344, 345, 346 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, 307, 311, and 383. Candidates must also complete CHEM 211-212, 313-314, 315, and 318 or 320, PHYSICS 106, 107 or PHYSICS 343, 344, 345, 346 and at least nine hours from among the following, including at least two math courses: MATH 110, 111, 113, 114, CS 103, STAT 262, and BIOL 312.

Sample Schedule for B.A. with Major in Biology

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ENGL 101</td>
<td>Social Science or Biology elective 3</td>
</tr>
<tr>
<td>MATH 110 or 113</td>
<td>non-Western elective 3</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>MATH 111 or 114 3-4</td>
</tr>
<tr>
<td>BIOL 113</td>
<td>MATH 212 4</td>
</tr>
<tr>
<td></td>
<td>BIOL 114 4</td>
</tr>
<tr>
<td></td>
<td>14-15</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature 3</td>
</tr>
<tr>
<td>Foreign language 3</td>
</tr>
<tr>
<td>Biology elective 4</td>
</tr>
<tr>
<td>Biology elective 4</td>
</tr>
<tr>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 307 or 311 4</td>
</tr>
<tr>
<td>Foreign language 3</td>
</tr>
<tr>
<td>ENGL 302 3</td>
</tr>
<tr>
<td>Biology elective, 300 or 400 level 4</td>
</tr>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social science or Biology elective 3</td>
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<tr>
<td>non-Western elective 4</td>
</tr>
<tr>
<td>Social Science or Non-Western elective 3</td>
</tr>
<tr>
<td>Social Science or Non-Western elective 3</td>
</tr>
<tr>
<td>Humanities elective 3</td>
</tr>
<tr>
<td>BIOL 383 4</td>
</tr>
<tr>
<td>Elective 3</td>
</tr>
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<table>
<thead>
<tr>
<th>Sample Schedule for B.S. with Major in Biology</th>
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</thead>
<tbody>
<tr>
<td>First Semester</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>BIOL 113 4</td>
</tr>
<tr>
<td>CHEM 211 4</td>
</tr>
<tr>
<td>ENGL 101 3</td>
</tr>
<tr>
<td>MATH 110 or 113 3-4</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology elective 4</td>
</tr>
<tr>
<td>CHEM 313 CHEM 315 5</td>
</tr>
<tr>
<td>Literature 3</td>
</tr>
<tr>
<td>Nonsci. elective 4</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology elective 4</td>
<td>Biology elective 4</td>
</tr>
<tr>
<td>BIOL 307 or Biology elective 4</td>
<td>BIOL 311 or Biology elective 4</td>
</tr>
<tr>
<td>ENGL 302 3</td>
<td>Nonscience elective 3</td>
</tr>
<tr>
<td>PHYS 106 or 343, 344</td>
<td>PHYS 107 or 345, 346</td>
</tr>
<tr>
<td></td>
<td>14-15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology elective or 3-4</td>
<td>Biology elective or 3-4</td>
</tr>
<tr>
<td>BIOL 383 4</td>
<td></td>
</tr>
<tr>
<td>Elective 3</td>
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<tr>
<td>Elective 0-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14-16</td>
</tr>
</tbody>
</table>

Courses Approved for Undergraduate Biology Major

Credit: GEOL 202, 307, 309, CHEM 563, 564, 565

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.

Pre-Medical, Pre-Dental, and Pre-Veterinary 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 assistance and for information about the University Health Sciences Advisory Committee.

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

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 Teaching.

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.

Environmental Management Certificate

The Department of Biology offers an undergraduate certificate program in environmental management for students interested in environmental issues. The program consists of 27 hours of course work, most of which could be counted with appropriate planning toward the fulfillment of B.S. or B.A. requirements in biology. The curriculum provides a substantive appreciation of the biological, physical, and social aspects of environmental problems and methods for their analysis and resolution. It should particularly interest students wishing to pursue graduate work or seeking employment in the environmental field. All biology majors are eligible to enroll. For further information please contact the certificate coordinator, Dr. Francis Heliotis, Room 3037 A-III, (703) 323-2181.

Biology for Nonmajors

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 Education and Human Services 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 nonmajor courses for those seeking additional elective credit. Students who have completed one year of nonmajor 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, 383, and 452;
2. Chemistry, a minimum of 22 hours, including CHEM 211-212, 313, 314, 315, either 318 or 320, and 321;
3. Mathematics, a minimum of six hours. (STAT 250 recommended, MATH 106 not applicable.)

Students are encouraged to elect additional basic science courses during their preprofessional years. Recommended are: BIOL 311, 380, 465, CS 103, CHEM 563, 564, 565, 566, PHYS 106, 107.

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

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 113</td>
<td>4</td>
</tr>
<tr>
<td>MATH 110 or 113</td>
<td>3—4</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
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<tr>
<td>Nonscience elective*</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total:</strong> 14-15</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 313 and 315</td>
<td>5</td>
</tr>
<tr>
<td>or 320</td>
<td></td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>Non-science elective*</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total:</strong> 15</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 321</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>3</td>
</tr>
<tr>
<td>Science electives**</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total:</strong> 16</td>
<td></td>
</tr>
</tbody>
</table>

**Professional Phase.** Twelve months' clinical education at an affiliated school of medical technology.

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.

Biology Clubs and Societies

Beta-Beta-Beta Biological Honor Society: Active members must have completed at least 54 credit hours and have a 3.0 Biology GPA with an overall 3.0. The goal of this organization is to promote scholarship, research, and dissemination of biological knowledge.

Biology Club: The club functions as both a social and informational network for all interested students. In addition it serves the Biology Department by sponsoring a seminar program and working at University functions.

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

**CIS 103; BIOL 311, 380, 465; CHEM 563, 564, 565, 566; PHYS 106, 107.

Premedical Society: The Premedical Society is a student support group providing professional school tours, educational programs, and lectures on health topics and on the professional school admissions process to students interested in health-related fields such as medicine and dentistry.

For more information contact the Biology Department in Academic III.
Sample Schedule for B.A. in Chemistry

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 113</td>
<td>MATH 114</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>CHEM 212</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Literature</td>
</tr>
<tr>
<td>Elective (e.g., BIOL 113)</td>
<td>Elective (e.g., BIOL 114)</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>CHEM 313</td>
<td>CHEM 314</td>
</tr>
<tr>
<td>CHEM 315</td>
<td>CHEM 318</td>
</tr>
<tr>
<td>MATH 213</td>
<td>CHEM 320</td>
</tr>
<tr>
<td>Literature</td>
<td>ENGL 302</td>
</tr>
<tr>
<td>PHYS 343</td>
<td>Elective</td>
</tr>
<tr>
<td>PHYS 344</td>
<td>PHYS 345</td>
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<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>CHEM 321</td>
<td>CHEM 332</td>
</tr>
<tr>
<td>CHEM 331</td>
<td>CHEM 336</td>
</tr>
<tr>
<td>Electives</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Electives</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>CHEM Elective</td>
<td>CHEM Elective</td>
</tr>
<tr>
<td>CHEM 337</td>
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<td>9</td>
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<tr>
<td></td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>121 hours total</td>
<td></td>
</tr>
</tbody>
</table>

Pre-Medical, Pre-Dental, and Pre-Veterinary 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 103.

Sample Schedule for B.S. in Chemistry

<table>
<thead>
<tr>
<th>First Semester</th>
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<tr>
<td>MATH 113</td>
<td>MATH 114</td>
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<tr>
<td>CHEM 211</td>
<td>Electives</td>
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<tr>
<td>ENGL 101</td>
<td>CHEM 212</td>
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<tr>
<td>CS 161</td>
<td>Literature</td>
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<tr>
<td>Elective</td>
<td>15</td>
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<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
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<tr>
<td>MATH 213</td>
<td>MATH 304</td>
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<td>PHYS 343</td>
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<td>CHEM 313</td>
<td>CHEM 314</td>
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<td>CHEM 315</td>
<td>CHEM 318</td>
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<td>CHEM Elective</td>
<td>CHEM 320</td>
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<tr>
<td>PHYS 344</td>
<td>PHYS 346</td>
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<td>14 or 15</td>
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70 College of Arts and Sciences

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<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>CHEM 331</td>
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</tr>
<tr>
<td>Literature</td>
<td>3</td>
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<tr>
<td>CHEM 321</td>
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<td>Electives</td>
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<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<tr>
<td>CHEM 441</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry elective 2 or 3</td>
<td>Chemistry elective 3</td>
</tr>
<tr>
<td>CHEM 337</td>
<td>2</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
</tr>
</tbody>
</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, Electrical and 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.

Communication

Faculty
Professors: Manchester, Taylor (Chair)
Associate Professors: Decker, Friedley
Assistant Professors: Akwule, Broome, Lont
Acting Assistant Professors: Steinberg
Lecturers: Bartelt, Boileau, Harrison-Smith, Joffe, Lieb-Brilhart, Rainey, Ryan, Schaefer

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 last semester 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, 12 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 10 hours total from among the following one credit courses: COMM 140, 141, 142, 143, 145, 146, 148, 340, 341, 342 343, 345, 346, 348, 349, 357, 450, 451.

No more than 6 hours internship credit (COMM 450) may be applied toward COMM electives; not more
than 9 hours credit in COMM 450 may be applied toward the 120 hours required for graduation.

Acceptance into major status in communication is competitive. To apply, students must have successfully completed 30 hours toward the CAS general education requirements for the B.A. degree, including COMM 101, 110, 120 or 130; have completed one of the core courses (COMM 300, 301, or 302); and have achieved appropriately high grades. For details of the acceptance process, see the requirements list available in the Communication Department office.

Not more than 9 hours upper-level communication courses taken prior to acceptance into the major may be counted toward the total 36 hours required communication courses. This restriction applies to all students accepted into the major 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 acceptance process.

To fulfill CAS general education communication requirements, 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 COMM 101, or 110, or 120, or 130)

**Analytical Reasoning** (3)
(Logic or Mathematics; STAT 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.

The general education requirements for COMM majors, except foreign language and COMM 101, 110, 120, or 130, may be satisfied by successful completion of the Plan for Alternative General Education (PAGE). See PAGE category in this catalog; sample schedules are available in PAGE office.

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 and Literatures for test information.
Economics

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.

**B.S. Degree with a Major in Economics.** In addition to general requirements for the 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 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 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.

PAGE Students: The general education requirements (with the exception of foreign language) for the B.A. and B.S. degrees are satisfied by successful completion of the Program for Alternative General Education (PAGE). See PAGE category in this catalog. See PAGE office (Thompson 122) for sample schedule for PAGE students with major in economics.

Sample Schedule for B.S. with Major in Economics

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ECON 103</td>
<td>3</td>
<td>ECON 104</td>
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<tr>
<td>ENGL 101</td>
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<td>Literature</td>
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<td>MATH 113</td>
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<td>MATH 114</td>
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<tr>
<td>Science</td>
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<td>Science</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
<td>ECON 306</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
<td>ECON 311</td>
</tr>
<tr>
<td>DESC 200</td>
<td>3</td>
<td>ENGL 302</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>3</td>
<td>DESC 202</td>
</tr>
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<td>Elective</td>
<td>4</td>
<td>Economics elective</td>
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<tr>
<td></td>
<td>16</td>
<td>Elective</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Economics elective</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>ECON 345</td>
<td>3</td>
<td>Economics electives</td>
</tr>
<tr>
<td>CS 103 or IRM 201</td>
<td>3</td>
<td>Electives</td>
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<tr>
<td>Electives</td>
<td>7</td>
<td>9</td>
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<tr>
<td>Seventh Semester</td>
<td>Economics electives</td>
<td>Eighth Semester</td>
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<td>Electives</td>
<td>6</td>
<td>Economics electives</td>
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Sample Schedule for B.A. with Major in Economics

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<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ECON 103</td>
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<td>ECON 104</td>
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<tr>
<td>ENGL 101</td>
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<td>Literature</td>
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<tr>
<td>MATH 108</td>
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<td>Foreign Language</td>
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<tr>
<td>Foreign Language</td>
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<td>PHIL or RELI</td>
</tr>
<tr>
<td>Communication</td>
<td>3</td>
<td>Non-Western Culture</td>
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<tr>
<td></td>
<td>15</td>
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<tr>
<td>Third Semester</td>
<td>ECON 306</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
<td>ECON 311</td>
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<tr>
<td>Natural Science</td>
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<td>ENGL 302</td>
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<td>Foreign Language</td>
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<td>DESC 202</td>
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<td>Fifth Semester</td>
<td>ECON Electives</td>
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<td>ANTH, PSYC, or SOCI</td>
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<td>ECON Electives</td>
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<td>Fine or Performing Arts</td>
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<td>ANTH, PSYC, SOCI</td>
</tr>
<tr>
<td>Non-Western Culture</td>
<td>3</td>
<td>Electives</td>
</tr>
<tr>
<td></td>
<td>15</td>
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<tr>
<td>Seventh Semester</td>
<td>ECON Electives</td>
<td>Eighth Semester</td>
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<tr>
<td>Electives</td>
<td>9</td>
<td>ECON Electives</td>
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<td></td>
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http://catalog.gmu.edu
English

Faculty

Professors: Baxter, L. Brown, S. Brown, J. Cohn, Comito, D’Andrea (Robinson Professor), Garson, Gras, Kelley, Molin, Shreve, Williams

Associate Professors: Richard Bausch, Bergmann, Brunette, Foreman, Foster, Gallehr, Goodwin, Grossberg, Hammond, Hodges, Irvine, Jann, Kaplan, Karlson, Keaney, Klappert, Kuebrich, Lathbury, Melosh, Nadeau, O’Connor, Owens, Palmieri, Radner, Rutledge, Story, Sypher, Thaiss, Tsukui, Yocom

Assistant Professors: Adamson, Albanese, Holisky, Horwitz, Nelson

Lecturers: Allen, Robert Bausch, Baxter, Burch, Callow, Cantor, Cascio, Clements, Craver, Crouch, Davis, DeNys, Domin, Ewing, Fawcett, Goldsmith, Guggenheim, Humbertson, Jacobs, Kozak, Kuniholm, Lindstrom, Merz, Montecino, Prociopoli, Purcell, Pyrek, Raffel, Rahm, Rubin, Ruedy, Ryan, Sage, Saio, Smith, Spiers, Ward, Williams, Wilson, Zawacki

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 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 the following distribution:

1. At least 12 credits in the following courses: ENGL 309, 397, 398, 410, 458, 464, 489, 503, 504
2. Twelve hours of literature courses including ENGL 325, Dimensions of Literature
3. Six credit hours in upper-level English courses of the student’s choice

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 Religious Studies. See Philosophy and Religious Studies section of this catalog for a description of the course of study. 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 procedure.

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.

PAGE Students. The general education requirements (with the exception of foreign language) for the B.A. degree are satisfied by successful completion of the Program for Alternative General Education (PAGE). See PAGE category in this catalog, and see PAGE office (Thompson 222) for sample schedule for majors in English.
Foreign Languages and Literatures

Faculty

Professors: Francescato (Chair), Aguera, Elstun, Hecht, Lewis, Marquez (Robinson Professor), Willis

Associate Professors: Cordeiro, Goldin, Hazera, LePage, Meyer, Wagner

Assistant Professors: Berroa, Bufill, Chamberlain, Levine, Ricouart, Wekerle

Lecturers: Cabrera, Carboni-Vetter, Davis, Forowa, Hol, Seidman

Course Work

This department offers all course work designated ARAB, CHIN, CL, CLAS, FREN, FRLN, GERM, GREE, HEBR, ITAL, JAPA, KORE, LATIN, 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; GERM 301, 302, 305, 325*; JAPA 301, 302; KORE 450, 451;

*Courses numbered 325 with a variable content may be repeated once for credit.

RUSS 300, 353, 354; SPAN 321, 322, 325*, 329; VIET 301, 302.

Elementary and intermediate courses are offered in Arabic, Chinese, French, German, Greek, Italian, Japanese, Latin, Portuguese, Russian, and Spanish, which may be used to fulfill the College’s foreign language area requirement for the B.A. degree. These courses are also designed to broaden the student’s general educational background and strengthen an awareness of the intrinsic value of language and linguistic heritage. The language laboratory complements the oral and written work of the classroom with tapes, drills, exercises, and cultural materials.

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 301, 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 Education.

The Comparative Literature Option. The Foreign Language department, along with the Department of English, offers a B.A. in Foreign 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 Department of Foreign Languages and Literatures or the English Department.

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 350, 351, 352, 355, 356, 460, 461, or 462)

2. One course in French civilization (FREN 375 or 376)

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.

4. No more than one course (3 credit hours) conducted in English may be taken for major credit in Spanish.
Geology

Faculty
Professors: Mose (Chair)
Associate Professor: Diecchio
Assistant Professor: Kline
Adjunct Professors: Gurfein, Hall

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, and 303, 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 343-345, 344-346 or 250-350). Geology majors are strongly encouraged to take a six-week summer field-camp course approved by the field-camp adviser. Geology majors unable to attend a field camp are encouraged to take GEOL 407. GEOL 407, in addition to GEOL 108 and 303, will constitute six credit hours of field mapping experience that may be considered equivalent to a field-camp course. 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 two years) to teach Earth Science in Virginia secondary schools if the courses used to satisfy the geology degree requirements include the following: Astronomy (ASTR 103 or 105); chemistry (CHEM 211); biology (BIOL 113 or 151); mathematics (MATH 113); meteorology (GEOG 206 OR 309); oceanography (GEOL 309), and physics (PHYS 250 OR 341). Additional information on the requirements for a Collegiate Professional Certificate to teach Earth Science (good for five years, renewable) may be obtained from the Geology chair.

Certificate Programs in Geology. The Department of Geology offers three certificate programs: (1) Certificate in Earth Science Teaching—requires a year of geology plus a semester of astronomy, general chemistry, meteorology, oceanography, calculus, physics, and a science education course; (2) Certificate in Geoscience Programming—requires 9 hours of computer science, 6 hours of computer science in engineering, 6 hours of statistics courses, and 6 hours of computer science in earth science; and (3) Certificate in Geochemistry—requires 12 hours of chemistry and 12 hours of geology. Additional information about these certificates can be obtained from the chair of the Department of Geology and from the Certificates and University Courses section of this catalog.

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 the Division of Continuing Education (703-323-2342).

Minimum course requirements:
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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<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>GEOL 101</td>
<td>GEOL 102</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Literature</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>CHEM 212</td>
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<tr>
<td>CS 112</td>
<td>GEOL 104</td>
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<td></td>
<td>GEOL 108</td>
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<tr>
<td>15</td>
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</tbody>
</table>

http://catalog.gmu.edu
History

Faculty

Professors: Bakhash (Robinson Professor), Cassara, Diner, Pacheco, Pugh, Spence, Wade

Associate Professors: Censer, D’Amico, Deshmukh (chair), Gleissner, Harsh, Henriques, Holsinger, Jensen, Lytton, Rosenzweig, Saeed, Soder, Walker

Assistant Professors: Cohen, Duara, Hawkes, Stewart

Lecturers: Ambacher, Angel, Bailey, Butowsky, Couturier, Hood, Jessup, Pearce, Shaw, Swann, Sneerson, Garcia-Godoy, Spector

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: 6 semester hours
2. European history (including Russia): 6 semester hours
3. Global, Latin American, African, Asian, or Middle Eastern history: 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.** History majors and majors in disciplines other than history who wish to become secondary school teachers in (1) history or (2) history and social science should consult with the secondary education adviser in the Department of History. 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></th>
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<tbody>
<tr>
<td>HIST 101</td>
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<td>HIST 102</td>
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<td>Foreign language</td>
<td>3</td>
<td>Foreign language</td>
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<tr>
<td>English composition</td>
<td>3</td>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>Social science</td>
<td>3</td>
<td>Social science</td>
<td>3</td>
</tr>
<tr>
<td>(Group B)</td>
<td></td>
<td>Mathematics or logic</td>
<td>3</td>
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<tr>
<td>Fine arts</td>
<td>3</td>
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<td>HIST 122</td>
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<tr>
<td>Foreign language</td>
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<td>Foreign language</td>
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<tr>
<td>Natural science</td>
<td>4</td>
<td>English 302</td>
<td>3</td>
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<tr>
<td>Literature</td>
<td>3</td>
<td>Natural science</td>
<td>4</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>3</td>
<td>Philosophy or religion</td>
<td>3</td>
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<tr>
<td>HIST 300</td>
<td>3</td>
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<td>History elective</td>
<td>3</td>
<td>History elective</td>
<td>3</td>
</tr>
<tr>
<td>Oral communication</td>
<td>3</td>
<td>Non-Western culture</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>Elective</td>
<td>3</td>
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<td>Elective</td>
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<td>Elective</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
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<th>Eighth Semester</th>
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<tbody>
<tr>
<td>Senior Seminar in</td>
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<td>Senior Seminar</td>
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<tr>
<td>History (or history elective)</td>
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<td>History (or history elective)</td>
<td>3</td>
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<tr>
<td>History elective</td>
<td>3</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></td>
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</table>

### Mathematical Sciences

#### Faculty

**Professors:** Saperstone (Acting Chair), Smith (Mathematics Education)

**Visiting Professors:** Epstein, Hershner

**Associate Professors:** Cabell, Fischer, Gabel, Kiley, Levy, Lim, Shapiro, Zoltek

**Assistant Professors:** Alligood, Calderer (on leave 1986-87), Chen, Lawrence, Lin, McDaniel, O’Brien, Sarkaria, Sauer, Svendsen (on leave 1986-87), Thomas, Trenholme

**Visiting Assistant Professors:** Colonna, Lonc, Porter, Wang

**Lecturers:** Ahamadi, Andersen, Donelson, Ellis, Haberkorn, Lanier, Lawson, Morse, Paddock, Rosenfeld

#### Course Work

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

#### Degree Requirements

**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 113, 114, 290, 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 who are not majoring in mathematics but are pursuing certification for secondary school teaching are advised to take MATH 290, 302, 303, and CS 103 or 112.

**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, 290, 215, 303, 306, 315, 316, 321, 322, plus 12 additional hours numbered above 310 for a total of 46 semester hours in mathematics. CS 112 is 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.

MATH 213 and 304 are not recommended for mathematics majors. MATH 106, 108, 110, 111, 371, and 372 do not count toward satisfying the requirements for a major in mathematics.

For Nonmajors. MATH courses 108, 110, and 111 are designed for students in the social and behavioral sciences. Liberal arts majors are advised to take either MATH 106 or the sequence 110, 111. 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.

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>
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<td>FRLN 101</td>
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<tr>
<td>MATH 113</td>
<td>MATH 114</td>
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<td>Natural science</td>
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<tr>
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<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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<td>MATH 215</td>
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<td>MATH 290</td>
<td>FRLN 202</td>
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<td>Elective</td>
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<td>Oral Communication</td>
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<td>Sociology,</td>
<td>Sociology,</td>
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<td>psychology,</td>
<td>psychology,</td>
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<tr>
<td>or anthropology</td>
<td>anthropology</td>
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<tr>
<td></td>
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<td>15</td>
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<td>MATH (above 310)</td>
<td>MATH (above 310)</td>
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<td>16</td>
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</tbody>
</table>
PAGES (Plan for Alternative General Education)

Faculty


The following PAGES faculty serve as course leaders of multidisciplinary courses listed in the dictionary of this catalog.

Fred Siff, PAGE 120; Eileen Sypher, PAGE 122; Margaret Yocom, PAGE 123; Michael R. Gabel, PAGE 125/225; Aliza Kolker, PAGE 130; Eleanor Gerber, PAGE 131; Emmett Holman, PAGE 150/151; Christopher Thaiss, PAGE 152/153; Douglas Mose, PAGE 227; R. Christian Jones, PAGE 228; Donald Holsinger, PAGE 230; Christopher Thaiss, PAGE 250/251; Robert Clark, PAGE 252; David Kuebrich, PAGE 253; Stanley Zoltek, Computing Across the Curriculum; Marie Nelson, Writing Across the Curriculum.

Course Work

The PAGES faculty offers all course work designated PAGES in the Course Dictionary of this catalog.

PAGES 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 skill in writing and speaking and in use of the computer. The PAGES program, in whole or in part, fulfills general education and graduation requirements for a bachelor's degree at George Mason.

Students in PAGES 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 PAGES will be two weekly lecture series (one credit each) by PAGES faculty and guest lecturers during each of the first three semesters.

Academic Policies and Procedures Unique to PAGES

Students in PAGES are subject to University policy on admissions, transfers and failure as stated in this catalog. In addition, students in PAGES (a special curriculum within this University structure) are subject to certain academic policies and procedures that are unique to this sequential program:

Admission: Admission to the PAGES program is open to all full-time entering freshmen on a space available basis.

Majors: Not a major in itself, PAGES fulfills general education requirements for every major a student may choose. Specific requirements of the departments in regard to their majors are available in the PAGES office and in the department offices.

Transfers: Within GMU—Because of the sequential and integrated nature of the program, PAGES courses do not correspond exactly to the general education courses in the traditional programs. A list of equivalencies is available in the CAS section of this catalog, in the PAGES office, and in the offices of the deans.

Outside GMU—The PAGES 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. George Mason University has policies on unsatisfactory work (grades of D or F) and on incompletes that apply to all students in the University. (Refer to the Grading Policies section of this catalog.)

2. Supplementary policies on failures for students in PAGES:
   a. PAGES students failing (grade of F) a total of five or more hours of course work in PAGES in the first semester of the freshman year will be dropped from the program.
   b. PAGES students failing (grade of F) 2 to 4 hours of course work in PAGES in a given semester will be placed on "Notice." The student then will also be dropped from the program.
   c. If a student is placed on "Notice" in the first semester of the freshman year then receives failing grades in five or more hours of the second semester, that student will also be dropped from the program.
   d. If a student is placed on "Notice" in both semesters of the freshman year and then receives failing grades in five or more hours in PAGES in the first semester of the sophomore year, then that student also will be dropped from the program.

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e. Failing grades occurring in the second semester of the sophomore year will not lead to immediate dismissal from the program; however, students must realize that failing grades received at this time will most likely mean a delay of at least two semesters before they can complete the PAGE program.

f. Except with permission of the director, students must retake, in the next semester in which these courses are offered, the PAGE course(s) they have failed. In exceptional cases, the PAGE office may allow a student to substitute a similar course, offered elsewhere in the University, for the PAGE course a student has failed.

g. Reinstatement of those dropped from PAGE: Students may appeal to the director the policies stated above. Academic counseling will be provided for all students failing courses in PAGE.

h. University Rules for Good Academic Standing: Like all other students in the University, PAGE students are bound by University policies governing "good academic standing." Please become familiar with these policies as they are stated in this catalog.

3. 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. A list of equivalencies between PAGE courses and courses in the traditional general education program is available in the PAGE office and in the offices of the deans. Special requirements of the departments in regard to their majors are available in the PAGE office and in the department offices.

Performing Arts

Faculty

Professors: Burton, D’Andrea (Robinson Professor), di Bonaventura, Gabriel (Chair), Maiello, J. Smith

Associate Professors: Brawley, Cooke, Hill, Kanyan, K. Latimer, L. Miller, Murphey, G. Smith

Assistant Professors: Harrison, Houser, K. C. Latimer

Lecturers: Andrews, Brophy, Dengler, Jankowski, Maley, Marvel, Simone, B. Smith, Wade

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 (Classical). Jeffrey Meyereicks, 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
harpist, National Gallery Orchestra and National Symphony Orchestra.

**Harpichord.** Webb Wiggins, Adjunct Assistant Professor. B.M., Stetson University; M.M., Eastman School; harpsichordist, Smithsonian Chamber Orchestra and Smithsonian Chamber Players.

**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.

**Violoncello.** Wilson Schmitt, Adjunct Professor. Columbia University; Tobias Matthay Pianoforte School, London; École Normale, Paris; Sorbonne, Paris; former soloist, U.S. and European orchestras; former head of piano departments, Drake and Syracuse universities.

**Viola.** 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.** Curtis Burris, Adjunct Assistant Professor. Northwestern University; 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.

**Tuba.** Michael Murray-Bunn, Adjunct Assistant Professor. B.M., M.M., Peabody Conservatory; tubist, Kennedy Center Opera House Orchestra, Filene Center (Wolf Trap) Orchestra, and National Gallery Orchestra.

**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.

**Viola Da Gamba.** Kenneth Slowik, Adjunct Associate Professor. B.M., M.M., Roosevelt University; principal viola da gambist and cellist, Smithsonian String Quartet, Smithsonian Chamber Orchestra, and Smithsonian Chamber Players.

**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.** Raymond Brown, Adjunct Professor. Teacher's Certificate, Peabody Conservatory; B.S., Johns Hopkins University; Professor Emeritus, The Pennsylvania State University; former soloist, oratorio and opera companies in the United States and Europe.

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.

Vera Tilson, Adjunct Associate Professor. Mannes College of Music; music director, Unitarian Church of Arlington; former music director and conductor, Arlington Metropolitan Chorus.

Anastios Vrenios, Adjunct Associate Professor. B.M., University of the Pacific; M.M., Indiana University; soloist, major U.S. and European orchestras and opera companies.

**Koto.** Kyoko Okamoto, Adjunct Assistant Professor. Bachelor in Languages, Kyoto University of Foreign Studies; Toho Kinshu Kai (Koto School).

**Composition.** Stephen Burton, Professor. M.M., Peabody Conservatory.
Sam di Bonaventura (see listing under Violin).

Glenn Smith, Associate Professor. B.A., M.A., California State University, Hayward; D. Mus., Indiana University.

**Conducting.** Stephen Burton (see listing under Composition).

Arnald Gabriel, Professor. B.S., M.S., Ithaca College; former conductor, U.S. Air Force Band and Symphony Orchestra.

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).

Anthony Maiello, Professor. B.S., M.S., Ithaca College; former Director of Bands, Potsdam College of the State University of New York.

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.

**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 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 graduate work in performance, choreography, teaching, history, and criticism in addition to 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 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 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 as follows:

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<tr>
<th>Semester Hours</th>
<th>1. General education</th>
<th>32</th>
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<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>
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<tr>
<th>Semester Hours</th>
<th>2. Major Program Dance Core:</th>
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<td>Dance and related courses required of all dance majors:</td>
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<td>Dance Appreciation</td>
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<td>Modern Dance Technique (21 hours must be Intermediate and above)</td>
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<td>Dance History I—Primitive through 18th Century</td>
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<td>Dance History II—19th and 20th Century</td>
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<td>Rhythmic Analysis</td>
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<td>Dynamic Alignment</td>
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<tr>
<td>Teaching Principles of Modern Dance</td>
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<tr>
<td>Dance Performance</td>
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<td>Costumes</td>
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<td>Lighting</td>
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<td>Choreography</td>
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| Semester Hours | 3. Dance Electives: Concentrations in choreography, teaching, and performance | 15 |
|----------------|-------------------------------------------------|
|                | 4. Free Electives | 10 |
| Total          | 130 |
### Bachelor of Fine Arts—Dance Sample Schedule

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>English Composition</td>
<td>English Literature</td>
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<td>Modern Dance Technique</td>
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<td>Modern Dance Technique</td>
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| Total | 16 |

### Bachelor of Arts—Dance Sample Schedule

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>ENGL 101</td>
<td>Math/Logic</td>
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<tr>
<td>Phil/Religion</td>
<td>Foreign Language</td>
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<td>Foreign Language</td>
<td>Social Science</td>
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<td>Social Science</td>
<td>Non-Western Culture</td>
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<tr>
<td>Dance Appreciation</td>
<td>Dance Improvisation</td>
</tr>
<tr>
<td>Dance History</td>
<td>Dance History</td>
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<tr>
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<table>
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<tr>
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<table>
<thead>
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<th>Seventh Semester</th>
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<tbody>
<tr>
<td>Non-Western Culture</td>
<td>Dance Performance</td>
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<tr>
<td>Teaching Principles and Methods</td>
<td>Dance Elective</td>
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<td>Electives</td>
<td>Electives</td>
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| Total | 15 |

### 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)

Keyboard Majors must substitute MUSI 271 and 272 (Techniques of Accompanying) for Class Piano I and II.
Major Instrument or Voice (Private Music Instruction) (8)
Ensemble (7)

<table>
<thead>
<tr>
<th>Concentration in Accompanying (total of 18 semester hours)</th>
</tr>
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<tbody>
<tr>
<td>Private Music Instruction (8)</td>
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<tr>
<td>Junior Recital (1)</td>
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<td>Senior Recital (1)</td>
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<tr>
<td>Music Literature (3)</td>
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<tr>
<td>Voice (Class Voice and/or Undergraduate Private Music Instruction) (2)</td>
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<tr>
<td>Diction (1)</td>
</tr>
<tr>
<td>Chamber Ensembles (2)</td>
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**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

#### Harmony I, II, III, IV
11

#### Keyboard Harmony
1

#### Sight Singing and Ear Training I, II
4

#### Survey of World Music
3

#### Historical, Theoretical, and Analytical Study of Music I, II, III, IV
12

#### Class Composition and Arranging I
3

#### General Conducting
2

#### Class Piano I, II
2

#### Major Instrument or Voice (Private Music Instruction)
12

#### Ensemble
8

### Music Concentration
18

### Free Electives
22

### Total
130

### 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 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).

### 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).

### Concentration in Vocal Performance

For admittance into the concentration in Vocal Performance, a student must be approved by a Vocal Performance Concentration Audition Committee.

The following required sequence of courses is in addition to those listed under Basic Musicianship (Bachelor of Music degree).

---

3Voice 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).

4Voice 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.)

5To 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.

6Nine semester hours must be earned in foreign languages; one semester each is required of French, German, and Italian.
Improvisation (1)
Ensembles (2)

Concentration in Winds/Strings/Percussion
Performance
Major Instrument (Private Music Instruction) (8)
Junior Recital (1)
Senior Recital (1)
Orchestral Literature (3)
Advanced Conducting (2)
Improvisation (1)
Ensembles (2)

Concentration in Music History and Literature
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).

Concentration in Music History and Literature (total of 18 semester hours)
Music Literature (12)
Theory Elective (3)
Independent Study (3)

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. 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:

General Education²
ENGL 101 and 302
Literature
Any course in literature at the 200 level or above in English or in Foreign Languages and Literatures.
HIST 121 or 122
Social and/or behavioral science
Laboratory science

Basic Musicianship
Harmony I, II, III, IV
Keyboard Harmony
Sight Singing and Ear Training I, II
Survey of World Music
Historical, Theoretical, and Analytical Study of Music I, II, III, IV
Class Composition and Arranging I
General Conducting
Class Piano I, II³
Major Instrument or Voice (Private Music Instruction)
Ensemble⁴
Laboratory Ensemble

Music Education Concentration
Laboratory Ensemble
Secondary Instruments/Voice⁵

¹Courses from the College of Arts and Sciences only.
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: Flute and Clarinet; 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.
⁵Vocal 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 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 Gloriana Singers.

¹The 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.
Advancement Conducting 2
Improvisation 1
Music Methods (MUSI 461 and 463 or 464 and 466) 6

### Additional Courses

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<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Mathematics</td>
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<td>Mathematics or science</td>
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<td>Human Development</td>
<td>3</td>
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<tr>
<td>Foundations of Elementary Education</td>
<td>2</td>
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<tr>
<td>Learning Theory</td>
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<td>HEAL 110</td>
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<td>Modern Dance</td>
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| Total                           | 22    |

### Student Teaching

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Total</td>
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### Sample Schedule for B.A. with a Major in Music

#### First Semester
- **ENGL 101** 3
- **Foreign language 101** 3
- **Harmony I** 3
- **Sight Singing and Ear Training I** 2
- **Class Piano I** 1
- **Major instrument or voice (Private Music Instruction)** 1
- **Ensemble** 1

#### Second Semester
- **Social Science** 3
- **Foreign language 102** 3
- **Harmony II** 3
- **Sight Singing and Ear Training II** 2
- **Class Piano II** 1
- **Major instrument or voice (Private Music Instruction)** 1
- **Ensemble** 1

#### Third Semester
- **Literature (English or Foreign Languages and Literatures)** 3
- **Foreign language 201** 3
- **Natural science** 4
- **Harmony III** 3
- **Major instrument or voice (Private Music Instruction)** 1
- **Ensemble** 1
- **Keyboard Harmony** 1
- **Major instrument or voice (Private Music Instruction)** 1

#### Fourth Semester
- **Literature (English or Foreign Languages and Literatures)** 3
- **Natural science** 4
- **Harmony IV** 2
- **Major instrument or voice (Private Music Instruction)** 1
- **Ensemble** 1
- **Survey of World Music** 3
- **Major instrument or voice (Private Music Instruction)** 1
- **Ensemble** 1
- **Natural science/mathematics/computer science** 3
- **Free electives** 6

### Sample Schedule for Bachelor of Music

#### First Semester
- **ENGL 101** 3
- **Foreign language or nonmusic elective** 3
- **Harmony I** 3
- **Sight Singing and Ear Training I** 2
- **Class Piano I** 1
- **Major instrument or voice (Private Music Instruction)** 2
- **Ensemble** 1
- **Keyboard Harmony** 1
- **Major instrument or voice (Private Music Instruction)** 1

#### Second Semester
- **Social Science** 3
- **Foreign language or nonmusic elective** 3
- **Harmony II** 3
- **Sight Singing and Ear Training II** 2
- **Class Piano II** 1
- **Major instrument or voice (Private Music Instruction)** 2
- **Ensemble** 1
- **Survey of World Music** 3
- **Major instrument or voice (Private Music Instruction)** 1
- **Ensemble** 1
- **Natural Science/mathematics/computer science** 3
- **Free electives** 6

---

*May not be used to satisfy the 130 credit hours required for the Bachelor of Music degree.*

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The Theatre Division of the Department of Performing Arts offers B.A. and B.F.A. degree programs that prepare students for graduate study in acting, directing, scene design, costume design, lighting design, technical theatre, history/theory/
criticism, as well as for professional activities and research.

**B.A. Degree with a Major in Theatre.** In addition to the general requirements for the Bachelor of Arts degree, Theatre majors must complete a minimum of 42 hours in the major: 25 hours of required core courses, and 17 hours of theatre electives. All majors are expected to participate in theatre or dance productions.

Required courses for the B.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 and 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 required core courses and 63 hours in an area of emphasis. Areas of emphasis are: (1) Acting and (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)
- Introduction to Theatre Technology (3)
- Introduction to Costume Technology (3)
- Survey of Theatre History I and 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 and II (6)
- Movement for the Theatre I and II (6)
- Beginning Modern Dance (3)
- Acting II (3)
- Acting III (3)
- Makeup (3)
- Dance Improvisation (3)
- Acting Styles I and II (6)
- Acting Problems I and II (6)

*Practicum—courses such as Play Production Practicum, Play Performance Practicum and Field Experience.*

**Theatre Electives (12)**
- Performing Arts Electives** (12)

Total 63 semester hours

2. Design/Theatre Technology
- ARTS 202, 203, Studio Fundamentals (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)

Total 63 semester hours

**Sample Schedule for B.A. with a Major in Theatre**

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<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro to Theatre 3</td>
<td>Intro to Costume 3</td>
</tr>
<tr>
<td>Free electives 3</td>
<td>Technology</td>
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<td>ENGL 101 3</td>
<td>Acting I 3</td>
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<tr>
<td>Foreign language 3</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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</thead>
<tbody>
<tr>
<td>Theatre Elective 3</td>
<td>Oral communication 3</td>
</tr>
<tr>
<td>Social science 3</td>
<td>Social science 3</td>
</tr>
<tr>
<td>Intro to Theatre Technology 3</td>
<td>Natural science 4</td>
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<td>Directing I 3</td>
<td>Survey of Theatre 3</td>
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<table>
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<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>Non-Western culture 3</td>
<td>Theatre elective 3</td>
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<tr>
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<td><strong>14</strong></td>
<td><strong>14</strong></td>
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</tbody>
</table>

**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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## Sample Schedule B.F.A. with a Major in Theatre Design/Theatre Technology Emphasis

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ARTS elective</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>ARTS 202</td>
<td>ARTS 203</td>
</tr>
<tr>
<td>Intro to the Theatre Experience</td>
<td>Acting I</td>
</tr>
<tr>
<td>Intro to Theatre Technology</td>
<td>Intro to Costume Technology</td>
</tr>
</tbody>
</table>
|                                |                                  | 16

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social science</td>
<td>Social science</td>
</tr>
<tr>
<td>Nonmajor elective</td>
<td>Nonmajor elective</td>
</tr>
<tr>
<td>Approved Art</td>
<td>Approved Art</td>
</tr>
<tr>
<td>Scene Design</td>
<td>Lighting Design</td>
</tr>
<tr>
<td>Costume Design</td>
<td>Theatre elective</td>
</tr>
</tbody>
</table>
| Practicum                      | Practicum                       | 16

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theatre History I</td>
<td>Theatre History II</td>
</tr>
<tr>
<td>Directing I</td>
<td>Theatre elective</td>
</tr>
<tr>
<td>Design Studio</td>
<td>Design Studio</td>
</tr>
<tr>
<td>Design/Technical Area elective</td>
<td>Design/Technical Area elective</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>ARTS elective</td>
</tr>
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</table>
| Free elective                  | Free elective                   | 16

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<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>Design/Technical Area elective</td>
<td>Design/Technical Area elective</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Free elective</td>
<td>Free elective</td>
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<tr>
<td>Theatre elective</td>
<td>Theatre elective</td>
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<tr>
<td>Practicum</td>
<td>ARTS Elective</td>
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</table>
|                                | Practicum                       | 17

<table>
<thead>
<tr>
<th>Philosophy and Religious Studies</th>
</tr>
</thead>
</table>

**Faculty**

**Professors:** Bergoffen (Chair), Lavine (Robinson Professor), McFarlane (Emeritus Professor)

**Associate Professors:** De Nys, Fletcher, Froman, Holman, McDermott, Rothbart, Vance

**Assistant Professors:** Burns, Hill, Jordan, Ro

**Lecturers:** Brown, Gregory

**Course Work**

This department offers all course work designated LS, 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 to (a) pursue graduate studies in philosophy; (b) emphasize philosophy in acquiring a broad liberal arts education; (c) prepare for certain professions, such as law, the ministry, government service; or (d) 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, a cooperative philosophy-psychology major in conjunction with the Psychology Department, and a specially designed religion track within the philosophy major. Each of these programs leads to a B.A. in philosophy.

The general education requirements (with the exception of foreign language) for the B.A. degree are satisfied by successful completion of the Program for Alternative General Education (PAGE). See PAGE category in this catalog, and see PAGE office (Thompson 222) for sample schedule for majors 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 371: Philosophy of Natural Sciences
   PHIL 373: Theory of Knowledge
   PHIL 374: Philosophy of Mind
   PHIL 574: Current Issues in Philosophy of Psychology

   Category B: The Continental Tradition
   PHIL 325: Karl Marx’s Social and Political Thought
   PHIL 336: Contemporary Continental Thought
   PHIL 337: Contemporary Continental Thought
   PHIL 531: Freud and Philosophy

3. All majors may submit no more than three credits from category C as credit toward the major:
   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).

Religious Studies 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 religious studies. 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 315: Buddhism
   RELI 370: Judaism
   RELI 371: History of Western Christian Thought (I)
   RELI 372: History of Western Christian Thought (II)

Religious Studies Track in Philosophy-Psychology Double Major. Students interested in pursuing the specially designed joint major in philosophy and English must fulfill distribution and core requirements of each major. Students pursuing this program must take one class in philosophy and one in English from the following list of theoretical or methodological courses (six credits). Both courses will count towards both majors (i.e., the philosophy course will be counted as part of the English major hours and vice versa).
   ENGL 320: Myth and Symbol in Western Literature
   ENSL 304: Ethical Theory and Language
   ENGL 306: History of Western Philosophy (Ancient)
   ENGL 374: Philosophy of Mind
   ENGL 375: Philosophy of Social Thought
   RELI 150: Introduction to Religious Studies

All students pursuing this track must submit six hours of credit from among the following courses for credit toward the major:
   HIST 306: Reformation
   SOC 385: Sociology and Religion
   ANTH 313: Anthropological Perspectives on Religion
   ENGL 320: Myth and Symbol in Western Literature

Philosophy-English Double Major. Students interested in pursuing the specially designed joint major in philosophy and English must fulfill distribution and core requirements of each major. Students pursuing this program must take one class in philosophy and one in English from the following list of theoretical or methodological courses (six credits). Both courses will count towards both majors (i.e., the philosophy course will be counted as part of the English major hours and vice versa).
   ENGL 341: Chaucer; or ENGL 342: Literature of Middle Ages; or ENGL 431: Medieval Intellectual Topics
   PHIL 302: History of Western Philosophy (Medieval)
   ENGL 401 (345): Literature of Sixteenth Century,
   ENGL 472 (346): Spenser
   PHIL 301: History of Western Philosophy (Ancient)
   ENGL 405 (358), 406 (361), 450 (370), 423 (381)
   PHIL 303: History of Western Philosophy (Enlightenment)
   ENGL 425 (382): Literature of American Renaissance, or ENGL 452 (387): American Novel to 1914
   PHIL 331: Philosophy in the United States
   ENGL 380, 390, 556 (555) (contemporary literature or language study)
   PHIL 332: Twentieth Century Analytic Philosophy
   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.

Philosophy-Psychology Double Major. Students interested in pursuing the specially designed joint
major in philosophy and psychology must fulfill
distribution and core requirements of each major.
Students pursuing this degree may apply up to 6
credits of the following philosophy courses and up
to 6 credits of the following psychology courses
toward the requirements of both majors:

PHIL 357: Philosophy of the Social Sciences
PHIL 372: Philosophical Methods
PHIL 373: Theory of Knowledge
PHIL 374: Philosophy of Mind
PHIL 531: Freud and Philosophy
PHIL 574: Current Issues in the Philosophy of
Psychology

Sample Schedule for Philosophy Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</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>
</tr>
<tr>
<td>Group A or B</td>
<td></td>
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<tr>
<td>Total</td>
<td>16</td>
</tr>
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<table>
<thead>
<tr>
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<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<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 electives</td>
<td>Philosophy elective</td>
</tr>
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<table>
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<th>Fifth Semester</th>
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</tr>
</thead>
<tbody>
<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>PHI 336 or 337</td>
</tr>
<tr>
<td>PHI 332</td>
<td>Philosophy electives</td>
</tr>
<tr>
<td>Philosophy electives</td>
<td>Nonphilosophy elective</td>
</tr>
<tr>
<td>ENGL 302</td>
<td></td>
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<tr>
<td>Total</td>
<td>15</td>
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<th>Seventh Semester</th>
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<tbody>
<tr>
<td>PHI 421</td>
<td>PHI 422 or 425</td>
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<tr>
<td>Fine arts</td>
<td>Electives</td>
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<td>Electives</td>
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<tr>
<td>Total</td>
<td>15</td>
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</table>

Physics

Faculty

Professors: Ehrlich (Chair), Kafatos, Lankford, Lieb, Mielczarek

Associate Professors: Ceperley, Dworcek, Ellsworth, Evans, Flinn

Assistant Professors: Kowalski, Toth-Allen

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, 350, 351, 352, 353, 361, 303,
306, 308, 402, 407 and 416 (may be taken for credit
twice). The remaining eleven credits are to be
elected from ECE 301, 302, PHYS 328, 355, 408,
412, 414, 417, 428, 510, 511, 512, 514, ECE 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

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concentration the student should take at least nine hours from the following courses: PHYS 414, 510, 511, 512 and 514. In addition, the student 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, ECE 441, MATH 446 and 447. In addition, the student should complete a senior project (PHYS 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: ECE 301, 302, 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, ECE 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, and either 407 or ECE 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.

Course Work

PHYS 343-345 are recommended for biology, chemistry, geology, and premedical students and for mathematics majors who seek a Bachelor of Arts degree. PHYS 106 and 107 are also recommended for biology majors. PHYS 103, 104, 141, 201, 300, 315, 316 are intended for nonscience 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: 343-345 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 343-345 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

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 111</td>
<td>PHYS 250</td>
</tr>
<tr>
<td>MATH 113</td>
<td>MATH 114</td>
</tr>
<tr>
<td>CHEM 211 or BIOL 113</td>
<td>CHEM 212 or BIOL 114</td>
</tr>
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<td>ENGL 101</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
</tr>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>PHYS 350</td>
<td>PHYS 350</td>
</tr>
<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>
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<tr>
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<td>Computer science</td>
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<td>Elective</td>
<td></td>
</tr>
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<td>17</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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</thead>
<tbody>
<tr>
<td>PHYS 303</td>
<td>PHYS 306</td>
</tr>
<tr>
<td>PHYS 305</td>
<td>ECE 302</td>
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<tr>
<td>PHYS 361</td>
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</tr>
<tr>
<td>MATH 313</td>
<td>MATH 314</td>
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<tr>
<td>ENGL 302</td>
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</tr>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 402</td>
<td>PHYS 408</td>
</tr>
<tr>
<td>PHYS 407</td>
<td>PHYS 414</td>
</tr>
<tr>
<td>PHYS 416</td>
<td>PHYS 416</td>
</tr>
<tr>
<td>PHYS 510</td>
<td>PHYS 512</td>
</tr>
<tr>
<td>Mathematics Elective</td>
<td>Physics elective</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

http://catalog.gmu.edu
Psychology

Faculty

Professors: Barocas, Boneau, Fleishman, King, Mandes, Pasnak, Tyer

Associate Professors: Allen, Blaha, Buffardi, Erdwins, Flinn (Chair), Gessner, Holt, Lehman, Maddux, Mellinger, Moretz, Rugel, Sanford, R. Smith, Wahl

Assistant Professors: Berney, Boehm-Davis, Denham, Friedman, Goplerud, Manning, Riskind

Adjunct Professors: Pence, V. Smith, Weisman

Research Professor: Ballas


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 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 or 372-373. (One of the courses must be 304, 305, or 309.)
2. BIOL 113, 114.
4. CS 103 with CS 262 strongly recommended.
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 undergraduate coordinator for final approval. Students who have not obtained approval by the end of their junior year 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, 372, 373, and CS 103 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.

PAGE Students. The general education requirements for the B.A. and B.S. degree (with the exception of
foreign language for the B.A.) are satisfied by successful completion of the Program for Alternative General Education (PAGE). See PAGE category in this catalog, and see PAGE office for sample schedules for majors in psychology.

<table>
<thead>
<tr>
<th>Sample Schedule for B.A. Psychology Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
</tr>
<tr>
<td>ENGL 101</td>
</tr>
<tr>
<td>Oral communication</td>
</tr>
<tr>
<td>Natural science</td>
</tr>
<tr>
<td>PSYC 100</td>
</tr>
<tr>
<td>Elective</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
</tr>
<tr>
<td>Social science (Non-Western)</td>
</tr>
<tr>
<td>Natural science</td>
</tr>
<tr>
<td>Psychology (any 200-level courses)</td>
</tr>
<tr>
<td>Elective</td>
</tr>
</tbody>
</table>

| **Third Semester**                         |
| Literature                                | 3 |
| Mathematics or Logic*                     | 3 |
| Psychology (any 200-level course)         | 3 |
| Fine Arts                                 | 3 |
| Foreign language                          | 3 |
| **Fourth Semester**                        |
| PSYC (any course)                         | 3 |
| Social science (non-Western)              | 3 |
| Psychology (any 300- or 400-level course) | 3 |
| Literature                               | 3 |

| **Fifth Semester**                         |
| ENGL 302                                  | 3 |
| Philosophy or religion                    | 3 |
| PSYC 300                                  | 4 |
| Foreign language                          | 3 |
| **Sixth Semester**                        |
| PSYC 304, 305, or 309                     | 4 |
| Psychology (300- or 400 level course)     | 6 |
| Elective                                  | 3 |

| **Seventh Semester**                       |
| Psychology (300- or 400-level)            | 6-7 |
| Electives                                 | 9 |
| **Eighth Semester**                        |
| Psychology (360 or 356)                   | 3 |
| Electives                                 | 12 |

<table>
<thead>
<tr>
<th><strong>Sample Schedule for B.S. Psychology Majors</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
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<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>
<tr>
<td><strong>Second Semester</strong></td>
</tr>
<tr>
<td>Psychology elective</td>
</tr>
<tr>
<td>Science course</td>
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<tr>
<td>Mathematics**</td>
</tr>
<tr>
<td>Cognate</td>
</tr>
<tr>
<td>Elective</td>
</tr>
</tbody>
</table>

| **Third Semester**                            |
| Literature                                   | 3 |
| Psychology electives                        | 6-7 |
| BIOL 113                                     | 4 |
| **Fourth Semester**                          |
| Literature                                   | 3 |
| Science course                              | 3 |
| BIOL 114                                     | 4 |
| Psychology electives                        | 3 |

| **Fifth Semester**                            |
| Cognate                                      | 8 |
| PSYC 300                                     | 4 |
| ENGL 302                                     | 3 |
| **Sixth Semester**                           |
| Cognate                                      | 6 |
| PSYC 360 or 365                             | 3 |
| Elective                                     | 3 |

*MATHEMATICS 110 is recommended.

**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

Robinson Professors: Hecl o, Paden
Distinguished Professors: W. Anderson, Fisher
Visiting Commonwealth Professor: Alexander
Professors: Clark, Dawisha, Stillman
Research Professors: Cole (Director, Public Management Institute), Thomas
Visiting Professors: Gibbons, Knowles
Associate Professors: Andrews (Director, Geography Program), Brown, Fonseca (Associate Dean, Graduate School), Gortner (Chair), Haack, Knight, Hung Nguyen (Director, Indochina Institute), Pfiffner, Plant (Director, DPA Program), Sacco (Associate Chair), Sandole (Joint appointment with Center for Conflict Resolution), White
Adjunct Associate Professor: E. Anderson
Assistant Professors: Dudley (Director, Law Enforcement Program), Friedlander, Mahler, Ostrowski, Travis
Adjunct Assistant Professors: Brand, First
Instructors: Lindberg, Rundstrom
Visiting Instructor: Mayer
Adjunct Instructor: Giesecke
Lecturers: Ahn, Bailey, Capelle, Corrigan, Davis, Dilger, El-Yacoubi, Froelich, Guzman, Harrison, Keller, McCampbell, McIntyre, McNaught, Mitchell, Neal, Rogers, Simmons, Stephenson, Thacker, Tucker, Waloichik, Whittaker, Yeager

Course Work

This department offers all course work designated GECA, GEOG, GOVT, PUAD, and PUAF in the Course Dictionary of this catalog.

Degree Requirements

PAGE Students. The general education requirements (with the exception of foreign language) for the B.A. and B.S. (except law enforcement) degrees are satisfied by successful completion of the Program for Alternative General Education (PAGE). See PAGE category in this catalog, and see PAGE office (Thompson 222) for sample schedule for majors in geography, government and politics, international relations, and public administration.

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 37 semester hours of credit in geography to include GEOG 102, 103, 310, 415 and three of the following: GEOG 301, 304, 305, 306, and 309. STAT 250 is also required but may not be counted toward the 37 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, and 335.

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: STAT 250; SOCI 221; DESC 200; DESC 202; CS 103; or IRM 201.

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>
<th>Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Romantic</td>
</tr>
<tr>
<td></td>
<td>Composition</td>
</tr>
<tr>
<td></td>
<td>English</td>
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<tr>
<td></td>
<td>Oral</td>
</tr>
<tr>
<td></td>
<td>Composition</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>Language</td>
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<tr>
<td></td>
<td>Literature</td>
</tr>
<tr>
<td></td>
<td>Fine Art</td>
</tr>
<tr>
<td></td>
<td>Philosophy</td>
</tr>
<tr>
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<td>Religion</td>
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<tr>
<td></td>
<td>Social</td>
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<td></td>
<td>Science</td>
</tr>
<tr>
<td></td>
<td>ANTH 101, 102</td>
</tr>
<tr>
<td></td>
<td>ANTH 103, 104</td>
</tr>
<tr>
<td></td>
<td>Anthropology</td>
</tr>
<tr>
<td></td>
<td>ECON 103, 104</td>
</tr>
<tr>
<td></td>
<td>Economics</td>
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<tr>
<td></td>
<td>Language</td>
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<td></td>
<td>Literature</td>
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<tr>
<td></td>
<td>Fine Art</td>
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<tr>
<td></td>
<td>Philosophy</td>
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<td></td>
<td>Religion</td>
</tr>
<tr>
<td></td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>Science</td>
</tr>
<tr>
<td></td>
<td>ANTH 114, 115</td>
</tr>
<tr>
<td></td>
<td>Anthropology</td>
</tr>
<tr>
<td></td>
<td>ECON 201, 202</td>
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<tr>
<td></td>
<td>Economics</td>
</tr>
<tr>
<td></td>
<td>Language</td>
</tr>
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<td></td>
<td>Literature</td>
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<tr>
<td></td>
<td>Fine Art</td>
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<td></td>
<td>Philosophy</td>
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<tr>
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<td>Religion</td>
</tr>
<tr>
<td></td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>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>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVT 132, 133</td>
<td></td>
</tr>
<tr>
<td>(preferably in freshman year)</td>
<td></td>
</tr>
<tr>
<td>HIST 130, GOVT 244</td>
<td>6</td>
</tr>
<tr>
<td>(preferably in sophomore year)</td>
<td></td>
</tr>
<tr>
<td>GOVT 340, 341</td>
<td>6</td>
</tr>
<tr>
<td>(preferably in junior year)</td>
<td></td>
</tr>
<tr>
<td>GOVT 449</td>
<td>6</td>
</tr>
<tr>
<td>(must be completed in last semester)</td>
<td></td>
</tr>
<tr>
<td>ECON 380 or 390</td>
<td>3</td>
</tr>
</tbody>
</table>

3. Advanced courses in international studies amounting to 18 hours distributed as follows:

| 6 |
| Two courses from GOVT 330s, 430s** |
| Two courses from GOVT 440s, 440s** |
| Two courses from a selected list of courses drawn from other disciplines including geography, history, economics, sociology, anthropology and foreign languages (list to be revised annually) |

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.

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>
<th>1. General</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>English 101 and 302</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
</tr>
<tr>
<td></td>
<td>A two-semester course in one recognized science with a laboratory</td>
</tr>
<tr>
<td></td>
<td>Management (MGMT 301)</td>
</tr>
</tbody>
</table>

2. Major requirements

| 38 |
| Law enforcement—Northern Virginia Community College (NVCC) |

The following courses taught at NVCC and described in the course dictionary of that institution's current catalog are required:

| 12 |
| At GMU: GOVT 371, 372, 376, 377 |
| (PHIL 306 may be substituted for either GOVT 376 or 377) |

3. Directly related

| 45 |
| Government—to consist of: |
| 21 |
| 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 |
| Required: GOVT 301, 356, and 451; and one course from among GOVT 309, 320, or 420. |
| 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, SOCI 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

| variable |
| 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. |

Total 128

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 123 semester hours of credit and meet general degree requirements set for the B.S. degree by work falling within the following pattern:

| 12 |
| Composition and Literature |
| 36 |
| Core Requirements |
| Required GOVT courses: |
103, 204, 241, 250, 320, 355, 356, 358, 401, 451
GOVT Electives 6
(any two of the following courses; an internship (GOVT 480) may be substituted for this requirement): 309, 402, 452, 461, 490

Supporting Requirements 63
ECON courses (required): 12
103, 104, and six hours to be selected from 306, 309, 310, 311, 330, and 350
STAT 250 and DESC 202 6
ACCT 201 3
Communications 3
COMM 130 or 310 9
Social science/humanities
Three courses from:
ANTH 114, PHIL 105, PSYC 100, SOCI 101 12
HIST: Four courses
(at least two at 300–400 level)
Administrative Tools
Computer science: CS 103, STAT 262 (or equivalents) 6
Option A:
Government Information Systems: GOVT 359 and IRM 201 6
Two courses from: GOVT 459, IRM 411, INFS 6 310, 311, GEOG 411, or approved course Option B:
Foreign language: Four courses in one modern foreign language 12

Open Electives 12

Total 123

Sociology and Anthropology

Faculty
Professors: Gittler (Sociology), Krech (Anthropology), Scimecca (Sociology, Chair), Williams (Anthropology)
Associate Professors: Avruch (Anthropology), Black (Anthropology, Coordinator), Borkman (Sociology), Dietz (Sociology), Horton (Sociology), Kolker (Sociology), Rader (Sociology), Rosenblum (Sociology), Tavani (Sociology)
Assistant Professors: Colvin (Sociology), Golomb (Anthropology), Jacobs (Sociology), Palkovich (Anthropology)
Lecturers: Badr (Sociology), Daddio (Sociology), Gerber (Anthropology), Kalof (Sociology), Trencher (Anthropology)

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. ENGL 481 (General Linguistics) may substitute for ANTH 380.

Within the Anthropology Program are three optional concentrations: Sociocultural Anthropology, Applied Anthropology, and Archaeology. A certificate in Applied Archaeology is also offered. 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,</td>
</tr>
<tr>
<td></td>
<td>geography,</td>
</tr>
<tr>
<td></td>
<td>government,</td>
</tr>
<tr>
<td></td>
<td>history*</td>
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<tr>
<td></td>
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<td>3</td>
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</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></td>
<td>Foreign language</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
</tr>
<tr>
<td></td>
<td>3</td>
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<tr>
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<table>
<thead>
<tr>
<th>Second Summer</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>ANTH 200-level</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
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</thead>
<tbody>
<tr>
<td>ENGL 302</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>Philosophy or religion*</td>
</tr>
<tr>
<td></td>
<td>3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sixth Semester</th>
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</thead>
<tbody>
<tr>
<td>ANTH 490</td>
<td>ANTH 300–400 level</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 300–400 level electives*</td>
<td>15</td>
</tr>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Eighth Semester</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>ANTH 490</td>
<td>ANTH 300–400 level</td>
</tr>
<tr>
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</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.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 101</td>
<td>English</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Literature</td>
</tr>
<tr>
<td></td>
<td>Natural science</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
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<td>3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI (300–400)</td>
<td>SOCI (300–400)</td>
</tr>
<tr>
<td></td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
</tr>
<tr>
<td></td>
<td>3</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI (300–400)</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
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<table>
<thead>
<tr>
<th>Sixth Semester</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SOCI (300–400)</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
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<td>3</td>
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</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, Certification for Secondary School Teaching.

### PAGE Students

The general education requirements (with the exception of foreign language) for the B.A. degree are satisfied by successful completion of the Program for Alternative General Education (PAGE). See PAGE category in this catalog, and see PAGE office (Thompson 222) for sample schedule for majors in sociology.

*Come to Anthropology office for guidance to electives.*

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http://catalog.gmu.edu
School of Business Administration
School of Business Administration

Accounting and Business Legal Studies  
Decision Sciences  
Finance/Real Estate and Urban Development  
General Business Administration  
Management  
Marketing

The School of Business Administration prepares students for the changing community needs and market demands of today’s world. The school has attracted and continues to support a diverse intellectual interests of a wide variety of students.

Acknowledging the interdependence of the University, the community and the business sector, the school encourages its faculty members to balance teaching, research, scholarship, and community service. The school also tries to foster an atmosphere of open communication between students and faculty, with benefits to both the University and society at large.

PAGE Students enrolled at George Mason University may fulfill their general education requirements through the Plan for Alternative General Education (PAGE). PAGE students pursuing degrees in the School of Business Administration should follow the PAGE program approved by the School.

Sample schedule for PAGE Student, Pre-Business Administration Major:

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAGE 120*</td>
<td>PAGE 125</td>
</tr>
<tr>
<td>PAGE 122</td>
<td>PAGE 123</td>
</tr>
<tr>
<td>PAGE 130</td>
<td>PAGE 131</td>
</tr>
<tr>
<td>PAGE 150/151</td>
<td>PAGE 152/153</td>
</tr>
<tr>
<td>ECON 103</td>
<td>ECON 104</td>
</tr>
<tr>
<td></td>
<td>DESC 200</td>
</tr>
<tr>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAGE 227</td>
<td>PAGE 228</td>
</tr>
<tr>
<td>PAGE 230</td>
<td>PAGE 252</td>
</tr>
<tr>
<td>PAGE 250/251</td>
<td>DESC 202</td>
</tr>
<tr>
<td>PAGE 225</td>
<td>ACCT 202</td>
</tr>
<tr>
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</tbody>
</table>

*PAGE 120 may be used on the application for acceptance to the School in place of IRM 201, but PAGE students must complete IRM 411 prior to graduation.

By following this two-year schedule, a PAGE student fulfills all the general education requirements, as well as requirements for applying for acceptance to the School of Business Administration. Having successfully completed the courses listed and upon acceptance to the School of Business Administration, a student would then follow the prescribed schedule for the specific business major chosen.

Administration

The administrative office for the School of Business Administration is located in Room 4611, Robinson Hall:

Coleman Raphael, Dean  
Richard L. Coffinberger, 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, decision sciences, finance, general business administration, management, or marketing. A minimum of 122 hours of course work is required, of which at least 46 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.

Students enrolling in evening classes exclusively should note that only one major, General Business Administration, will be available on a regular basis. The course work required for other majors offered by the School may be offered irregularly.

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 upper-level courses within a specific major, and three semester hours must be in the policy course (MGMT 498).

Degree Requirements

The following requirements must be met by all degree applicants:

http://catalog.gmu.edu
To be eligible to apply for acceptance into the School of Business Administration, you must satisfy the following requirements: (1) Completion of 60 or more semester hours at George Mason University or through acceptable transfer hours, and (2) Completion, at George Mason University or through acceptable transfer hours, of the following courses with a grade of C or better in each course: English Composition—ENGL 101 and 102 (or ENGL 302), (ENGL 111, 112, 113 at NVCC) Micro and Macro Economics - ECON 103 and 104. (ECON 211, 212, 213 at NVCC) Financial and Managerial Accounting - ACCT 201 and 202 (ACCT 211, 212, 213 at NVCC) Business Statistics—DESC 200 and 202 (MATH 281, 282, 283 at NVCC) Business Calculus—MATH 108 (MATH 162, 163 at NVCC) Management Oriented Information Systems—IRM 201* (DAPR 106 and 120 at NVCC) *PAGE Students may use PAGE 120 on their application for acceptance to the school, but must complete IRM 411 prior to graduation.

Acceptance to the School of Business Administration is competitive. A composite score is computed by adding the grade point average on the courses above with the applicant's cumulative grade point average on all collegiate work attempted, notwithstanding the age of that course work. While a straight A average yields a composite score of 8.00, generally a composite score of 5.00 or better is necessary to be competitive for acceptance to the School of Business Administration. Students who receive an academic warning for the semester of application may be denied acceptance, regardless of their overall academic performance.

Applications for acceptance to the School of Business Administration must be submitted by 1 October for the following spring semester, by 1 February for the following summer session, or by 1 July for the following fall semester. You should file the application in the semester at the end of which you anticipate completing the requirements set forth above.

Please note that you must complete a minimum of 30 hours of course work applicable to the degree program following acceptance to the School of Business Administration. Of the 30 hours, 18 must be in upper-level business administration courses required for a specific major, and 3 must be in MGMT 498, Business Strategy and Policy. The Business Administration core classes (i.e. BULE 301, 401; DESC 301; MATH 301; MKTG 301, 407) other than MGMT 498 and the upper-level economics degree requirements may be completed prior to acceptance to the School of Business Administration.

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 prescribe.
Sample Schedule for First Four Semesters in Pre-Business Administration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 103¹</td>
<td>ECON 104¹</td>
</tr>
<tr>
<td>ENGL 101¹</td>
<td>ENGL 102²</td>
</tr>
<tr>
<td>MATH 108¹</td>
<td>DESC 200¹</td>
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<tr>
<td>Laboratory science</td>
<td>Laboratory science</td>
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<tr>
<td>Humanities³</td>
<td>Humanities or Literature³</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 201¹</td>
<td>ACCT 202¹</td>
</tr>
<tr>
<td>IRM 201¹</td>
<td>History, government, or geography</td>
</tr>
<tr>
<td>Literature or Humanities</td>
<td>ECON 306 or 310</td>
</tr>
<tr>
<td>DESC 202¹</td>
<td>Speech Communication COMM 101 or 130</td>
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</table>

<table>
<thead>
<tr>
<th>Psychology, sociology, or anthropology⁴</th>
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Sample Schedule for Students Accepted to the School

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>BULE 301</td>
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<tr>
<td>DESC 301</td>
<td>BULE 401</td>
</tr>
<tr>
<td>MGMT 301</td>
<td>Area of concentration 6</td>
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<tr>
<td>MKTG 301</td>
<td>Elective ⁵</td>
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<td>ECON (upper-level)</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<tbody>
<tr>
<td>Area of concentration 6</td>
<td></td>
</tr>
<tr>
<td>MKTG 407</td>
<td>Area of concentration 6</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
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</tbody>
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Accounting and Business Legal Studies

**Faculty**

**Associate Professors:** Coffinberger, Floyd, Millsbaugh, Samuels, Tucker

**Assistant Professors:** Bagranoff, Buchanan, Cao, Hicks, Lynn, Rymer

**Instructors:** Bost, 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, 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.

¹Completion with a grade of C or better required before or during the semester of application for acceptance to the School of Business Administration.

²Students may choose to take ENGL 302 in place of ENGL 102, but should consult the prerequisites for ENGL 302 first.

³Students may take six credits in Humanities and three credits in Literature or six credits in Literature and three credits in Humanities.

²Two required—may be taken in any order.

⁴PAGE students must take IRM 411 in place of one of their general electives, but may use PAGE 120 on the application for acceptance to the School.

http://catalog.gmu.edu
Decision Sciences

Faculty

Professors: K. Kendall, Render (Chair), Ruth

Associate Professor: Kelly

Assistant Professors: Carlson, Gardner, J. Kendall, Pugh, Warkentin, Young

Instructors: Quitmeyer, Schank

Lecturers: Cotton, Mohamed, Parent, Pauler, Wang

The Decision Sciences Department offers a variety of programs and courses that deal with the application of the contemporary technologies of quantitative models and computer information systems to practical problems of both business and governmental organizations. The department also is responsible for undergraduate core courses in information systems, statistics, and quantitative analysis.

Graduates of the program receive a B.S. degree with a major in decision sciences. Students choose one of two areas of concentration—quantitative methods or information resource management. Within the quantitative methods concentration one of three tracks (management science, operations management, or applied statistics) may be pursued. As the names indicate, each track emphasizes a different aspect of quantitative methods. In addition to the general degree requirements for the B.S. degree, students who major in decision sciences must complete 18 hours in upper-level business administration courses within their selected area of concentration, as shown below. Students should discuss their choice of concentration with a faculty adviser in the Decision Sciences Department and refer to the official department guidelines for the concentrations and tracks.

Concentration in Quantitative Methods. Required:
DESC 352, 353, and 452. Electives: In addition to DESC 352, 353, and 452, each student elects one of the following tracks within the concentration in quantitative methods. Courses marked by an asterisk are strongly recommended as track electives.

Management Science Track Courses: Three or more from DESC 355*, 451*, 354, 535, and MKTG 351.

Operations Management Track Courses: Three or more from DESC 355*, 456* (or STAT 570), DESC 354, 461, 535, 563, and one of either ACCT 311 or MKTG 331.

Applied Statistics Track Courses: Three or more from DESC 456 (or STAT 570), DESC 354 (or STAT 381), STAT 362, 382, and 455.


Electives: Three or more from IRM 410, 420, 440, 480, 491, INFS 311, 312, 315, 316, ACCT 312.

Notes:
1. Signed Graduate Course for Undergraduate Credit Form must be submitted to take DESC 535 or STAT 570, or other graduate-level courses.
2. 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.
Finance/Real Estate and Urban Development

Faculty

Associate Professors: Crockett, Hanweck, Hysom, Johnston (Acting Chair), Reuben

Assistant Professors: Crawford, Grimshaw

Instructor: Erickson

Lecturers: Freund, Kane, Moore, Pagett, Sherbo

The finance and real estate and urban development faculty offers a major in finance with two 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 major, students desiring to major in finance or in real estate and urban development must complete 18 hours of upper-level business administration courses within an area of concentration as shown below with grades of C or better in each course:

Concentration in Finance. Required: FNAN 311, 321, 401. Electives: Three or more from ACCT 351, DESC 353, FNAN 411, 412, 421, 423, 491, REUD 301, 415, 419.

Note: Students wishing to enter the investments area are encouraged to elect FNAN 411 and 412. Those wishing to specialize in financial institutions should take FNAN 421 and 423.

Concentration in Real Estate and Urban Development. Required: REUD 301, 304, 415, 416. Electives: Two or more from ACCT 351, FNAN 311, 321, 521, REUD 417, 418, 583, 584.

Note: Signed Graduate Course for Undergraduate Credit form must be submitted to take REUD 583 or 584 and other graduate-level courses.

General Business Administration

The faculty of the School of Business Administration, with the associate dean for academic programs, offers a major in general 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. Students may not use the major in business administration if credit for more than one major is desired. 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.
Management

Faculty

Professors: English, Hunger, Kovach, Pearce (Chair), Sands (Emeritus Professor), Sims, Steinhauser (Emeritus Professor)

Associate Professors: Marchione

Assistant Professors: Carper, Pejsar

Instructors: Fare, Godden, Parhizgar, Taylor

Senior Lecturers: Stimson, O'Kelley

Lecturers: Bailey, Bolton, Bushnell, Charland, Cohany, Keever, Newsuan, Ridolfi, Scherrrens, Vail, Wyatt

The management major is 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 management courses. Beyond Management 301, students are required to take the following three courses:

- MGMT 311 Organizational Behavior
- MGMT 321 Personnel Administration
- MGMT 491 Seminar in Management

Beyond these three required courses, students must choose three courses from the following:

- MGMT 331 Labor-Management Relations
- MGMT 341 Business Communication
- MGMT 381 Management Problem Solving and Decision Making
- MGMT 411 Organizational Theory
- MGMT 421 Advanced Personnel Administration
- MGMT 431 Labor Legislation and Collective Bargaining
- MGMT 451 Small Business Management
- MGMT 471 Organizational Management and Environmental Change

Students interested in the human resource/personnel area should take MGMT 331, 421, and 431. Those interested in the entrepreneurship/small business management area should take MGMT 451 plus two other MGMT courses, such as 381 and 411.

Marketing

Faculty

Professors: DeBoer (Emeritus Dean), McCrohan, Tongren

Associate Professor: Entrikin (Chair), Domzal

Assistant Professors: Goretsky, Harvey

Instructors: Rishell,

Lecturers: Hoelzel, Hood, B. Jones, Mason

The marketing major is 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 marketing courses. Beyond Marketing 301, students will be required to take the following courses:

- MKTG 312 Consumer Behavior
- MKTG 313 Advertising Management
- MKTG 351 Marketing Research
- MKTG 471 Marketing Management

In addition, students must select two courses from the following:

- MKTG 310 Business and Government Logistics
- MKTG 311 Sales Management
- MKTG 330 Purchasing Materials and Management
- MKTG 332 Retail Management
- MKTG 333 Industrial and Governmental Marketing
- MKTG 451 Marketing Information Systems
- MKTG 481 Marketing in the Non-Profit Sector
- MKTG 491 Seminar in Marketing

Students interested in the human resource/personnel area should take MKTG 312, 313, and 351. Those interested in the entrepreneurship/small business management area should take MKTG 451 plus two other MKTG courses, such as 330 and 332.
School of Information Technology and Engineering
School of Information Technology and Engineering

Computer Science

Electrical and Computer Engineering

Information Systems and Systems Engineering

Operations Research and Applied Statistics

Problem solving is a process inherent in almost all human activities. It involves finding and implementing a course of action that is intended to accomplish some desirable objectives, such as achieving career goals, operating an office or manufacturing facility, or realizing a set of planning objectives for a public or private sector organization.

People have been involved in problem-solving activities for thousands of years. The industrial revolution and the emergence of the traditional engineering disciplines enabled us to use physical mechanisms as aids in accomplishing many problem-solving activities. Much of traditional engineering activity has been concerned with the physical and material sciences and the use of these sciences to design devices and systems for the presumed betterment of the human condition.

Today, we can augment and enhance this success using information technology, the purpose of which is system design for human interaction through enhanced efficiency and effectiveness of knowledge organization and use.

The disciplines of electrical and computer engineering and computer science are involved with the hardware and software aspects of information technology. These disciplines concern such efforts as the design of communication, control, and computer systems that enable large volumes of data to be sent at high speeds, transmission of facsimilies of engineering designs, automation of manufacturing facilities and office environments, and provision of the appropriate data bases and physical displays of knowledge that assist in tasks that range from judgmental to physically controlling automated facilities.

But neither hardware alone, nor even software and hardware together, can provide a complete basis for contemporary education in information technology and engineering. The human element is also important for successful system design and operation and must, therefore, be an important ingredient in a successful information technology program. The disciplines of information systems and systems engineering are concerned with working with people to assist them in the organization of knowledge.

Information technology and engineering efforts at George Mason University are primarily concerned with four disciplines—electrical and computer engineering, computer science, information systems and systems engineering, and operations research and applied statistics. The careful integration of these programs at GMU results in a unique academic experience for highly motivated students interested in these areas of study.

Careers in these fields are among the most dynamic and rapidly changing careers within our society and the people employed as professionals within these information technology and engineering areas perform highly skilled functions that provide significant challenges. Engineers and computer scientists must design systems that will solve their clients’ problems. These systems must then be manufactured, installed, and maintained. At present, more than 60 percent of the American population is employed in activities that involve the processing and handling of information. Manufacturing employment has slipped below 20 percent of the employed population, and farming below 5 percent. Moreover, the percentage of people employed in various information technology and information engineering areas is expected to grow. There is hardly a field, from banking, to medicine, to command and control of military troops and equipment, that is not experiencing explosive growth relative to the felt need for more effective and efficient use of information. The rapid changes in these areas, and the great diversity of potential applications, requires a broad educational background, dedication, and the willingness and desire to continue a lifetime of learning new technology.

The School of Information Technology and Engineering offers eight programs that concentrate on the important contemporary issues and needs just described. Three bachelor’s degree programs are offered through the School of Information Technology and Engineering:

- Computer Science
- Electronics Engineering
- Systems Engineering

Five master’s degree programs are available:

- Computer Science
- Computer and Electronics Engineering
- Information Systems
- Operations Research and Management Science
- Systems Engineering

There is a single cross-disciplinary doctoral program:

- Information Technology

The undergraduate degree programs are designed to prepare graduates to enter directly into professional...
employment or to continue studies at the graduate level. The requirements for the bachelor's degrees include required and elective courses in mathematics, humanities, and general education, and specialty courses in computer science and electronics engineering. The electronics engineering program also provides students with a strong foundation in the physical and general engineering sciences as well. A strong emphasis on English composition and communications is contained in each program.

The programs provide opportunities for students to undertake studies in areas that complement and enhance the undergraduate studies in computer science and electronics engineering. There is also opportunity, within the elective freedom provided by these undergraduate major programs of study, for students to develop interest areas in other fields of study within the School of Information Technology and Engineering which offer undergraduate courses but which do not presently have undergraduate majors. The Bachelor of Individualized Study (B.I.S.) degree program may be attractive to mature students who have completed a substantial portion of their studies at other institutions.

The following general requirements for a Bachelor of Science degree program must be completed by all undergraduate students who receive bachelor's degrees through majors in the School of Information Technology and Engineering:

1. Completion of at least 120 semester hours of academic work
2. Completion of at least 12 semester hours of English composition and literature
3. Completion of at least 6 semester hours in the humanities and liberal studies areas of anthropology, economics, geography, government, history, linguistics, philosophy, psychology, and sociology
4. Completion of the requirements for the major as listed under the departments of computer and information sciences, or electrical and computer engineering
5. Completion of an acceptable plan of study formulated by the student and his or her adviser.

Students should consult the Baccalaureate Degree and the Graduation sections of the Undergraduate Policies and Procedures portions of this catalog for detailed information concerning graduation requirements, curricula requirements, English composition and literature requirements, residence requirements, and academic quality requirements for graduation with a major in computer science or electronics engineering. The portion of the catalog that concerns the Division of Continuing Education discusses the requirements for the B.I.S. degree. The following sections provide a detailed description of the requirements for the computer science and electronics engineering undergraduate degree programs.

Administration

Andrew P. Sage, Dean
James D. Palmer, Associate Dean

Computer Science

Faculty

Professors: Mark, Rine (Chair), Seidman, Sood
Associate Professors: Amsbury, DeJong, Hamburger, Norris, Rice
Assistant Professors: Acquah, Bottegal, Diaz-Herrera, Gonzalez, Kjell, Onyuksel, Qu, Quammen, Wang

Course Work

This department offers all course work designated CS in the Course Dictionary of 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. Incoming freshmen who have been admitted to the major are permitted to enroll in CS 112 or appropriate follow-on courses.

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 2.75. 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.

Advanced Placement. The CS Department recognizes AP Computer Science scores of 3, 4, or 5, which can be used for credit toward CS 112, CS 211, CS 312, as appropriate.

Grades. A student must earn a C or better in any course intended to satisfy a prerequisite for a CS course.

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.

Enrollment in computer science courses CS 112, 211, and 312 is generally reserved for students with the
prerequisite mathematics background described in each course.

**B.S. Degree with a Major in Computer Science.** In addition to the general SITE degree requirements for a B.S. degree, the following courses are required:

- **Computer Science:** CS 112, 211, 311, 312, 365, 485, plus twelve additional hours of courses numbered above 300 for a total of 31 hours in computer science; Mathematics: MATH 113, 114, 213, 303, 305, 446, for a total of 20 hours in mathematics; MATH 351 or STAT 344; other computer science required courses: CS 468; CS 440 or 471.

Students are also required to complete an additional 12 hours of computer science-related courses. These courses may be chosen from the following: OR 435; ENGR 285, 431, 442; PHIL 376, 511, 512, 371, 422; any MATH course numbered above 300 except MATH 350, 371, 372; any computer science course numbered above 300.

**Courses for nonmajors**

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.

**Sample Schedule for B.S. in Computer Science**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Credits</th>
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<tbody>
<tr>
<td>First Semester</td>
<td>CS 112</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ENGL 101</td>
<td>3</td>
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<tr>
<td></td>
<td>MATH 113</td>
<td>4</td>
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<td></td>
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<td></td>
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<tr>
<td>Third Semester</td>
<td>CS 312</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MATH 312</td>
<td>3</td>
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<tr>
<td></td>
<td>Literature</td>
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<tr>
<td></td>
<td>Elective</td>
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<tr>
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<td>CS 311</td>
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<tr>
<td>Fifth Semester</td>
<td>MATH 305</td>
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<tr>
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<td>CS 421</td>
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<td></td>
<td>STAT 344</td>
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<td>CS-related elective</td>
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<td>Seventh Semester</td>
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<td>MATH 446</td>
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<tr>
<td></td>
<td>CS (above 300)</td>
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<tr>
<td></td>
<td>Elective</td>
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<tr>
<td></td>
<td>Total</td>
<td>15</td>
</tr>
</tbody>
</table>

*Substitution allowed for PAGE 125, 225 (Quantitative Analysis I and II).*

**Sample Schedule for PAGE Student, Computer Science Major**

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<th>Semester</th>
<th>Course Code</th>
<th>Credits</th>
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<tr>
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<tr>
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<td>PAGE 122</td>
<td>3</td>
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<tr>
<td></td>
<td>PAGE 130</td>
<td>3</td>
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<tr>
<td></td>
<td>PAGE 150/151</td>
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<tr>
<td></td>
<td>CS 112</td>
<td>4</td>
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<td>16</td>
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<tr>
<td>Third Semester</td>
<td>PAGE 227</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PAGE 230</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PAGE 250/251</td>
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<tr>
<td></td>
<td>MATH 114*</td>
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<td>CS 312</td>
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<tr>
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<td>Total</td>
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<tr>
<td>Fourth Semester</td>
<td>PAGE 228</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PAGE 252</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PAGE 253</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MATH 213</td>
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</tr>
<tr>
<td></td>
<td>CS 311</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>16</td>
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</table>
Electrical and Computer Engineering

Faculty
Professors: Cook, Gertler, Tabak
Associate Professors: Beale, Black (Chair), Ceperley, Chang, Cooley, Gokhale, Kruppa, Mouchahoir, Schaefer, Stephanou
Assistant Professors: Baraniecki, Berry, Bourbakis, Earp, Eldeib, Mulpuri
Lecturers: Athale, Bellem, Berkowitz, Chian, Dunham, Edwards, Grafton, Gurfein, Mehrotra, Smith, Stewart, Toms

Degree Requirements

B.S. Degree in Electronics Engineering. This degree program in 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. It is accredited by the Accreditation Board for Engineering and Technology.

In addition to the general B.S. degree requirements, the 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 adviser.

The electronics engineering curriculum is a demanding one 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 and participates in the Ph.D. program in information technology through the School of Information Technology and Engineering (see Graduate Catalog).

Other Engineering Disciplines. Students interested in engineering disciplines other than electronics engineering and systems engineering 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 electronics engineering adviser each semester.

Required Courses in a Sample Schedule for B.S. in Electronics Engineering

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 113</td>
<td>MATH 114</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>CS 211</td>
</tr>
<tr>
<td>CS 112</td>
<td>PHYS 250</td>
</tr>
<tr>
<td>ECE 107</td>
<td>ENGL 101</td>
</tr>
<tr>
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1See department listing for approved electives. At least one such course at 300 level or above.
3Advanced lab courses include ECE 429, 434, 435, 449, 461.
4See department listing for approved technical electives. Tracks in electronics, communications and signal processing, computer engineering, and controls systems and robotics are available. A nontrack option is also available.

http://catalog.gmu.edu
Information Systems and Systems Engineering

Faculty
Professors: Andriole, Aseltine, Beam, Kerschberg, Palmer, Sage, Sibley
Associate Professors: Adelman, Fife, Goicoechea, Lehner, Siff
Assistant Professors: DasGupta, Koll

Systems engineering includes working with people to assist them in organizing knowledge, which requires methods for knowledge acquisition, representation, and utilization. Thus, systems engineering activities vary from requirements definition or specification to the conceptual and functional design and development of systems. They concern architectural definition and performance evaluation, which are needed to obtain functional integration, maintainability, reliability, and, perhaps most important, the appropriate interfaces that will ensure system design for successful human interaction. This human interaction may involve human supervisory control of physical processes, such as the robots that are used in automated manufacturing. It may involve typically cognitive tasks at the operational levels of fault diagnosis, detection, and correction; or at the level of strategic planning.

Systems engineering at George Mason University primarily focuses on the design, development, and use of knowledge-based systems and processes that support human activities in planning, design, decision making, and associated resource allocation. Thus, our undergraduate program in systems engineering has a strong information systems component. It emphasizes behavioral factors associated with such subjects as human-machine interaction, the design of decision support and expert systems, software systems engineering, and system acquisition and procurement. These compose the advanced portion of undergraduate study and follow such fundamental subjects as applied mathematics, engineering science, and computing.

Course Work
The undergraduate degree program in systems engineering is offered through this department, and courses with designators INFS (Information Systems) and SYST (Systems Engineering) are generally its responsibility.

Degree Requirements

B.S. Degree in Systems Engineering. The degree program in systems engineering, a new undergraduate degree program effective September 1987, is designed to prepare the undergraduate for direct entry into professional practice or for entry into graduate study. In addition to the general degree requirements of GMU, students must meet specific requirements for this degree, which are outlined in the accompanying sample schedule.

Advising. All systems engineering students are required to see their advisers at least once each semester to plan for the following semester's registration. This is a minimum requirement because close contact can assure maximum benefits from the many available educational opportunities at GMU. Each student in systems engineering is expected to complete an approved plan of study, which then constitutes a "learning contract" for the degree program.

Sample Schedule for Undergraduate Systems Engineering Majors

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
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<tr>
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<td>MATH 213 3</td>
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<tr>
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</table>

The 6 hours of engineering science electives may be selected from general engineering (ENGR) or electrical and computer engineering (ECE) courses. Technical electives may be selected from courses in computer science, electrical and computer engineering, information systems, systems engineering; or approved courses in operations research, applied statistics, psychology, or business administration.

http://catalog.gmu.edu
Operations Research and Applied Statistics

Faculty

Professors: Greenberg, Harris, Schum, Wegman
Associate Professors: Gantz, Hoffman, Miller
Assistant Professors: Jo, Paik, Richey, Roque, Sofer

Operations research and applied statistics at George Mason University principally involve the theoretical and empirical science of managerial and operational processes. These processes are typically described by mathematical models that are derived from empirical observations, or from a theory that is subject to empirical validation. Our courses include but go beyond the traditions of mathematical programming and supporting mathematical methods to enable broad consideration of managerial and operational problems.

A major objective of the program is to allow a better understanding of natural phenomenological processes, such as traffic in a network or customers arriving at a bank, and designed phenomenological processes which have a deliberate structure, such as manufacturing production lines or administrative procedures in an office. Organizational support systems are particularly valuable to assist in information processing tasks in both flow and response designed processes. These are useful in strategic and tactical situations and for developing short- and long-range plans.

Models are needed for a variety of purposes in business, industry, and government to describe different environments and to relate alternative courses of action to performance. Thus, the courses in operations research and applied statistics focus on the modeling and analysis of systems. While we do not offer an undergraduate degree in either operations research or statistics, a variety of appropriate courses are available for inclusion in other degree programs.

Course Work. This department generally offers courses in this catalog that carry the OR (Operations Research) or STAT (Statistics) prefixes.
School of Nursing
The undergraduate- and graduate-level nursing programs at George Mason University are designed to prepare students to deliver superior nursing care and provide leadership in nursing in the increasingly complex and challenging field of modern health care. Graduates are in demand as professional nurses, and for administrative nursing positions in hospitals, nursing homes, community health agencies, and other health care agencies. The program emphasizes early detection of potential health problems, health maintenance in ambulatory services, and preparation for the administrative and managerial responsibilities of nurses.

Professional degree programs such as nursing are built upon a strong general education base. Nursing theories and technologies taught utilize this background and prepare students to function in a variety of health care agencies.

**PAGE**

The general education requirements within the B.S.N. program may be met through George Mason University's Plan for Alternative General Education (PAGE). The plan integrates the University's general education requirements in the form of a series of interdisciplinary courses that are completed during the first two years of a bachelor degree program. For nursing students, the PAGE option satisfies all requirements except the course work in nursing and biology.

**Administration**

Rita M. Carty, Dean
Georgine M. Redmond, Assistant Dean
Brenda S. Cherry, Director, Undergraduate Program
Catherine E. Connelly, Associate Dean, Graduate Program

The undergraduate and graduate nursing programs at George Mason University are accredited by the Virginia State Board of Nursing and by the National League for Nursing.

**Course Work**

This School offers all course work designated NURS in the Course Dictionary of this catalog.

**Bachelor of Science Degree**

The Bachelor of Science in Nursing (B.S.N.) degree prepares graduates to function as professional nurses in hospitals, nursing homes, and in the community. The program may be completed on a full- or part-time basis, and a special pathway for registered nurses takes into account the needs of the working R.N. An accelerated program for students with baccalaureate degrees outside of nursing is planned to begin in summer 1987, pending approval.

Clinical nursing begins at the sophomore level. Students must complete a prenursing curriculum and be admitted to junior standing within the program. During the first two years, students complete general education requirements and sophomore-level nursing course work. The last two years are devoted to integrating classroom study with practical experience in off-campus clinical agencies and health care facilities.

**Degree Requirements**

Candidates for the degree must present at least 124 semester hours of work. Specific requirements for the B.S.N. are as follows:

**Language Arts and Culture**
- English (ENGL 101-102) 6
- Communication 3
- Humanities 6
- Art (appreciation, history, criticism, or theory)
- Music (appreciation, history, criticism, or theory)
- Literature (in addition to six hours of ENGL 101, 102)
- Philosophy, language, religion, or humanities 9

**Social Behavior Sciences**
- Sociology 3
- Psychology 6

**Natural Sciences**
- Chemistry (CHEM 103-104) 8
- Biology (BIOL 124-125) 8
- Microbiology (BIOL 261) 4
- Statistics (STAT 250, PSYC 300, or SOC 221) 3-4

**Nursing Major**
- NURS 250, 254/304, 262, 301, 302, 314, 315, 324, 325, 411, 426, 430, 431, 450, 471, 475, 476 62

**Physical Education Activities**
- Electives 2
- Total 124

1Recommended
2No more than three hours of nursing electives may be used to satisfy this requirement.
The school provides opportunity for credit by examination in several courses for students presenting evidence of previous training. Registered nurses may obtain a maximum of 30 hours of credit toward the baccalaureate degree by satisfactory performance on proficiency examinations.

Special Requirements

Nursing 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. Student liability insurance is provided by the University; a sophomore student must have CPR certification before entering Nursing 262 and maintain it through the remainder of the program.

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 School of Nursing has established, with approval of 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 cumulative average of 2.8 in courses prerequisite to junior-level nursing courses: anatomy and physiology; chemistry; microbiology; psychology (three hours); sociology; Nursing 250, 254, 262. Students must achieve C or better in 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, 314, 315, 324, 325 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.

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

Progression. 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.)

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 school 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 Director of the Undergraduate Program 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.

Graduation. Graduation depends upon earning a C or better in all courses prerequisite for junior standing and all required nursing courses.

Sample Schedule for Undergraduate Nursing Majors

First Semester

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<td>PSYC 100</td>
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Second Semester

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<td>BIOL 125</td>
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Third Semester

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<td>CHEM 104</td>
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<td>NURS 262</td>
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Sixth Semester

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School of Nursing

Seventh Semester

NURS 411  3
NURS 426  3
NURS 430  3
NURS 431  5
Elective  __3__

Eighth Semester

NURS 450  3
NURS 471  3
NURS 475  3
NURS 476  5

17  14

Faculty

Professors: Ailinger, Carty (Dean), Johnson-Brown (Visiting Commonwealth Professor), Silva, D. Walker

Associate Professors: Cherry (Director, Undergraduate Program), Connelly (Associate Dean, Graduate Program), Feeg, Harper, Lambert, Liu, Millonig, Moore, Shannon, Smith, Trainor, Vail

Assistant Professors: Baker, Bennett, Boland, Cianci, Conti, Dienemann, Ehlke, Fant, Gaffney, Jenkins, Kodadek, Kopac, Kramer, Redmond (Assistant Dean), Roberts, L. Walker, Wiederhorn, Williams

Instructor: Brenkus

Lecturers: Bouboulis, Boyd, Carr, Hall, Langley, Miller, Murphy, Price, Reafs, Schwaab, Rigney, Rudowski, Shephard, Swenson, Tackett
College of Education and Human Services
College of Education and Human Services

Education

Health, Sport, and Leisure Studies

Social Work

The College of Education and Human Services, 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 Education and Human Services 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, EDCl, EDGC, EDRD, EDSE, EDUC; Department of Health, Sport, and Leisure Studies: HEAL, PHED, PRLS; Department of Social Work: SOCW.

Teacher Certification

The College of Education and Human Services 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 Education and Human Services academic policies and undergraduate degree requirements are described in detail under the following departmental sections: Education; Health, Sport, and Leisure Studies; and Social Work. Academic policies and degree requirements for graduate programs are described in the Graduate 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.
5. Vocational Education  
a. Industrial Arts  
b. Trade and Industrial Education.

Acceptance Into the Department of Education’s Teacher Education Program

Students interested in pursuing a major in early or middle education must apply for admission to the Teacher Education Program through the Department of Education. Until their applications are filed and approved by the Teacher Education Screening Committee (TESC), they are classified as pre-education majors.

Admission to the Teacher Education Program is selective. Students must apply and be accepted into the program before enrolling in any 400-level courses. 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 listed below 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. 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 the 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 311 and 312

b. Completed a minimum of 12 credit hours selected from EDUC 305, 306, 320, 322, 324, 344, HEAL 305, or PHED 301.

(Note: No grade below C will be accepted for satisfactory completion of course work in the

*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.

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 Education and Human Services and in the Bachelor of Music degree program and postbaccalaureate 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 postbaccalaureate 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)*

*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.
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.

Academic Requirements

Requirements for retention are:

1. Continued academic performance at or above the admission requirement standards;
2. Courses included in the computation of the professional GPA that include 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 method 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) 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 for B.S.Ed.
Degree with a Major in Early Education (NK–4) or Middle Education (4–8)

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>1. English and Literature     12</td>
</tr>
<tr>
<td>a. ENGL 101 Composition and Introduction to Literature (3)</td>
</tr>
<tr>
<td>b. ENGL 205, 206 or 253 Readings in English and American Literature (3)</td>
</tr>
<tr>
<td>c. Any other 200 level English literature course (3)</td>
</tr>
<tr>
<td>d. ENGL 302 Advanced Composition (3)</td>
</tr>
<tr>
<td>2. Oral Communication          3</td>
</tr>
<tr>
<td>Select one of the following:</td>
</tr>
<tr>
<td>1. COMM 100 Introduction to Communication (3)</td>
</tr>
<tr>
<td>2. COMM 120 Introduction to Public Speaking (3)</td>
</tr>
<tr>
<td>Humanities                    6</td>
</tr>
<tr>
<td>1. Art                        3</td>
</tr>
<tr>
<td>Select one of the following:</td>
</tr>
<tr>
<td>a. MUSI 100 Fundamental of Music (3)</td>
</tr>
<tr>
<td>b. MUSI 101 Music Appreciation (3)</td>
</tr>
</tbody>
</table>

Department with a Major in Early Education (NK–4) or Middle Education (4–8)
Education 123

Social Sciences 12
1. History
   a. HIST 121 Formation of the American Republic (3)
   b. HIST 122 Development of Modern America (3)
2. Geography

Select one of the following:
   a. GEOG 101 Major World Regions (3)
   b. GEOG 103 Cultural Geography (3)
3. Economics

Select one of the following:
   a. ECON 103 Contemporary Economic Principles and Issues I (3)
   b. ECON 104 Contemporary Economic Principles and Issues II (3)

Mathematics 9
1. MATH 371 Mathematics in the Elementary School I (3)
2. MATH 372 Mathematics in the Elementary School II (3)
3. Math 106 Concepts of Mathematics (3)

Laboratory Science 12
Select three of the following disciplines:
1. BIOL 151 An Introduction to Biology or Biology 103 Contemporary Biology (4)
2. CHEM 103 Chemical Science in Modern Society (4)
3. PHYS 141 Elementary Physics (3) and PHYS 142 Elementary Physics Lab (1)
4. ASTR 105 Introduction to Modern Astronomy (4)
5. GEOL 101 Physical Geology (4)

School Health and Physical Education 11
1. HEAL 110 Personal Health or HEAL 120 Community Health (3)
2. HEAL 305 Teaching Health in the Elementary School (3)
3. PHED 301 Teaching Physical Education in the Elementary School (3)
4. PHED 100 Foundations of Exercise and Fitness (1)
5. A one-credit activity course (1)

Specialized Studies 30*

Major Requirements 51
1. Foundations and General Methods
   a. EDUC 311 Introduction to Early and Middle Education (1)
   b. EDUC 312 Psychological Foundations of Child Development and Learning (4)
   c. EDUC 320 Introduction to Tests and Measurements (3)
   d. EDUC 322 Essential Elements for Early and Middle Education (2)
   e. EDUC 324 Utilization of Instructional Media and Technology (1)
2. Specialized Methods and Materials
   a. EDUC 305 Children's Literature (3)
   b. EDUC 306 Teaching Language Arts in the Elementary School (3)
   c. EDUC 344 Problem Solving in School Mathematics (3)
   d. EDUC 401 Teaching Thinking Skills (4-8 students) or EDUC 402 Teaching and Learning in Nursery School and Kindergarten (NK-4 students) (1)
   e. EDUC 403 or 404 Developmental Reading (3)
   f. EDUC 407 or 408 Diagnostic Reading (3)
   g. EDUC 411 Teaching Math in the Elementary School (3)
   h. EDUC 412 Teaching Social Studies and Humanities in the Elementary School (3)
   i. EDUC 413 Teaching Science in the Elementary School (3)
3. Clinical Experiences 15
   a. EDUC 429 or 430 Junior Student Teaching (6)
   b. EDUC 431 or 432 Senior Student Teaching (9)

Total Hours 146**

Certification at Early Education and Middle Education Levels. Teacher preparation programs in early education (nursery school, kindergarten, grades 1–4) and in middle education (grades 4–8) are offered. Students must decide prior to enrollment in 400-level courses whether they desire to be certified at the early education level or at the middle education level. All undergraduates seeking dual certification (NK–4 and 4–8) must fulfill the following requirements:
1. The completion of three hours in reading methods at the second level of study.
2. Appropriate student teaching experience at both levels

None of the additional professional course hours for dual certification will count toward the hours needed for graduation.

The programs listed above lead to the awarding of the Bachelor of Science in Education degree with a major in early education or in middle education and eligibility for an initial Virginia certificate with endorsement at the nursery school-kindergarten-grade 4 level, or the grades 4–8 level.

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. Financial aid is available for students bilingual in English and a minority language of the public school population in this metropolitan area.

*Areas of Specialized Studies. Consult academic adviser in the Department of Education for available specialized study areas and requirements. Areas are available in most disciplines in the College of Arts and Sciences in approved discipline blends, such as general science which includes courses in several different sciences.

**The minimum total credits required for graduation will depend upon the area of specialized studies selected by the student but will not exceed 146.

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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 Education and Human Services.

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>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>HIST 121</td>
<td>Social Science</td>
</tr>
<tr>
<td>Math</td>
<td>elective</td>
</tr>
<tr>
<td>EDUC 370</td>
<td>Science</td>
</tr>
<tr>
<td>EDUC 364</td>
<td>Technical electives</td>
</tr>
<tr>
<td></td>
<td>Technical electives</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>Technical Elective</td>
</tr>
<tr>
<td>EDUC 371</td>
<td>EDUC 308</td>
</tr>
<tr>
<td>EDUC 372</td>
<td>EDUC 373</td>
</tr>
<tr>
<td>Science elective</td>
<td>EDUC 377</td>
</tr>
<tr>
<td>Physical education</td>
<td>EDUC 374</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>EDUC 469</td>
<td>EDUC 367</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>EDUC 467</td>
</tr>
<tr>
<td>EDUC 313</td>
<td>Math or science</td>
</tr>
<tr>
<td>Humanities elective</td>
<td>elective</td>
</tr>
<tr>
<td>Social Studies elective</td>
<td>Humanities elective</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>EDUC 463</td>
<td>EDUC 417</td>
</tr>
<tr>
<td>Regional cultures</td>
<td></td>
</tr>
<tr>
<td>World Literature or communication</td>
<td></td>
</tr>
<tr>
<td>HEAL 110</td>
<td></td>
</tr>
<tr>
<td>Humanities elective</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

■ 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>
</tr>
</thead>
<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>
</tr>
<tr>
<td>EDUC 469</td>
<td>EDUC 308</td>
</tr>
<tr>
<td>General elective</td>
<td>General elective</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>EDUC 325</td>
<td>EDUC 417</td>
</tr>
<tr>
<td>Vocational elective</td>
<td></td>
</tr>
<tr>
<td>Math/science elective</td>
<td>HEAL 110</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Summers</td>
<td></td>
</tr>
<tr>
<td>General elective</td>
<td></td>
</tr>
<tr>
<td>Math/science elective</td>
<td></td>
</tr>
</tbody>
</table>

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 and the College of Education and Human Services. CAS majors include biology chemistry, economics, English, French, German, geography, geology, government, history,

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mathematics, music, physics, psychology, sociology, and Spanish. Added secondary endorsement certification is offered in prealgebra, earth science, and general science. In addition, a specialization in bilingual/multicultural education is offered. Interested students should consult 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, Sport, and Leisure Studies. Students majoring in vocational education should consult the Coordinator of Vocational Education.

2. General Education Requirements as mandated by the State of Virginia:

<table>
<thead>
<tr>
<th>Humanities</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101, 102 (or 302')</td>
<td>6</td>
</tr>
<tr>
<td>English, foreign language, oral communication, fine arts, music, or philosophy</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Sciences</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 121 or 122</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology, economics, geography, history, political science, psychology, or sociology</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Laboratory Science and Mathematics</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>(At least one course in each area)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives (from the above categories)</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health and Physical Education</td>
<td>5</td>
</tr>
<tr>
<td>HEAL 110</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education activities²</td>
<td>2</td>
</tr>
</tbody>
</table>

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 and be fully admitted to the Teacher Education Program in accordance with the regulations stated in the Graduate Catalog.

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 529 Pluralism in US Education (2)
4. EDUC 531 Educational Tests and Measurements (3)
5. EDUC 593 Utilization of Instructional Technology (3)
6. Curriculum and Methods. Select one from the following:
   - EDCI 567 Social Studies
   - 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
7. Practicum
   - EDCI 515 Practicum in Secondary Education (12)

Total Hours (30)

Students who wish to earn a Master of 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.

¹May only be taken by students who have completed literature requirements and 45 hours.
²Required for all social science endorsements.
³Credits for these courses may not be applied toward a degree in the College of Arts and Sciences.
Health, Sport, and Leisure Studies

Faculty
Professors: Cooper (Chair), Stein
Associate Professors: Bever, Crawford, Freed, Metcalf, Schack
Research Associate Professor: Bunker
Adjunct Assistant Professor: Doyle
Assistant Professors: Agne-Traub, Cato, Linn, Wright
Instructor: Woodhouse-Beiting
Lecturers: Godin, Reynolds
Research Instructor: Procaccino

Course Work
The department offers all course work designated HEAL, PHED, and PRLS in the Course Dictionary of this catalog.

PAGE Students
General education requirements are satisfied by successful completion of the Program for Alternative General Education. Additional courses are required each semester the student is enrolled in the PAGE program. Students planning to major in health education; physical education; or parks, recreation, and leisure studies should contact the Department of Health, Sport, and Leisure Studies for the list of courses.

Physical Education

Degree Requirements
This degree is designed to prepare students for physical education careers in teaching public and private sector fitness and sport programs, and advanced study in exercise and sports sciences. Course work consists of a general education required core, a 24-semester-hour specialization in a supporting discipline, and three options for concentration of the major courses in a professional sequence. With the exception of student teaching (options 2, 3), the specialization courses must be selected with approval of the adviser from a discipline outside physical education; 15 of these hours must be in 300/400-level courses and the 24 hours must be exclusive of the general education requirements. The final semester is devoted to student teaching or an internship. Students must have a 2.50 or higher GPA in the major and the specialization course work.

The semester prior to enrolling in student teaching or the internship, all majors must pass the physical proficiency examination. Students enrolled in the teacher certification program must also demonstrate proficiency in swimming or enroll in and pass an intermediate-level swimming course, and must complete a proficiency examination in writing before applying for graduation. See the Department of Education to register for the examination.

Physical Education Program

Core Requirements

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts and Culture</td>
<td>21</td>
</tr>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 101, 102 (or 302)</td>
<td></td>
</tr>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 100 or 120</td>
<td></td>
</tr>
<tr>
<td>Non-Western Culture:</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 114, 201, 204, 206, 207, 208, 211, 313, 332</td>
<td></td>
</tr>
<tr>
<td>ARTH 180, 280, 319, 320</td>
<td></td>
</tr>
<tr>
<td>ENGL 432, 433, 434</td>
<td></td>
</tr>
<tr>
<td>FREN 451</td>
<td></td>
</tr>
<tr>
<td>GOVT 332, 333</td>
<td></td>
</tr>
<tr>
<td>HIST 251, 252, 261, 262, 271, 281, 282, 328, 329, 353, 354, 356, 463, 464</td>
<td></td>
</tr>
<tr>
<td>KORE 450, 451</td>
<td></td>
</tr>
<tr>
<td>LAC 152, 153, 154</td>
<td></td>
</tr>
<tr>
<td>MUSI 103</td>
<td></td>
</tr>
<tr>
<td>RELI 211, 212, 213, 314, 315, 337, 490</td>
<td></td>
</tr>
<tr>
<td>RUSS 353, 354</td>
<td></td>
</tr>
<tr>
<td>THR 327, 356, 357</td>
<td></td>
</tr>
<tr>
<td>VIET 301, 302</td>
<td></td>
</tr>
</tbody>
</table>

An equivalent number of hours in a foreign language may be used to meet this requirement.

Social Sciences
HIST 121 or 122
Select 9 hours from the following:
Anthropology, economics, geography, government, history, sociology, psychology
(Must be from 3 different fields)

Required Courses
BIOL 124-125 (8), MATH (3)
HEAL 110 (3), HEAL 205 (3), HEAL 111 (2)
Specialization

Total minimum requirements

Core Total

76

76

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Option I Physical Education with Selected Specialization

Professional Sequence


Total Hours 123

Program Contract

Students may select a specialization from areas such as management, marketing, sport, psychology, exercise science, sport broadcasting, sport reporting, pre-sports medicine, pre-physical therapy.

Contracts specifying specialization courses must be completed and approved by adviser and intern coordinator no later than the end of the first semester in the program.

Core Total 76

Option II Physical Education

Teacher Certification K-12

Professional Sequence


Total Hours 123

Option III Physical Education with Teacher Certification in Physical Education and Endorsement in Health Education

Professional Sequence


HEAL 315, 440, and three of the following courses: 220, 310, 325, 330, 402

Total Hours 131

Physical Proficiency Examination

All students majoring in physical education must pass all three parts of the examination to be eligible for the B.S. degree. The following are the requirements:

- *Students majoring in physical education do not have to take PHED 100 as a prerequisite or corequisite.
- **Register for PHED 442 (1 hour) and attend tennis portion of PHED 311 (fall only).
- ***Register for PHED 442 (1 hour) and attend weight training portion of PHED 317 (spring only).

Men

Sit & Reach: 10 second hold at toe level
Flexed Arm Hang: 30 seconds
1 1/2 Mile Run: 12 minutes or less

Women

Sit & Reach: 10 second hold at toe level
Flexed Arm Hang: 20 seconds
1 1/2 Mile Run: 13:30 or less

Swimming Proficiency Examination

All students enrolled in the teacher certification program must pass the following swimming proficiency test or enroll in and pass an intermediate-level swimming course:

1. Swim 50 yards/meters using either freestyle or breast stroke
2. Swim 50 yards/meters using two strokes (25 yards/meters each) different from the first 50 yards (excluding elementary back stroke)
3. Swim 20 feet under water

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

- PHED 450
- HEAL 111
- PHED 308
- HEAL 110, 120
- PHED 330 (formerly PHED 430)
- PHED 331 (formerly PHED 432)

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: Requirements are subject to change and students must meet current NATA certification standards.

Teacher Education Program

The program in teacher education is accredited and approved by the National Council for Accreditation.

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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 fall semester of their junior year. To be considered for admission, 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 for the most recently completed 60 hours of collegiate work and for the professional GPA.

3. For the professional GPA the student must have completed or be in the process of completing:

   For Physical Education
   a. EDUC 302, 313, BIOL 124 and 125, PHED 300 and 303
   b. Two of the following: PHED 311, 312, 315, 317, 318.

   For Health Education
   a. BIOL 103-104 or 113-114, HEAL 110, 120, 205, 315
   b. One of the following four courses: HEAL 220, 310, 325, 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 Department of Health, Sport, and Leisure Studies.

5. Have demonstrated proficiency in written and oral communication and computer literacy. (See the Department of Education to register for the examinations.)

6. Physical Education students must take the Common Examination and Physical Education Area Examination, and Health Education students must 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.

7. Have completed a panel interview as scheduled through the Office of Field Experiences.

Student Teaching Admission

1. Students must maintain a GPA of 2.50 or above following admission to the Teacher Education Program.

2. Students must complete the application process for student teaching through the Office of Field Experiences.

3. Students must have satisfactorily completed both physical and swimming proficiency tests.

Internship Admission

1. Students must have a current approved program contract.

2. Students must have completed and obtained approval for an internship application during the semester prior to that of the internship. (Get appropriate forms from department secretary.)

3. Students must have satisfactorily completed the physical proficiency test.

Health Education

Degree Requirements

This degree is designed to prepare students for health education careers in teaching, community health agencies, public and private sector health promotion programs, and advanced study in health education. Course work consists of a general education required core, 15 semester hours in a support discipline, and three options for concentration of major courses in a professional sequence. Support disciplines include: sociology, psychology, communications, marketing, science, education, and physical education. (Note exceptions in options 2 and 3.) Courses in the support discipline must be exclusive of general education requirements with at least nine semester hours at the 300/400 level.

The final semester of the program is devoted to student teaching and/or internship. Students selecting a teacher certification option must meet requirements set forth under the Teacher Education program section preceding the health education degree program description. Students planning to pursue this degree program must present a 2.00 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 Department of Health, Sport, and Leisure Studies upon completion of 45 semester hours (must include personal health and community health courses).

Programs in Health Education

Core Requirements

<table>
<thead>
<tr>
<th>Category</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts and Culture</td>
<td>15</td>
</tr>
<tr>
<td>ENGL 101 and 102; COMM 100 or 130</td>
<td>9</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 203, 204, 205, or 206</td>
<td></td>
</tr>
<tr>
<td>Humanities¹</td>
<td>3</td>
</tr>
<tr>
<td>Art, music, philosophy, or foreign language</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>12</td>
</tr>
<tr>
<td>PSYC 100; SOCI 101; HIST 121 or 122; ANTH 114</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Natural Science</td>
<td>23-24</td>
</tr>
<tr>
<td>BIOL 103-104 or 113-114, 124-125, 261; STAT 250 or SOCI 221</td>
<td></td>
</tr>
<tr>
<td>Required Courses</td>
<td></td>
</tr>
<tr>
<td>HEAL 110, 111</td>
<td>9-10</td>
</tr>
<tr>
<td>PHED 100</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
</tr>
</tbody>
</table>

¹Must substitute ECON 103 or 104 if support discipline is marketing.
Support Discipline

Core Total (depends on option selected) 74–78

Option I—Community Health

Core Total 74

Professional Sequence 48
HEAL 120, 205, 220, 310, 315, 323, 325, 330, 430, 440, 450, 460 (15)

Minimum Total Required 122

Option II—Teaching Certification in Health Education

Core Total 78*

Professional Sequence 42
HEAL 120, 205, 220, 310, 315, 323, 325, 330, 402, 430, 440, 450, 460 (6)

Minimum Total Required 120
*NOTE: Support Discipline (18 semester hours) Education EDUC 300 (or 522), 302, 313, HEAL 414 (9)

Option III—Teaching Certification in Health Education with Endorsement in Physical Education

Core Total 73

Professional Sequence 42
HEAL 120, 205, 310, 315, 325, 330, 402, 414, 430, 440, 480
EDUC 300 (522), 302, 313

Minimum Total Required 124
*NOTE: Support Discipline (15 semester hours) Physical Education PHED 300, 306, 308, 371, and 3 semester hours from the following courses: PHED 311, 312, 315, 317, 318, PRLS 316

Driver Education Certification

Students completing Option II or III will meet state certification requirements to teach driver education.

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 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

<table>
<thead>
<tr>
<th>General Education</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English arts and culture</td>
<td>12</td>
</tr>
<tr>
<td>ENGL 101, 102 (or 302) (6); COMM 120 or 130 (3); (Art, music, theatre, literature, foreign language, philosophy, religion) (3)</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>11</td>
</tr>
<tr>
<td>BIOL 103, 104 (8); IRM 201 or CS 103 (3)</td>
<td></td>
</tr>
<tr>
<td>Behavioral Science</td>
<td>9</td>
</tr>
<tr>
<td>PSYC 100 (3)</td>
<td></td>
</tr>
<tr>
<td>Social Sciences (GEOG, ANTH, PSYC, SOCI, GOVT or HIST) (6)</td>
<td></td>
</tr>
<tr>
<td>HEAL 110 or 208 (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

Professional Interest Option (Second year)

(Select one option only)

Park Resource Option

Emphasis in science (biology, chemistry, geology) and technology courses. Consult with adviser.

Recreation Service Option

Emphasis on social and behavioral sciences with skill development in physical, social, or cultural arts. Consult with adviser.

Commercial Recreation Option

Emphasis on social science, human resources management, and marketing for private recreation and tourism. Consult with adviser.

Management Core

ACCT 201, ECON 103, MGMT 301, 311, MKTG 301

Professional Program

PRLS 100, 103, 210, 310, 315, 320, 400, 405, 410, 415, 425, 450, 460, 490

Electives

6

Total 122

Professional Interest Options

Each option consists of 16 credits. Select any listed courses. Note number of hours required. Any changes must be made with adviser’s written permission.

Park Resources

Emphasis in science (biology, chemistry, geology) or related park resources courses.

6 hours from the following:

BIOL 307 Ecology
BIOL 309 Intro to Ocean
BIOL 333 Vertebrate Zoology
BIOL 345 Plant Communities
BIOL 371 Animal Distributions
CHEM 103 Chemical Science in Modern World
GEOG 110 Maps and Map Reading
GEOG 280 Geography of Virginia
GEOG 303 Conservation of Resources & Environ.

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GEOG 315 Geog of U.S. & Canada
GEOG 412 Aerial Photography
GEOG 430 Land Use Geography
GEOL 103 Geol of National Parks
GEOL 106 Environmental Geology

3 hours from the following:
GOVT 103 Intro to Dem Govt
GOVT 241 Intro to Pub Ad
ANTH 120 Intro to Archaeology

7 hours from the following:
MKTG 333 Industrial & Govt Marketing
PRLS 316 Recreation & Outdoor Education
PRLS 300 People with Nature
PRLS 326 Seminar: Practical Problem Solving in Recreation and Parks
PRLS Recreation Activities (choose two)

Recreational Services

Emphasis on social and behavioral sciences with skill development in physical, social, or cultural arts.

6 hours from the following:
HEAL 111 Adv First Aid & Emergency Care
HEAL 205 Prin of Accident Causation and Prevention
HEAL 330 Nutrition
PHED 304 Sport Culture & Society
PHED 308 Developmental PE
PHED 450 Physiology of Exercise
PHED 300 Kinesiology

3 hours from the following:
PSYC 321 Counseling Psychology
PSYC 231 Social Psychology
SOCI 397 Fundamentals of Aging I
SOCI 398 Fundamentals of Aging II
PSYC 415 Psych Factors in Aging
SOCI 203 Socio of Small Groups
SOCI 205 Socio of Deviance
SOCI 240 Soc Services of Society
SOCI 302 Socio of Delinquency

7 hours from the following:
Music, Art, Drama
Dance, Crafts, PHED
PRLS 326 Current Issues in Parks and Recreation
PRLS Recreation Activities (choose two)

Commercial Recreation

Emphasis on marketing, business skills, health, fitness and human resources management for managing leisure services for profit and consumer satisfaction.

6 hours from the following
IRM 410 Managerial Applications of Microcomputers
MGMT 321 Personnel Administration
MGMT 381 Management Problem Solving and Decision Making
MGMT 451 Small Business Management
MKTG 311 Sales Management
MKTG 312 Consumer Behavior
MKTG 313 Advertising Management
COMM 330 Prin of Public Relations
FIN 301 Financial Management

7 hours from the following:
HEAL 111 Adv First Aid & Emer Care

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Social Work

Faculty

Associate Professors: Hughes, Polivka (Chair), Raskin
Assistant Professor: Gary

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 to 45 semester hours in social work, to include SOCW 301, 323, 324, 351, 352, 357, 358, 453, 454 or 455, 471, and two 400-level social work electives;
2. SOCW 100 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>Elective</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>MATH (106)</td>
</tr>
<tr>
<td>History, economics, or government</td>
<td>GOVT 204</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>Philosophy or religion</td>
</tr>
<tr>
<td>SOCI 101</td>
<td>Elective</td>
</tr>
<tr>
<td>SOCW 100 (optional)</td>
<td>SOCW 100 (optional)</td>
</tr>
</tbody>
</table>

Third Semester

<table>
<thead>
<tr>
<th>English or American Literature</th>
<th>BIOL 103</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Fourth Semester

<table>
<thead>
<tr>
<th>English or American Literature</th>
<th>BIOL 104</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Fifth Semester

| SOCW 357*                     | Elective |
| SOCW 323*                     | Elective |
| SOCW 301                      | Elective |
| SOCW 351*                     | Elective |
| ENGL 302                      | Elective |

Sixth Semester

| SOCW 352                     | Elective |
| SOCW 358                     | Elective |
| SOCW 324                     | Elective |
| Elective                     | 3        |

Seventh Semester

| SOCW 453**                   | Elective |
| Social work elective         | Elective |
| SOCI 221                     | Elective |
| Elective                     | 3        |

Eighth Semester

| SOCW 454**                   | Elective |
| Social work elective         | Elective |
| SOCI 471                     | Elective |
| Elective                     | 3        |

*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 (SOCW 455, 10 credits) must meet specific requirements and be advised by the director of field instruction.
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 nontraditional 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
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 available to all new Extended Studies students and are required 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 nonregistration times, career and academic counseling services are available on a walk-in basis and appointments are not needed. During presemester 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 along with the enrollment request packet 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.

If an Extended Studies enrollee later applies for admission to a GMU degree program, any unsatisfactory grades earned while enrolled through Extended Studies will remain a part of the student's permanent record and will be counted in determining the student's future academic standing.

**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 Summer Session office 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.

**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 interinstitutional, individualized, and interdisciplinary.

The B.I.S. degree is conferred by the University in partial fulfillment of its service obligation to Northern Virginians. Approximately 670 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, nontraditional 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 benefiting from the proposed course of study. In general, a nontraditional, 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.

Reapplication 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; and (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 nontraditional 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 six 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 BIS 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

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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, nontraditional 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
- Human Resource Management
- 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 Nontraditional 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 University, Northern Virginia Community College, Strayer College (Arlington campus), the Northern Virginia Centers of 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 BIS 490 Project Committee, although only a George Mason University faculty member may sign an educational contract or serve as the major adviser.

Certificate Programs in Gerontology

The Division of Continuing Education administers the undergraduate and graduate certificate programs in gerontology. The certificate programs in gerontology are designed for students who wish to train for work with older people and for professionals already 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 recreation, social service, nursing, and administration. Six departments participate in these interdisciplinary programs—Education, Health and Physical Education, Psychology, Sociology, Public Affairs, and Social Work—as does the School of Nursing. Consult the Certificate Programs section of this catalog for additional information. Counseling and an application form may be obtained at the Office of Individualized Study Degree Programs, Room 124 East, 323-2342.

Other Programs

Off-Campus Credit Instruction

Off-campus credit instruction is offered at sites convenient to the residential communities and places of employment in Northern Virginia and at times that are convenient for working adults. Currently, the Division administers more than 75 courses in 13 disciplines at more than 12 off-campus locations.

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. 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 (CEUs) 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 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 School of Nursing, in cooperation with the University’s Division of Continuing Education, offers opportunities for credit and 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 School of Nursing utilizes the wealth of available resources in Northern Virginia and the Washington metropolitan area.

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 School of Nursing.

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 (CEUs) 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, a class in test preparation, and conferences on high technology, business management, education, and government contracts. Other sites may be used for specific activities, such as music programs, which are usually held in the Humanities Module. The GMU Professional Center, located on the third floor at 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.
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 University guidelines.

The following certificate programs are open to undergraduate and postbaccalaureate students. Completion of these programs requires the possession of a bachelor’s degree either previously or simultaneously awarded. Additional certificate programs at the postbaccalaureate and master’s level are described in the graduate catalog.

Certificate Program in Applied Archaeology

Purpose of Program

This certificate program in applied archaeology provides the basic knowledge, skills, and practical experience to students who want to learn more about archaeology as a public and business concern. The program is open to students from all disciplines, but it should be particularly useful to those majoring in history, geology, geography, American Studies, and similar disciplines allied with anthropology, and those who may be seeking employment in the fields of cultural resource management, contract archaeology, public archaeology, and museums. Individuals who wish to enter the certificate program should contact Ann Palkovich, Anthropology Program.

Program Requirements

The certificate program in applied archaeology consists of 24 semester hours of courses beyond the introductory-level courses in anthropology (ANTH 120 and ANTH 114). 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 toward the certificate program.

The 24 semester hours include:

1. Fifteen semester hours of core courses: ANTH 425 Public Archaeology, ANTH 430 Research Methods in Archaeology, SOCI 221 Statistics for the Behavioral Sciences or SOCI 305 Analysis of Social Data, ENGL 309 Independent Writing, ANTH 220 Field School in Archaeology or ANTH 325 Field Methods in Archaeology.

2. Six semester hours of electives selected from the following: ANTH 201 Native North Americans, ANTH 300 Civilizations, ANTH 305 Hunter-Gatherer Societies, ANTH 320 Lab Techniques in Archaeology, ANTH 322 Historical Archaeology, ANTH 370 Ecology and Culture, ANTH 375 Anthropological Perspectives on History, ANTH 420 Interpretation in Archaeology.

Selected courses in allied disciplines may also be applied as elective hours (e.g., AMST 320, BIOL 371, GEOG 310, GEOL 304, HIST 300) with the approval of the certificate program adviser.

3. ANTH 495 Internship. The internship is arranged by the student in consultation with the certificate program director; it offers the student an opportunity to gain practical experience in public/contract archaeology. A minimum of 10 hours per week for a semester (150 hours) are to be devoted to the internship project. Students must complete ANTH 425, ANTH 220 or ANTH 325, and ANTH 430 before enrolling in the internship.

Certificate Program in Canadian Studies

This certificate program is interdisciplinary and emphasizes the combined English and French cultures that give Canada its unique flavor and cause many of its most enduring social problems. Individuals going into careers in business, politics, or any of the public professions (law, public administration, communications, etc.) will benefit greatly from the knowledge gained in completing the program. In many cases it will enhance that individual’s potential for employment and promotion within his or her chosen career.

Individuals interested in the program can obtain information from any of the faculty members involved in the program. The coordinator of the program is Harold F. Gortner (Department of Public Affairs).

Program Requirements

The certificate program in Canadian Studies consists of 24 semester hours of courses taken within a
number of departments throughout the University. Students receiving the certificate must hold a baccalaureate degree or be receiving one from George Mason University at the time they receive the certificate. Only those courses with grades of C or better will be counted toward the certificate program. The requirements of the program are as follows:

Required: CAST 300 Introduction to Canada

Three courses from among the five listed below: ANTH 399 Issues in Anthropology; Native Canadian Ethnology and History ENGL 360 FREN 480 Special Topics in Literature: Canadian/Quebec Literature GEOG 335 Geography of Canada GOVT 335 Government and Politics of Canada HIST 379 History of Canada

Four elective courses chosen from an approved list of courses, including any courses from the list above that are not counted toward the distributive core. Courses chosen must be approved by the coordinator of the Canadian Studies Program. No more than two courses may be chosen from any discipline. Current courses available to use as electives include:

AMST 401 Themes in American Civilization* ANTH 201 Native North America ENGL 439 Special Topics: Non-British or American Literature* ENGL 449 Special Topics in Drama* ENGL 486 Special Topics in Poetry* ENGL 490 Special Topics in Film* FREN 202 Intermediate French (its equivalent, or any 300-level French language course) FREN 452 French-Canadian Literature (taught in French) FREN 481 Special Topics* GEOG 420 Physiography of North America GOVT 490 Seminar* HIST 420 Topics in twentieth century U.S. Diplomacy*

Certificate Program in Cartography

The certificate program in cartography provides specialized training in technical skills needed for advanced map design and production. Students learn aerial photograph interpretation and photogrammetry in addition to both computer-aided and photomechanical methods of map making. Students also gain a thorough knowledge of cartographic theory. We welcome students from all disciplines who are interested in a specialty in cartography. The program may be especially useful for those in the natural and social sciences who wish technical training in advance of possible employment in the many private sector mapping firms and government mapping agencies in the Washington D.C., metropolitan area.

Inquiries should be directed to Prof. Robert Rundstrom, Department of Public Affairs.

*Courses approved for the Canadian Studies certificate program, by the coordinator, based upon the content of the course. Other courses will be considered when the content is appropriate.

Program Requirements

The certificate program in cartography consists of 26 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 26 hours required in the certificate program must include the following 17 hours of courses: GEOG 310, 311, 411, 412, and 416. The remaining nine hours of electives must be approved by the Certificate Program Adviser prior to enrollment. An effort is made to tailor electives to individual needs. Consult the Certificate Program Adviser for a list of possible courses.

Certificate Program in Earth Science Teaching

The Department of Geology offers a certificate in earth science teaching for students who wish to become secondary school teachers of earth science in Virginia. This certificate program is open to students majoring in any science, but is designed primarily for geology majors. The certificate program consists of 28 semester hours which, in conjunction with a college degree in science, makes a potential teacher eligible for a Provisional Certificate (good for two years) to teach earth science. A Collegiate Professional Certificate (good for five years, renewable) follows the Provisional Certificate and may be obtained later by passing the National Teacher Examination, by demonstrating competency during the two years of Provisional Certificate teaching, and by accumulating at least nine semester hours of education courses in the areas of human growth and development, foundations of education, and curriculum and development (at least one course in each area is required). Students who wish to obtain a certificate in earth science teaching must hold a baccalaureate degree or must be receiving a baccalaureate degree at the time they receive the certificate.

The semester-hour requirement includes a year of introductory geology (GEOL 101-102) plus the following courses:

ASTR 103 Astronomy (3:3:0) BIOL 113 Biological Science (4:3:3) CHEM 211 General Chemistry (4:3:3) GEOG 309 Introduction to Meteorology and Climate (3:3:0) GEOL 309 Introduction to Oceanography (3:3:0) MATH 113 Analytical Geometry and Calculus (4:4:0) PHYS 343 College Physics (3:3:0) PHYS 344 College Physics Lab (1:0:2) EDCI 573 Teaching Science in the Secondary School (3:3:0)

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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 or intending to pursue graduate studies, and who wish to add an applied environmental component to their training.

Inquiries should be directed to Dr. Francis Heliotis, Department of Biology.

Program Requirements

The certificate program in environmental management consists of 27 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 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.

Students select 27 hours of course work with the help of the certificate coordinator. The courses are divided into five categories. Courses listed in more than one category can only satisfy the requirements of one. Any substitution from the following list requires permission from the certificate coordinator.

1. Environmental Certificate Core (4 courses)
   BIOL 337
   One course from GEOG 303, GECA 503
   One course from ECON 103, GOVT 241, GOVT 357
   One course in statistics

2. Physical Perspective (1 or 2 courses)
   BIOL 309; GEOG 102, 309, 430; GEOL 204, 313, 403, 405

3. Biological Perspective (1 or 2 courses)
   BIOL 307, 309, 345, 446, 449, 471, 513, 526, 532, 543, 546, 549; HEAL 450

4. Social Perspective (1 course)
   ANTH 370; ECON 350, 360; GEOG 304, 305, 307; GOVT 318, 398, 401, 463, 536; MGMT 301; PHIL 555; SOCI 306

5. Environmental Methods (1 course)
   GEOG 310, 411, 412; GECA 579; DESC 352

Notes

1. Biology majors are required to complete 2 courses in Physical Perspective.
2. Geology and Geography majors are required to complete 2 courses in Biological Perspective.
3. All other majors can choose either Physical or Biological Perspective for 2 courses.
4. It is highly recommended that certificate students develop proficiency in computer programming.

Certificate Program in Geochemistry

The Department of Geology offers a certificate in geochemistry for students who wish to pursue a career that combines geology and chemistry. Professional geochemists study the geological and chemical processes at work in nature, in areas such as crystal chemistry, nuclear chemistry, thermodynamics, aqueous chemistry, and oceanic chemistry. Geochemists are employed in private, state, and federal agencies, in basic research and in developmental and environmental research.

Students who wish to obtain a certificate in geochemistry must hold a baccalaureate degree or be receiving a degree at the time they receive the certificate. The course requirements include a year of introductory geology (GEOL 101-102), a year of introductory chemistry (CHEM 211-212), plus 12 semester hours of geology courses related to geochemistry (Group A below) and 12 semester hours of chemistry courses related to geochemistry (Group B below). Students should consult with the geochemistry certification specialist before pursuing a certificate in geochemistry. The appropriate courses are as follows (alternate courses may be approved by the geochemistry certification specialist):

Group A: Geology courses—must take at least one course from each group; must take a total of at least 12 credit hours
1. Mineralogy—GEOL 201, 305
2. Petrology—GEOL 207, 401
3. Geochemistry—GEOL 403, 404

Group B. Chemistry Courses—must take at least two courses from each group; must take a total of at least 12 credit hours
1. Analytical and Physical Chemistry—CHEM 321, 331, 335, 336, 422
2. Inorganic and Organic Chemistry—CHEM 313, 314, 315, 318, 341, 441, 445

Certificate Program in Geoscience Programming

Geoscience programming is using modern computer technology to understand and to solve geology-related problems in areas such as resource analysis, environmental assessment and remedial response policy, engineering geology and cartographic interpretation. The Department of Geology offers a certificate in geoscience programming for students who wish to combine geology with computer skills. The certificate program consists of 27 semester hours which, in conjunction with a baccalaureate degree in geology, prepares the student for a career in public and private agencies that gather and interpret geoscience data. Students who wish to obtain a Certificate in Geoscience Programming must hold a baccalaureate degree or be receiving a baccalaureate degree in geology at the time they receive the certificate. The course requirements for the certificate include the following:

CS 112 Computer Science I (4:4:0)
CS 211 Computer Science II (3:3:0)
CS 212 Computer Science III (3:3:0)
ENGR 110 Engineering Computations (3:3:0)
ECE 240 Introduction to Microcomputer Applications (3:3:0)
GEOG 411 Introduction to Computer Cartography (3:3:0)
Certificate Programs in Gerontology

Committee
Rita Ailinger, Aliza Kolker, Catherine Kopac, Kathleen McGuinness, Jeanne Mellinger, Mary Montebello, Theodore Remley, Fred Schack, Moira Shannon

The undergraduate certificate program in gerontology is designed for students who wish to train for work with older people and for professionals working with the elderly. The program provides a background of basic knowledge in gerontology and then permits the student 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.

The certificate program in gerontology is administered by the Division of Continuing Education. Six departments—Education, Health and Physical Education, Psychology, Public Affairs, Social Work, and Sociology—and the School of Nursing counsel students and form the policy committee for the program.

Individuals who wish to enter the bachelor’s-level certificate program may obtain counseling and an application form from the Office of Individualized Study Degree Programs, Room 124 East, 323-2342.

Program Requirements

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 eight hours of biology, anatomy, or physiology, and three 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 569, PRLS 470, PSYC 415, and SOCI 441.

2. Six semester hours in a practicum in gerontology: PSYC 548, 549 (Students must 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, PSYC 326, SOCI 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 no more than six hours in which D grades have been received.

Certificate Program for Psychology Technicians

Inquiries should be directed to Dr. Carol Erdwins, Department of Psychology.

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 30 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, 421, 422

One of the following:

PSYC 211, 313, 314, 415

One of the following:

PSYC 320, 321, 330, 414, 423

Note: Some courses are prerequisites to others and need to be taken in sequence. Specifically, PSYC 325 is a prerequisite to PSYC 326 and 414; 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 minimum grade of B in each semester of the

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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 Real Estate and Urban Development

The certificate program in Real Estate and Urban Development provides 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 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 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
ECON 103 Contemporary Economic Principles and Issues I
DESC 200 Statistical Analysis for Decision Making I

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

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 Management Accounting
DESC 202 Statistical Analysis for Decision Making II
ECON 104 Contemporary Economic Principles and Issues II
FNAN 301 Financial Management
University Courses

Committee on University Curriculum Matters

Jeffrey T. Chamberlain (Chair), M. Edward Goretsky, Jeanne C. Mellinger, John M. Smith, Kitty S. Smith

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 Course offerings have included:
UNIV 300: Robinson Fellow Seminar (3)
UNIV 407: Introduction to Irish Studies (3)
UNIV 410: Assassination and Terrorism as Political Weapons (3)
UNIV 411: Electronic Communication (Television) and the Representation of Reality (3)
UNIV 412: Family Law (3)
UNIV 413: Life in the Universe (3)
UNIV 414: Feminist Perspectives on Sexual Liberation (3)
UNIV 415: The New Deal: Its Impact on American Society, 1933-1980 (3)
UNIV 416: Intelligence in the Universe (3)
UNIV 417: Energy Alternatives for the Eighties (3)
UNIV 418: Corporate-Government Relations in the International Environment (3)
UNIV 420: Nuclear War (3)
UNIV 421: Archaeoastronomy (3)
UNIV 422: Popular Movements and Active Nonviolence in the U.S. (3)
UNIV 423: Consciousness and Modern Physics (3)
UNIV 424: South Africa: Crisis and Conflict (3)
UNIV 425: Utopias and Utopian Thought in the Western World (3)
UNIV 426: Human Allegiances and Modernization (3)
UNIV 427: Understanding Modern Japan: Its Social, Economic, and Political Characteristics and Interactions (3)
UNIV 428: Understanding the Brain (3)
UNIV 429: Security in the Nuclear Age (3)
UNIV 430: Where Have the Heroes Gone? (3)
UNIV 431: Generic Design (3)
UNIV 433: Ideas that Shape American Lives (3)
UNIV 434: Interracial and Interethnic Conflict: World Perspectives (3)
UNIV 435: Business Law Technology: An Analysis of Modern Social Organization (3)
UNIV 436: The Development Process: Cities from Fields (3)

UNIV 437: Approaches to Problem Solving (3)
UNIV 438: Literature and Society: The Caribbean Archipelago (3)

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Course Dictionary
This dictionary lists undergraduate and graduate courses offered by the University and available for credit to undergraduates. Courses are listed in alphadiscipline order beginning with "Accounting" and ending with "Vietnamese." The computer name for courses is included with each heading. Except where obvious (i.e., English), the department offering the course is cited in the heading. The computer names used are:

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http://catalog.gmu.edu
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 Graduate School, they may take these courses for reserve graduate credit.
Courses

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).


202 Managerial Accounting (3:3:0). Prereq ACCT 201. Survey of managerial accounting. Manufacturing cost systems, budgets, and cost-volume-profit analysis are introduced. Special attention is directed to the use of accounting information in managerial decision making.

311 Cost Accounting (3:3:0). Prereq ACCT 202. Topics include accumulation allocation, analysis, and reporting of internal financial data. Discussion of the use of cost information in inventory valuation, income determination, planning, controlling, and decision making.

312 Accounting Information Systems (3:3:0). Prereq ACCT 311 and INFS 201. An examination of techniques for analysis and design of systems that provide accounting and financial data for both internal and external users. Emphasis is on the accountant's role in systems development and control.


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 362.)

481 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.


481 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.

492 Field Experience in Accounting (3:3:0). Prereq Senior standing and Pol. This educationally relevant, faculty-governed field experience gives students an opportunity to become involved in addressing actual challenges encountered by Northern Virginia businesses. Working through the Entrepreneurship Center, each client firm will be matched with a team of students assigned to propose action plans relating to a major problem or opportunity faced by the company.

499 Independent Study (1-3:0:0). Prereq 9 hr 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 incl 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, and advertising and advertising. 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.
Anthropology Courses (ANTH)

Sociology and Anthropology

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 and Cultures of the Pacific (3:3:0). Prereq ANTH 114 or Pol. Survey of twentieth 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 Peoples and Cultures 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 Peoples and Cultures of 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 four-to-six 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, 6 hr of Anthropology incl ANTH 120 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 incl mythology, ritual, symbolism and dogma. Cross-cultural and predominantly 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.

325 Field Techniques in Archaeology (3-6:0). Prereq 54 hrs, ANTH 120, or Pol. Intensive study of archaeological field techniques by directed group projects in site survey, site testing, recording techniques, and stratigraphy through discussions, demonstrations, and hands-on experience. (May be repeated for credit; six credits maximum.

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 humans as culture-bearing animals. Topics incl altruism, aggression, primate social organization, morphology, comparative ethology, and microevolutionary genetic differentiation.

365 Human Diversity (3:3:0). Prereq 54 hr, ANTH 135, or Pol. Variations in culturally distinct human groups due to environmental, physiological, genetic, nutritional disease, and spatial factors.

370 Ecology and Culture (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. Survey of issues in study of relationships between cultural and psychological variables. Major topics viewed cross-culturally incl personality, mental illness, projective systems, cognition and learning.

375 Anthropological Perspectives on History (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 Comparative Medical Systems (3:3:0). Prereq ANTH 114, 54 hr, or Pol. Survey of the discipline of medical anthropology with focus on traditional medical beliefs and the diverse responses to modern scientific medicine both in developing countries and among cultural minorities in the U.S.

389 Issues in Anthropology (3:3:0). Prereq 54 hr, ANTH 114, and 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 6 hr of Anthropology incl ANTH 120 or Pol. Consideration of the public significance of archaeology, and anthropological contributions to public concerns such as antiquities legislation and cultural resource management.

430 Research Methods in Archaeology (3:3:0). Prereq 54 hrs. ANTH 120, or Pol. The archaeological research process will be studied through discussions of current archaeological methodologies and through student participation in designing and critiquing research projects.

435, 436 Special Projects in Archaeology (1-3:0:0). Prereq ANTH 320 or 325 or 430 and Pol. Lab or field project leading to a written report of the research. Research paper are completed under the instructor's guidance.

440 Applied Anthropology (3:3:0). Prereq ANTH 114, 54 hr or Pol. Focus on anthropologists' 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.

495 Internship (3-6:0:0). Prereq 54 hrs., ANTH 120, or Pol. Supervised project in applying anthropology; i.e. public archaeology, development anthropology, museums. (May be repeated for credit; 6 credits maximum).

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

101 Introduction to The Arabic Language (3:3:1). Prereq none. Introduction to Modern Standard Arabic, with emphasis on the written language. Lab work required.

102 Introduction to The Arabic Language (3:3:1). Prereq Arabic 101 or PoD. Continuation of Arabic 101. Lab work required.

201 Intermediate Arabic I (3:3:1). Prereq ARAB 102 or equiv. Further development of skills acquired in Arabic 101 and 102 including grammar, vocabulary, listening, speaking, reading, and writing. Must be taken in sequence. Lab work required.

202 Intermediate Arabic II (3:3:1). Prereq ARAB 201 or equiv. Continuation of Arabic 201 with emphasis on the application of language skills to reading, composition, and discussion. Must be taken in sequence. 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. Considers placement of buildings and public monuments in urban design.

180 History of African Art (3:3:0). Highlights the variety of artistic styles and symbolic traits of cultures in Africa producing artistic artifacts. Concentrates on the central and western sub-Saharan regions and proceeds geographical.

200, 201 Survey of Western Art (3:3:0). Western art as expressed through architecture, sculpture, and painting. The first sem covers prehistoric to Renaissance; the second covers Renaissance to the present.

210 History of Design (3:3:0). Prereq A 100-level or above course in ARTH or ARTS or Pol. Role of design in arts from antiquity to the present.

280 Survey of Far Eastern Art (3:3:0). Art of India, China, Japan, Southeast Asia, Korea, and Indonesia from Bronze Age through the 20th century, exploring role of Buddhism and Hinduism through visual representation.

315 History of Modern Architecture (3:3:0). Prereq A 100- or 200-level course in ARTH or ARTS or Pol. History and
development of modernism in architecture from the Beaux Arts movement to the present, and an investigation of stylistic and structural innovations.

319, 320 Near Eastern Art (3:3:0, 3:3:0). Prereq 24 hr. Art and architecture of Egypt, Mesopotamia, Anatolia, Bronze Age Crete and Greece, Moslem Iraq, Iran, and Turkey, and its effect on other centers. ARTH 319 covers developments in antiquity; 320, Islam.

321 Greek Art (3:3:0). Prereq 24 hr. History of ancient Greek architecture, sculpture, and painting.

322 Roman Art (3:3:0). Prereq 24 hr. History of Roman architecture, sculpture, and painting.

323 Ancient Painting (3:3:0). Prereq 24 hr or a 100- or 200-level ARTH course. Ancient wall painting, its functions and styles, in Mediterranean area.

332 Medieval Art (3:3:0). Prereq 24 hr. Architecture, sculpture, and painting from early Christianity through Gothic in Byzantine Empire and Western Europe.

340 Early Renaissance Art in Italy (3:3:0). Prereq 24 hr. Architecture, sculpture, and painting in Italy from ca. 1300 to 1500.

341 Northern Renaissance Art (3:3:0). Prereq 24 hr. Architecture, painting and sculpture in France, Germany, and the Netherlands from ca. 1300 to 1600.


344 Baroque Art in Italy, France, and Spain (3:3:0). Prereq 24 hr. Architecture, sculpture, and painting in Southern Europe from ca. 1600 to 1750.

345 Northern Baroque Art (3:3:0). Prereq 24 hr. Architecture, painting, and sculpture in Belgium, England, Germany, and the Netherlands from ca. 1600 to 1750.

350 History of Photography (3:3:0). Prereq ARTH 101, 200, or 201. Development of photography from origins in France in the 19th century to the present.

360 Nineteenth-Century European Art (3:3:0). Prereq 24 hr. Movements from Neoclassicism to Symbolism will be discussed in relation to social, cultural, political, and technological changes in Europe.

362 Twentieth-Century European Art (3:3:0). Prereq 24 hr. A study of major movements (Fauvism, cubism, futurism, constructivism, surrealism, neo-expressionism) and important artists in twentieth-century painting and sculpture. Discussion will center on art, art theory, and the relation of both to European history.


373 American Art, 1900-1945 (3:3:0). Prereq 24 hr. Major developments in painting and sculpture from the turn of the century to World War II. Selected topics will include the emergence of an American avant-garde, the development of new subject matter with urbanization, Regionalism, and art and politics in the 1930s.

374 American Art Since World War II (3:3:0). Prereq 24 hr. Topics including abstract expressionism, pop art, minimalism, conceptual art, feminist art, environmental art, the new figuration, and photo-realism will be discussed in an historical and critical context.

392 Exhibition Projects (3:3:0). Prereq 6 hr in ARTS or 3 hr in ARTH or Engineering and 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.

398 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.

460 Advanced Studies in European Art/Nineteenth-Twentieth Centuries (3:3:0). Prereq 300-level course in Modern ARTS. Study in a particular area of Modern European Art. Topic may focus on a movement or group of artists (i.e., realism, impressionism, or fauvism) or on a theme which includes several time periods.

471 Advanced Studies in American Art (3:3:0). Prereq 300-level course in American art. Study in a particular area of American art, focusing on a form (landscape or genre painting), a theme (nationalism, regionalism, the iconography of the family), or a movement (American modernism).

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 200, 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.

582 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 Visual Thinking (3:0:6). A studio primer including an investigation into drawing, sequential design, printmaking, and film-making imagery.
202, 203 Studio Fundamentals I, II (3:0:6), (3:0:6). Prereq ARTS 102. A two-semester course concerning basic visual decision making and the choice involved in ordering elements of a visual vocabulary into unified, coherent wholes. Establishes a basis for comprehension and use of the components to a visual language that is a foundation for further experience in the arts.

310, 311 Graphic Design (3:0:6) (3:0:6). Prereq ARTS 102, 202, and 203 or equiv., or Pol. Introduction to the concepts of commercial graphic design and its techniques. Solutions to typical problems confronted by the graphic artist: newspaper layout, advertising layout, book design. Taught as a series of studio problems.

312 Design I (3:0:6). Prereq ARTS 102, 202, and 203 or Pol. This course provides an opportunity to investigate and experiment with visual communication in two- and three- dimensional form. Emphasis is on developing an individual awareness of the relationship between concepts, communication, techniques, and media.

322, 323 Drawing I, II (3:0:6) (3:0:6). Prereq ARTS 102, 202, and 203 or Pol. Fundamentals of drawing with emphasis on perspective systems and skills in representing space, objects, and textures by a variety of methods. Offered sequentially.

332, 333 Painting I, II (3:0:6) (3:0:6). Prereq ARTS 102, 202, 203, or Pol. Painting taught as observation through techniques in oil or water-based media, varying with the instructor. Offered sequentially.

342 Printmaking I: Silkscreen (3:0:6). Prereq ARTS 102, 202, and 203 or Pol. The process and history of basic silkscreen printmaking will be practiced and studied: monotypes, paper stencil, liquid blockout, lacquer stencil film, direct and indirect photographic stencils. Applied design and techniques for the production of posters will be emphasized. Every other fall semester.

343 Printmaking II: Relief (3:0:6). Prereq ARTS 102, 202, and 302, 342, or Pol. The process and history of basic relief printmaking will be practiced and studied: woodcut, linoleum cut, wood engraving, relief collagraph with an introduction to color relief printing in editions. The application of relief printmaking to the design, illustration, and production of books and portfolios will be emphasized. Every other spring semester.


351 Color Slide Photography (3:0:6). Prereq Pol. A study of 35mm photography in terms of camera manipulation, basic optics and sensismetry, and aesthetics of the color slide medium. Students are required to provide a 35mm camera (preferably a single lens reflex camera), a light meter, and film.

362, 363 Sculpture I, II (3:0:6) (3:0:6). Prereq ARTS 102, 202, 203, or Pol. Fundamentals of sculptural design with emphasis on three-dimensionality in a variety of media. Practical knowledge of sculptural materials and techniques, i.e., clay modeling, mold making, carving, basic woodworking, and their applications to 3-D form, concepts, and spatial relationships.

373 Art for the Elementary School (4:0:6). Prereq for non-art majors only. Jr. standing and EDUC 300. Problems of teaching art for the non-specialist classroom teacher in terms of insight into children's art, the role of art in the school curriculum, and personal understanding of art. Ten-hour field experience required as part of the course.

392 Exhibition Projects (3:3:0). Prereq six hours in ARTS or three hours 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. 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 Drawing III, IV (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.

432, 433 Painting III, IV (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 Printmaking III: Intaglio (3:0:6). Prereq ARTS 102, 202, and 203 or Pol. The process and history of basic intaglio methods of printmaking 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. Every other fall semester.

443 (341) Printmaking IV: Color (3:0:6). Prereq ARTS 342 or 442 or Pol. 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. Every other spring semester.

452, 453 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 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.

491, 492 Advanced Studio Problems (2-4:0:0) (2-4:0:0). Prereq 54 hrs. Pol. and PoC. Study proposal submitted prior to registration. Opportunity for development of advanced skills and concepts in drawing, painting, sculpture, and other media. May be repeated for credit.

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 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 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.
Asian Studies Courses (ASST)

Area Studies

450 Fundamental Themes and Issues of Asian Civilization (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.

460A Seminar in History, Society, and Literature with the Focus on Literature (3:3:0). Prereq junior standing in the Asian studies major or Pol. Traces the development of Asian societies and cultures through time using major Asian literary works in English translation as source materials. Geographical foci will depend on the expertise of the instructor.

460B Seminar on Asian Society in Historical Perspective (3:3:0). Prereq junior standing in the Asian studies major or Pol. Aims at understanding some of the common themes and historical forces that forged critical links between the civilizations of South Asia, Southeast Asia, and East Asia in both modern and premodern times.

470 Seminar in Major Issues in Contemporary Asia (3:3:0). Prereq junior standing in the Asian studies major or Pol. An examination of the major problems currently facing individual Asian countries and the implications of these problems for the Asian and international communities.

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 sci req; not for physics majors.

228 Foundations of Cosmological Thought (3:3:0). Examines the scientific, historical, and philosophical foundations and development of cosmological thought from antiquity to the present. Emphasizes a qualitative understanding of the development of cosmology concluding with the present concept of the origin and evolution of the Universe. No advanced background in mathematics or the natural sciences is required.

328 Introduction to Astrophysics (3:3:0). Prereq PHYS 345 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 (3:3:0). 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.

Bachelor of Arts and Sciences Integrated Curriculum (BA/SIC) Course (BASC)

BA/SIC

100 Monthly meeting of BA/SIC students with faculty (0:0:0). Designed to help students integrate the cross-disciplinary knowledge presented in the BA/SIC curriculum.

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. Topics incl reproduction, genetics, plants, major ecosystems and ecological problems. Students who have taken BIOL 113-114 or BIOL 124-125 are not eligible to take this course. Spring, summer term D.

113 Biological Science (4:3:3). For science majors and preprofessionals in the life sciences. Topics incl the chemical and cellular basis of life, genetics, and taxonomy. Students who have previously passed BIOL 103 or 103 and 104, should consult the dept undergrad coordinator before enrolling. Fall, summer term A.

114 Biological Science (4:3:3). Prereq BIOL 113. Topics incl 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 phys 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. 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; physiology 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.


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 124-126.

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. Not available to students who have taken BIOL 261 or 361. Spring.

303 Animal Biology (4:3:3). Prereq BIOL 113 or Pol. Emphasis on structure and function of vertebrates, adaptations to the environment, and evidences of evolution.

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 GEOI 309). Prereq GEOI 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 113-114 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.


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.

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 taxonomy, morphology, 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.

377 Ecosystem Ecology (3:3:0). Prereq 8 hrs of biology, geology, or chemistry, or Pol; 54 hrs. Introduction to ecosystem concepts and their applications to natural and managed ecosystems.

380 Bioinstrumentation (4:3:3). Prereq CHEM 211, 212, BIOL 383, 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.

383 Cell Biology (4:3:3). Prereq BIOL 113-114, CHEM 211-212, MATH 110 or 113, and junior standing. Cellular structure and function. Topics incl fine structure, chemistry, metabolism and regulatory mechanisms. Fall, 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 trip(s).

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 bio 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 383 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.

464 Plant Physiology (4:3:3). Prereq BIOL 383 or Pol. A study of plant functions, photosynthesis, transport...
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.

543 (644) Tropical Ecosystems (4:3:3). Prereq Course in ecology or Pol. Terrestrial, aquatic and marine ecosystems in the tropics emphasizing plant communities and plant-animal interactions, and the role of man in the tropics. Field trip to the tropics is req. as part of lab.

546 (646) Estuarine and Coastal Ecology (4:3:3). Prereq Course in ecology and Pol. Emphasizes marine biology of estuarine and coastal habitats of the Chesapeake Bay region and factors affecting distribution and abundance of organisms. Lab provides training in field measurement of physical and chemical parameters and collection and identification of local organisms. Extended field trips made to mid-Atlantic sites. Summer.

547 (647) Terrestrial Plant Ecology (4:3:3). Prereq Course in ecology. Consideration of community organization, development, productivity and mineral cycling, interactions between plants and competitors, herbivores and various environmental factors, especially light, water and soil. Field and lab emphasize data collection and statistical analysis.

553 Advanced Topics in Immunology (3:3:0). Prereq BIOL 452 or Pol. A comprehensive study of immunologic mechanisms as they pertain to immunologic diseases and transplantation.

556 Microbial Physiology and Metabolism (3:3:0). Prereq BIOL 393 or Pol. A comprehensive study of microorganisms covering aspects of growth, nutrition, transport, autotrophic and heterotrophic metabolism, regulation, and differentiation.

557 Experiments in Microbiology (2:0:6). Prereq BIOL 383 or Pol. Students perform a select group of experiments that illustrate techniques used in the study of microbial taxonomy, genetics, physiology, and metabolism.

560 Biological Ultrastructure (4:2:6). Prereq BIOL 383, 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.


564 Techniques in Virology (2:1:3). Co- or Prereq BIOL 563 or Pol. Emphasis on propagation of animal viruses in embryonated eggs and cell culture, titration of animal viruses and bacteriophage, serological techniques used in virology, and biochemical and biophysical characterization of viruses.


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, odd 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. Study of the genetic structure and dynamics of populations, both real and ideal. Spring, even numbered years.

575 Selected Topics in Genetics (3-3:0). Prereq General genetics or Pol. Different topics in different years. Topics incl molecular, developmental, physiological and classical genetics emphasizing current problems and research. May be repeated once with POC. Spring, odd-numbered years.

Business Legal Studies Courses (BULE)

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 The Legal Environment of Business (3:3:0). Prereq 60 hr incl ENGL 101, 102, and ECON 103, 104, or Pol. Legal environment in which business transactions are conducted incl the Uniform Commercial Code and selected government regulations.

303 Law and Business Organizations (3:3:0). Prereq BULE 301, or Pol. Law of agency, bailments, business organizations, and property.

304 Real Estate Law (3:3:0) (same as REUD 304). Prereq BULE 301, or Pol. 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.

305 Government Contracting Law (3:3:0). Prereq BULE 301 and LOGS 331. A survey of the legal aspects of contracting with the government incl formation, administration, modification and termination of government contracts as well as the remedies available to the parties when a breach of contract occurs.

401 Law, Business, and Society (3:3:0). Prereq Completion of a 300-400 level BULE course and at least 75 semester hours. Interrelationships between for-profit and not-for-profit organizations and their external political, social, economic, international, and ethical environments along with consideration of the public policy process and issues that arise out of the business environments.

Canadian Studies Courses (CAST)

Public Affairs

300 Introduction to Canada (3:3:0) Prereq 24 hr or Pol. A survey of Canadian life from cultural, geographical, historical, political, social, and literary perspectives.

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)-(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. Credit will not be given both for this course and for CHEM 106 or 211-212. Not open to students majoring in chemistry.

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. Enrollment restricted to students majoring in elementary education. Credit will not be given both for this course and for CHEM 103-104 or 211-212.

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, nuclear chemistry, and the properties and uses of the more important elements and their compounds. Students majoring in science, engineering, or mathematics should choose this course. Credit will not be given both for this course and for CHEM 103-104 or 106.

313-314 Organic Chemistry I (3:3:0)-(3:3:0). Prereq CHEM 211-212; coreq for 313: CHEM 315; coreq for 314: CHEM 318 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 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.

337 Physical Chemistry Lab II (2:1:3). Prereq CHEM 321. Prereq or coreq CHEM 332. Continuation of CHEM 336. One hr recitation.

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. Incl 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.

514 Physical Organic Chemistry (3:3:0). Prereq CHEM 313-314, or Pol. The principles underlying molecular structures, reactivities, and reaction mechanisms. Topics include valence-bond and molecular-orbital theory, the electronic interpretation of organic reactions, stereochemistry, conformational analysis, the kinetics and thermodynamics of organic reactions, and photochemistry.

521 Theory of Analytical Processes (3:3:0). Prereq CHEM 422 or Pol. Physicochemical principles and analytical techniques applicable to the analysis of solutions, including activity coefficients, solvation and ionic size, titration-curve theory, acidity functions and pH-scales, kinetic analysis, and modern techniques for designing experiments and interpreting data.

523 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.

525 Electroanalytical Chemistry (3:3:0). Prereq CHEM 422 or Pol. Theory of polarography, stationary-electrode and hydrodynamic voltammetry, chronopotentiometry, chronoamperometry, controlled-potential electrolysis and coulometry at controlled potential, coulometric titration, and a number of related techniques, with emphasis on their applications in analysis and research.

532 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.


546 Bioinorganic Chemistry (3:3:0). Prereq CHEM 563 or Pol. A survey of the structures, functions, and properties of metal ions in biological systems. Modern inorganic coordination chemistry and the study of metal-ion sites in metalloenzymes and metalloproteins. Enzymatic catalysis, oxygen carriers, electron-transfer phenomena, and inorganic model systems.


565 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. Complements 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 Biochemistry Lab II (2:1:3). Continuation of CHEM 565. One hr recitation.

567 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.

Chinese Courses (CHIN)

Foreign Languages and Literatures

101 Elementary Chinese (3:3:1). Intro to Mandarin, incl basic grammar, oral expression, listening comprehension, reading, and writing. Language Lab is an integral part of the course.


201 Intermediate Chinese I (3:3:1). Prereq CHIN 102 or equivalent. Further development of skills acquired in CHIN 101-102, including grammar, oral expression, listening comprehension, reading, and writing. Three classroom hours and one laboratory hour per week. CHIN 201 and 202 must be taken in sequence. Lab work required.

202 Intermediate Chinese II (3:3:1). Prereq CHIN 201 or equivalent. Continuation of CHIN 201. Lab work required.

Classics Courses (CLAS)

Foreign Languages and Literatures

250 Classical Myths and Legends (3:3:0). Prereq ENGL 101 or equiv or Pol. Myths and legends of Greece and Rome,
with illustration of their role in classical and modern literature and art. Course work in English. May be taken to fulfill general req in literature for baccalaureate degrees.

300 Homer and Greek Tragedy (3:3:0). Prereq ENGL 101 or equiv or Pol. The Iliad and Odyssey and selected plays by Aeschylus, Sophocles, and Euripides. Discussion of the social setting of both types of literature. Course work in English. May be taken to fulfill general req in literature for baccalaureate degrees.

Communication Courses (COMM)

Communication

100 Introduction to Communication (3:3:0). Students will gain an understanding of the elements affecting speech communication at each level: interpersonal, interpersonal, small group, organizational, intercultural, public and mass communication. Effective listening and critical evaluation of persuasive messages will be stressed, as well as techniques for self-monitoring to improve speaker skills in communication.

101 Introduction to Interpersonal Communication (3:3:0). Principles involved in communicating in interpersonal relationships with the primary focus upon dyadic and nonpresentational group situations. Skill development appropriate to these settings will be emphasized.

110 Introduction to Oral Interpretation (3:3:0). Principles involved in the oral communication of the written word from writer, to reader, to audience. Practice in oral communication of prose, poetry, and drama.

120 Introduction to Public Speaking (3:3:0). Principles and types of public speaking; emphasis on informing and persuading. Intensive practice in composition and presentation.

130 Introduction to Small Group Discussion (3:3:0). Emphasizes the development of presentation ability in a group, decision-making group maintenance, and leadership and participant skills. Preliminary study of group dynamics.

140 Forensics Seminar in Creative Arts (1:0:6). Prereq Audition. Intensive work in creative forensics events—rhetorical criticism, epidemic speaking, informative speaking, persuasive speaking, extemporaneous speaking, after-dinner speaking, and impromptu speaking. May be taken four times.

141 Forensics Seminar in Re-creative Arts (1:0:6). Prereq Audition. Intensive work in re-creative forensics events—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.

146 Yearbook Workshop I (1:1:2). Prereq COMM 100 or equivalent and Pol. Practical experience in photography, layout, production writing, and sales for the University yearbook, coordinated by the yearbook faculty adviser. May be repeated for a total of three semester hours.

148 Radio Workshop I (1:1:2). Prereq 100-level COMM course or Pol. Practical experience in production, newswriting, promotions, advertising, public relations, programming, or newscasting for the student radio station, WGMU. May be repeated for a total of three credits.

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, 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 three 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 intercultural 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.

307 Field Study in Intercultural Communication (3:3:0). Prereq COMM 305 or Pol. A structured communication learning experience centered around one to three weeks of
travel in a foreign environment, involving another country or a relevant subcultural group in the United States. Students must complete readings relevant to communication in the host society, laboratory assignments that require the student to make observations about intercultural communication, and a personal learning paper in which the student integrates learnings from observation and interactions during the travel. Students must also attend seminar sessions and lectures. Intercultural communication concepts and principles are used to analyze the observations and communication experiences of participants’ travel.


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 330 and 54 hr or Pol. Survey of the nature, history, scope and practice of public relations in business, trade associations, nonprofit 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 311, or Pol. Theory, practice, and methods of analysis of communication within organizations. Emphasis on the process and structure, interaction formats, mechanisms for modification, and career paths in organizational communication.

340 Forensics Seminar in Creative Arts (1:0:6). 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 (1:0:6). 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 (1:0:6). 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 (1:0:6). 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 146, 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 II (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 or hours.

348 Radio Workshop II (1:1:2). Prereq 3 hr COMM 145 or Pol. Intense practical application of previously acquired skills in production, promotions, advertising, public relations, programming, or newswriting for the student radio station, WGMU.

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 and 40 wpm keyboard skill. An experience course where the student engages in actual newsgathering. 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.


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. Keyboard skills required.

354 Radio Broadcast Operations (3:1:5). Prereq COMM 302 or Pol. Theory and practice of operational radio broadcasting. Topics include the programming, production, and promotion aspects of commercial and noncommercial radio.

355 Television Production (3:1:5-8). Prereq COMM 302 or Pol. Theory and practice of television production. Includes work with video and audio equipment in a studio lab. Practice in all operational capacities in production of video programs.


357 Television Workshop (1:1:2). Prereq Comm 100 or Pol. Practical experience in the area of television production while working in the University telecommunications studio. Coordinated by the faculty of the Department of Communication. May be repeated for total of 3 hr.

358 Electronic Field Production (3:1:5-3). Prereq COMM 302 or Pol. Introduction to the techniques, theory, and practice of television field production, including preproduction, production, and post-production. May be repeated for total of three hours.

361 Advanced Newswriting and Reporting (3:2:3). Prereq COMM 351 or Pol. An advanced reporting course where students engage in actual newsgathering outside the classroom and writing for publication in the University newspaper or other sources.

375 Mass Communication Advertising and Promotions (3:3:0). Prereq COMM 302 or Pol. COMM 302 or Pol. Covers the history, regulation and ratings of advertising as well as media buying, advertising campaigns, and the strengths and weaknesses of various media vehicles used in advertising.

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, nonprofit organizations, and large corporations.

399 Special Topics in Speech Communication (3:3:0). Prereq COMM 301 or Pol. A study of speech communication by topics such as the basis for speech production, Afro-American rhetoric, communication history. 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.

420 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.

431 Information Technology and the Political Process (3:3:0). Prereq GOVT 103 or 133, or junior status as a major in Communication or Pol. A study of the impact of the information network of wire and wireless communications and computers on the political process in advanced industrial countries. Same as GOVT 431.

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 major and 500 level course and PoD. College and field work 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 Responsible Communication in a Free Society (3:3:0). Prereq COMM 300, 302 or Pol. Major issues surrounding the role of speech, press, and electronic media in society. Areas of special study include free speech in a 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.

465 Topics in Communication and Gender (3:3:0). Prereq COMM 400 or Pol. In-depth exploration of selected topics involving gender and communication. Among topics covered may be women in media, women as rhetors, male/ female communication, communication and sex roles. Specific interests are examined in a seminar setting. Course may be repeated with department approval.

475 (456) 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 semester in which the work is to take place. May be repeated.

Communication courses at the 500 level are open to postbaccalaureate 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. Incl extensive 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 management. The focus is upon interpersonal interactions, including dyadic and small-group levels in various settings such as friendships, marriage, family, and the workplace. 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 lecture, guided discussions, case analyses, exercises, and simulations.

505 Intercultural Communication (3:3:0). Analysis of communication 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 managerial functions within international organizations. Focus on interpersonal aspects of government and business relations both outside the United States and with foreign visitors in the United States, with extensions being made to management of subcultural differences within U.S. national organizations. Emphasis on

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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 develop an understanding of how cultural differences effectively with these cultural differences.

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-confidence, 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 development 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.

Comparative Literature Courses (CL)

Comparative Literature

300 Introduction to Comparative Literature (3:3:0). Prereq Junior standing and intermediate proficiency in a foreign language. An introduction to the methods of comparative literature through the study of a selected theme or motif as it appears in various periods, genres, or national literatures. Readings are drawn chiefly from English, American, or European literature; on occasion, non-Western literatures will be featured. Students are encouraged to work with texts in the original language.

500 Theories of Comparative Literature (3:3:0). Prereq CL 300 and senior standing or Pol. An intensive study of the major theories of comparative literature with special emphasis on international movements and their characteristic themes. Students will work with texts in the foreign language of their concentration; other texts will be studied in translation. M233GEMGEM 000001000011007 233 0486

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 noncomputer 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.

112 Computer Science I (4:3:1). Prereq Second year of high school algebra and interest in computer science. An introduction to computer science for majors and others with a serious interest in computer science. Topics include an overview of computer system hardware and organization, problem-solving methods and algorithm development, program structures, abstract data types, simple data and file structures, an introduction to analysis of algorithmic complexity and program correctness, and applications development in a high-level programming language which supports modular design.

161 Introduction to a Programming Language (1:1:0). Intro to basic concepts of a computer language and its applications (e.g., computer graphics, expert systems, database mgmt. packages).

211 Computer Science II (3:3:0). Prereq A grade of C or better in CS 112. A continuation of the instruction in algorithmic development, procedural and data abstraction, and algorithmic complexity begun in CS 112. Topics will include abstract data types and data structures (sets, files, strings, linked lists, stacks, queues, trees, graphs) and examples of their applications, with continued emphasis on program development which will be reinforced through several larger programming projects. There will be additional programming language instruction to supplement the major topics of this course.
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. Symmetry 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.

312 (formerly 212) Computer Science III (3:3:0). Prereq A grade of C or better in CS 211. Math 305 is a suggested coreq. Additional examples of tree and graph algorithms, sorting, searching, string processing and an introduction to resource management, such as memory, time, processors. A continued emphasis on abstract data types, algorithmic strategies, and program verification and complexity. Additional topics may include logic programming, proof of correctness, and development of parallel algorithms. Credit for both CS 212 and CS 312 will not be given.

331 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 nonterministic 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 Introduction to Software Engineering (3:3:0). Prereq CS 311. Techniques in software design and development. Discussion of formal models of structured programming, software engineering methods and tools, top-down design and documentation. Students organize, manage, and develop a software engineering project, working in teams.


440 Language Processors (3:3:0). Prereq MATH 305, CS 312, 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 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.

468 Computer System Programming (3:3:0). Prereq CS 312, 311. Assemblers, compilers, system structures, operating systems, and machine architecture.


480 Introduction to Artificial Intelligence (3:3:0). Prereq CS 312 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 312, 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 (1-3:3:0). 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 six credits if the subject matters are substantially different.

499 Special Topics in Computer Science (3:3:0). Prereq 54 hours and Pol; specific prerequisites vary with nature of topic. Topics of special interest to undergraduates are offered. May be repeated for a maximum of six credits if the subject matters are substantially different.

Dance Courses (DANC)

Performing Arts

101 Dance Appreciation (3:3:0). 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 (3:3:0). 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 (3:3:0). 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 (3:3:0). 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.


141 Beginning Ballet (3:3:0). 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 (3:3:0). Prereq DANC 141 or Pol. Further development of knowledge, skills, and appreciation through the technique, vocabulary, and history of ballet.

150 Dance Improvisation (3:3:0). Exploration into the creation of spontaneous movement experiences. Emphasis
on encouraging freedom of self-expression and creative awareness.

161 Beginning Tap Dance (3:3:0). Elementary exploration into the rhythms and steps basic to the art form of tap dancing.

224 Intermediate Modern Dance (3:3:0). 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 four times for credit.

231 Intermediate Jazz Techniques (3:3:0). Prereq DANC 131 or Pol. Continued study of movement in the jazz style of dance. May be taken four times.

241 Intermediate Ballet (3:3:0). Prereq DANC 141 or Pol. Continued training at the intermediate level. Emphasis on increasing technical proficiency and aesthetic awareness. May be taken four times.

251 Dance Composition I (3:3:0). 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 (3:3:0). 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 corrective and imagery to correct insufficient muscle pattern and reduce stress upon the body.

313 Rhythm 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 twentieth century.

314 Music Accompaniment for Dance (3:3:0). Prereq DANC 313 or Pol. Lecture practicum course designed 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 (3:6:0). Prereq DANC 224 or Pol. Continued training for advanced students. Emphasis on attainment of high quality of technical and performing skills. May be taken eight times.

341 Advanced Ballet (3:3:0). 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 eight times.

350 Advanced Dance Improvisation (3:3:0). 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 (3:3:0). 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 four 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 twentieth century. Emphasis on the social, cultural, and philosophical factors shaping the progress of dance in successive historical periods.

420 Special Topics in Dance (3:3:0). 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 twentieth 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 methodology 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 stdg 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 general elective credit).

200 Statistical Analysis for Decision Making I (3:3:0) (formerly MATH 108). 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 108, DESC 202. Examination of the principal functions of operations managers in various settings. Analytical models are used to describe key planning and control analyses 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 applications, 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.

354 Decision Theory and Networks (3:3:0). Prereq DESC 301. Study of the systematic evaluation of alternative actions as a basis for choice among them. Analytic techniques such as tree diagrams, Bayesian inference, and network models (e.g., CPM and PERT), are to be used
extensively. The techniques as presented will be applied to a wide range of business problems; included in the problem analysis are case methodology, use of the case method and microcomputer software for both decision analysis and project management.

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 drawing useful conclusions and supporting recommendations made in reports to management. Term project and microcomputer applications of cases.

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, including dynamic, integer, and goal programming. Applications to management, finance and marketing.

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 include trend analysis, moving averages, exponential smoothing, adaptive regression and correlation, time series analysis.

456 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.

459 Advanced Topics in Applied Business Statistics (3:3:0). Prereq DESC 353 or Pol. Advanced study of selected topics in statistics with applications to business problems and decisions. Potential topics to cover developments in business statistics, including contemporary research findings and case studies, that would not normally be covered in other available applied business statistics courses.

461 Advanced Operations Management (3:3:0) (formerly MGMT 461). Prereq ACC 202, MGMT 301, and DESC 301. Advanced study of selected topics in the management of operations in manufacturing and service industries. Emphasis is placed on the management aspects of the quality control system. 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, including contemporary research findings and case studies of decision sciences in business and other organizations.

492 Field Experience in Decision Sciences (3:3:0). Prereq Senior standing and Pol. This educationally relevant, faculty-directed field experience gives students an opportunity to become involved in addressing actual challenges encountered by Northern Virginia businesses. Working through the entrepreneurship center, each student firm will be matched with a team of students assigned to propose action plans relating to a major problem or opportunity faced by the company.

499 (formerly BUAD 499) Independent Study in Decision Science (1-3-0:0). 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.

535 Computer Simulation (3:3:0). Prereq DESC 353. Introduction to the basic concepts of simulating complex systems by computer. Topics covered include Monte Carlo methods, discrete-event modeling, a specialized simulation language, and the statistics of input and output analysis.

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, MATH 108 or 113. Basic factors of price and distribution theory, incl analysis of demand, costs of 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, including 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.


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 current 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.

study of a selected area of economics. Directed research paper req.

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 prerequisite hours and courses for the grad course in which they wish to enroll.

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 early and middle education majors are studied. Topics include 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. 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.

311 Introduction to Early and Middle Education (1:1:0). Introduces early and middle education majors to the teaching profession through an examination of the nature of the American schools, the student's potential contributions to the profession, and the role of a teacher in today's schools. Field experiences are required. (Open also to students in music, health, and physical education.)

312 Psychological Foundations of Childhood Learning and Development (4:4:0). Introduces early and middle education majors to psychological principles applicable to the teaching-learning process. No previous knowledge of psychology is necessary. It is assumed, however, that students have developed critical thinking skills. Field experiences are required.

320 Introduction to Tests and Measurements (3:3:0). Introduces basic principles, techniques, and terminologies used in the quantification of measuring devices. Interpretation of standardized tests. Emphasis on construction and interpretation of measuring devices used in the classroom.

322 Essential Elements for Early and Middle Education (2:2:0). An introduction to BTAP competencies with an emphasis on those related to planning, classroom management, and discipline. Methods to be studied will be appropriate for teaching all elementary school subjects. Field experiences required.
324 Utilization of Instructional Media and Technology (3:3:0). An experiential study of the utilization of instructional media, equipment, and emerging technologies as applied in the classroom. Primary focus on the student's competence relevant to equipment operations.

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 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 will 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.

369 Career Guidance and Counseling in Vocational Education (3:3:0). Study of industrial technology related to trade and industrial courses offered in secondary schools, incl industrial field trips, group discussion, and investigation of current industrial practices. Field experience req.

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 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. The 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 drafting 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 contingent EDUC 373.

386 Construction Technology: Energy Systems (3:0:3). Study of the practical application of energy systems in residential and commercial construction. Topics incl design, installation, servicing, 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, evaluation, materials, media, methods, reading, and others. The course may take any form appropriate for the need involved to include practica and workshops. May be repeated. If applicable to a specific degree program, may be accepted toward a degree by the University.

401 Teaching Thinking Skills. Introductory training in selected strategies for teaching thinking in grades 4–8. Students study and apply a range of methods and materials for providing systematic, developmental learning of basic thinking processes and skills. Field experiences required.

402 Teaching and Learning in Nursery School and Kindergarten (1:1:0). Study of the processes, programs, materials and methods involved in teaching the nursery school and kindergarten child. Emphasizes meeting the educational needs and unique learning styles of young children in relation to developmental needs of the whole child. Field experiences in a preschool or kindergarten are required.

403 Developmental Reading for Early Education (3:3:0). Prereq EDUC 300, 302, 313; admission to the Teacher Education Program. Prereq or coreq EDUC 305. A study of the theory, methods, practices, and materials involved in the teaching of reading at the nursery school, kindergarten, and grades 1–4. Incl study of reading readiness abilities, readiness for reading at the primary level, word analysis and word recognition skills, vocabulary development, reading comprehension and critical reading, reading skills in content fields, and study skills. Emphasis is placed on lifetime reading habits for all students including below-level readers, beginning readers, the gifted, and multicultural and bilingual readers. Field experience in public schools req.

404 Developmental Reading for Middle Education (3:3:0). Prereq EDUC 300, 302, 313; admission to the Teacher Education Program. Prereq or coreq EDUC 305. A study of reading in grades 4 thr through 8, incl word analysis and word recognition skills in content fields, adaptive rates of reading, study and interpretive reading skills. Emphasis is placed on lifetime reading habits for all students incl below-level readers, the gifted, multicultural and bilingual readers. Incl an understanding of the reading curricula in early education. Field experience in public schools req.

407 Diagnostic Reading for Early Education (3:3:0). Prereq EDUC 403; admission to Teacher Education Program. Study
of theory, methods, practices, and materials involved in the diagnostic teaching of reading in nursery school, kindergarten, and grades 1–4. Incl techniques for evaluation, diagnostic techniques available, differentiation of instruction to fit individual capabilities, and corrective methods. Field experience req.

408 Diagnostic Reading for Middle Education (3:3:0). Prereq EDUC 404; admission to Teacher Education Program. Review of theoretical methods, practices, and materials involved in the teaching of reading skills in grades 4–8. Incl techniques for evaluation, formal and informal diagnostics, corrective methods and differentiation of instruction; and understanding of study skills and utilization of media. Field experience req.

411 Teaching Mathematics in the Elementary School (3:3:0). Prereq MATH 371; admission to Teacher Education Program. Study of theoretical methods, practices, and materials involved in teaching mathematics in the elementary school. Lab and discovery techniques emphasized for practical application of fundamental math concepts and reinforcement. Field experience req.

412 Teaching Social Studies in the Elementary School (3:3:0). Prereq 12 hr of social science and admission to Teacher Education Program. Study of theory, processes, methods, practices, and materials involved in social studies education in the elementary school. Emphasis on modern approaches to social studies teaching with emphasis on planning units of instruction. Field experience req.

413 Teaching Science in the Elementary School (3:3:0). Prereq Admission to Teacher Education Program and completion of 2 of the req lab sciences. Emphasis on theories, practices, methods, materials and resources necessary to teach the sciences in the elementary school. Emphasis on relationship of child to environment, leading to the development of basic generalizations in science. Incl “hands-on” work in the biological, physical, and earth sciences Field experience req.

414 Student Teaching in Health Education (9:12:0). 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 an approved school in Virginia. Experience at the secondary level.

417 Student Teaching in Vocational Education (9:12:0). 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 (9:9:0). 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.

429 Junior Student Teaching in Early Education (6:0:0). Prereq Admission to, and good standing in, the Teacher Education Program. Intensive clinical experience in an approved school in Virginia. Experiences in kindergarten and grades 1, 2, 3, or 4 must be included.

430 Junior Student Teaching in Middle Education (6:0:0). Prereq Admission to, and good standing in, the Teacher Education Program. Intensive clinical experience in an approved school in Virginia. Experiences in grades 4, 5, 6, 7, and 8.

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 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 PoT. Students repeating the course reqis 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 development, the culturally deprived, music, learning disabilities, guidance, the mentally retarded, and social foundations.

450 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 (3:3:0). 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 Practicum in Laboratory Technology. Each student will be placed in an exemplary program to observe and participate in 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.

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 labs 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 (1-8:0). Prereq Emp loyment in professional capacity by sponsoring division or agency. Offered 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 analysis of cultural transmission in educational institutions, 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). 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). 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 exam ination of the developmental psychosocial, cognitive, and conceptua lization 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. Several specialty 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 specific areas of program 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.


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 Pol. Examination of the relationship between learning theories and 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). 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). 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.

556 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. Covers certification and ethical standards of the school psychologist with current issues and trends.

579 School Psychologist Practicum (3:0:0). 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 skill 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
Elementary/Secondary (EDCI)

500—See EDUC 500.

507 Internship in Applied Linguistics (3:0:3). Prereq grad status 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 (ESL) 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 (ESL).

518 Introduction to Multicultural Education (3:3:0). A survey of multicultural education that examines problems faced by an individual in an alien culture, theories 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) in bilingual/ESL classrooms. 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 (ESL) 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.


Electrical and Computer Engineering (ECE)

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 on 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 ECE 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, Maxwell’s Eqs, intro to transmission lines. This course uses vector calculus and complex algebra.

331 Digital System Design (3:3:0). Prereq ECE 285. Principles of digital logic and system design. Topics incl number systems; logic fundamentals; simplification of Boolean functions; combinational logic; synchronous and asynchronous sequential logic; flip-flops, registers, counters, memory and arithmetic circuits; digital system design case studies; and elementary computer architecture. ECE 332 is normally taken concurrently with ECE 331. Cr may not be received for ECE 301 and 331.

332 Digital Electronics and Logic Design Lab (1:0:3). Prereq PHYS 351 or Pol; coreq ECE 331. Lab associated with ECE 331.

333 Linear Electronics I (3:3:0). Prereq ECE 286 or PHYS 352 or equiv. ECE 334 is normally taken concurrently with 333. Cr may not be received for ECE 302 and ECE 333. Principles of operation and application of electronic devices and linear circuits. Topics incl semiconductor properties, diodes, bipolar and field effect transistors, integrated circuits, amplifiers, feedback concepts, operational amplifiers and analog design.

334 Linear Electronics Lab I (1:0:3). Prereq PHYS 351 or Pol. Coreq ECE 333. Lab associated with ECE 333.


429 Control Systems Lab (1:0:3). Prereq ECE 421; coreq ECE 422. Laboratory experiments for topics in control systems analysis, design, and implementation with an emphasis on the use of microcomputers.

430 Principles of Semiconductor Devices (3:3:0). Prereq MATH 304, ECE 305, ECE 333 or 302 or Pol; coreq MATH 313. Intro to solid state physics and its application to semiconductor and semiconductor devices. Topics: band theory, doping, p-n junctions, diffusion theory, low frequency circuits, devices incl bipolar transistor, MOSFET, CMOS, photo transistors.

431 Digital Circuit Design (3:3:0). Prereq ECE 305, 331, 333. Analysis and design of discrete and integrated switching circuits. Topics include the transient characteristics of diodes, bipolar, and field-effect transistors; MOS and bipolar inverters; nonregenerative and regenerative circuits; TTL, ECL, PL, NMOS, and CMOS technologies; semiconductor memory; VLSI design principles; and SPICE circuit analysis.

432 Linear Electronics II (3:3:0). Prereq ECE 305, 333. ECE 434 is normally taken concurrently. A second course in linear electronics covering the following topics: power amplifiers, feedback amplifier frequency response, operational amplifier systems, oscillations, multiplexing, digital logic circuits, and microwave amplifiers, and computer aided design.

434 Linear Electronics II Laboratory (1:0:3). Prereq ECE 334. ECE 433 is normally taken concurrently. A second lab course in linear electronics involving analysis and design of the following topics listed in ECE 433.

435 Digital Circuit Design Laboratory (1:0:3). Coreq ECE 431. Lab experiments for topics covered in ECE 431.


449 Computer Design Lab (1:0:3). Prereq ECE 445. This laboratory course provides experience in the design and fabrication of a digital computer. Included is the specification of a computer system and the fabrication of (1) a multichip random access memory, (2) an arithmetic and logic unit and associated registers, (3) input/output circuitry, and (4) a control unit. The above entities are then combined to form a simple computer. Medium-scale integrated circuitry is utilized.

450 Introduction to Robotics (3:3:0). Prereq ENGR 331, MATH 313. An intro to robotic manipulator systems. Topics incl an overview of manipulation tasks and automation requirements; actuators, sensors, and computer interfaces; arm and hand kinematics; path, velocity, and force control; elements of computer vision; and real-time programming languages. Design projects will be conceived, simulated, and tested by the students.


460 Communication and Information Theory (3:3:0). Prereq ECE 333 and MATH 351 or Pol. Signal analysis, Fourier

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461 Communication Engineering Laboratory (1:0:3). Prereq ECE 460. Lab experiments for the topics from analog and digital communication covered in ECE 460.

462 Data and Computer Communications (3:3:0). Prereq ECE 460. Intro to modern data and computer communications systems. Topics incl transmission links, modern and codec designs, packet switching, computer networks and protocol satellite broadcasting, optical-fiber wideband local area networks, data link control, multiplexing and error-control coding, examples of computer networks.


490 Advanced Design Project (3:3:0). 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.

498 Independent Study in Electrical and Computer Engineering (1-3:0:0). Directed self-study of special topics of current interest in ECE. Must be arranged with an instructor and approved by the department chairperson before registering. Can be taken for a maximum of three credit hours.


512 Real-Time Microprocessor Systems (3:3:0). Prereq ECE 421 or equiv. Real-time microprocessor systems with emphasis on control, interfacing techniques, real-time operating systems, and related applications. Topics incl basic input-output, interfacing the peripheral analog circuitry, operating systems, programming techniques, process control with microcomputers, and microprocessors for communications. Course incl a simulation and design project.


516 Advanced Microprocessors (3:3:0). Prereq ECE 511 or equiv. 16-bit and 32-bit microprocessors. Detailed study of the Intel 8086 and Motorola 68000 families (up to 80386 and MC68020). Topics of the instruction set, microcomputers, and applications. Brief coverage of NS32000, Z8000, Z8000, AT&T WES32100, NEC V70, V71, DEC MicroVAX 78032. Course includes a lab project and demonstration involving the Intel 8086 and MC68000 systems.

520 Electronic Systems Analysis (3:3:0). Prereq ECE 333. Study of electronic circuits from a systems viewpoint. Topics consist of the analog building block circuits used in system design incl operational amplifiers, voltage regulators, video amplifiers, oscillators, modulators, phase-locked loops, multiplexers, active filters, A/D and D/A converters, and optoelectronic circuits.


528 Random Processes in Electrical and Computer Engineering (3:3:0). Prereq ECE 360, MATH 351, or equivalent. Topics incl 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.


555 Introduction to Optical Electronics (3:3:0). Prereq ECE 305, and either ECE 286 or MATH 313. An intro to optical systems for information gathering, transmission, storage, and processing. Topics incl intro to lasers, solid-state detectors, and optical fibers; variety of optical sensors, imaging and nonimaging; optical data storage techniques and optical signal processing; optical communications.

567 Optical Fiber Communications (3:3:0). Prereq ECE 305, 331, 333, and MATH 313. Study of the components and integration of fiber-optic transmission systems. Topics incl optical fibers, signal degradation, optical sources, power launching and coupling, photo detectors, receiver circuits, link analysis, and optical measurements.


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.

Engineering Courses (ENGR)


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 PASCAL 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.


308 ENGR Fluid Mechanics (3:3:0). Prereq ENGR 206, MATH 213. Principles of fluids in equilibrium and in motion. Topics incl 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), (3:3:0). Prereq PHYS 352 and MATH 304 or 306; ENGR (PHYS) 311 or MATH 313 is prereq for ENGR (PHYS 312). Study of mathematical techniques as applied in physics and engineering. Ordinary and partial differential equations, special functions, Fourier series, Laplace transforms, integral equations, matrices and complex variables.

355 Computer-Aided Design (3:2:3). Prereq ENGR 205, ENGR 110. An intro to computer-aided design (CAD) and computer-aided manufacturing (CAM). Topics incl a review of programming in BASIC; mechanical, architectural, and electronic drafting by computer; graph plotting; 2D and 3D wire-frame drawings; programming of menus; isometric and perspective drawing; color shading; animation; introduction to computer-aided manufacturing (CIM). The student will write an interactive, menu-driven program for solution of an engineering design problem, with graphical output.

390 Engineering Economy (3:3:0). Prereq ENGR 107 and ENGR 205. Intro to economic decision process in engineering design and analysis. Topics incl 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.

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 101 and ENGL 102.

100 Composition for Foreign Students (4:4:0). For nonnative 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 for 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 prereq for all English courses numbered above 302. 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 education 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, Molieres, Flaubert, Dostoevski, Tolstoy, Mann, Malraux, Ionesco, and Beckett. All reads 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 way in which literature has explored questions of continuing primary importance. Works will be selected principally from English and American literature and a

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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 such writers as Lincoln, 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'Neil, Frost, Faulkner, Stevens, Miller, Olsen, and others.

302 Advanced Composition (3:3:0). Prereq Completion of 45 cr hr, 3 cr 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 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 American Folklore (3:3:0). Topics incl folktales, personal narratives, legends, proverbs, jokes, folksongs, folk art, folk craft, and folk architecture. Consideration of ethnicity, community, family, festival, folklore 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 Literary Approaches to Popular Culture (3:3:0). Emphasis on popular fiction and adaptation of popular prose genres in 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 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 English and American literature as themes, motifs, and patterns.

347, 348, 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, 363 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 Significant Authors (3:3:0). One or two major authors, such as Shakespeare, Dickens, and Hardy, or Tolkien and C. S. Lewis, as announced. May be repeated with PoD.

366 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 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-World 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 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 and of 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, Koinski, and others.

387 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.

388 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
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Instructor. In-depth study in the craft of fiction and may include 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 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 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 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 357.

404 The Augustan Age (3:3:0). English literature from the late 17th century to the middle of the 18th century; emphasis on Dryden, Swift, and Pope. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 357.

405 The Age of Sensibility (3:3:0). English literature of the later eighteenth century, the time of the French and English revolutions, including new developments in the novel, biography, and poetry. Emphasis on Johnson, Boswell, and Blake, with some attention to the following: Goldsmith, Sterne, Gray, Cowper, Fanny Burney, Burke, William Godwin, and Mary Wollstonecraft.

406 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 Prose and Poetry of the Victorian Period (3:3:0). Poetry and non-fiction prose by such authors as Carlyle, Arnold, Tennent, Browning, Ruskin, and Mill.

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, incl 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.

421 Film History and Theory (3:3:0). Prereq ENGL 300 or 301. Advanced survey of the history of film art and major theories concerning the nature of film.

423 Colonial and Federalist American Literature (3:3:0). The works of the first 200 years of American literature, incl Edwards, Franklin, Irving, Cooper, and Bryant. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 381.

425 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, or popular culture of the time. May be repeated once for cr when subtitle is different, with PoD.

341/HIST 431/FR/LN 431 Medieval Intellectual Topics (3:3:0). 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 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 Japanese Literature in Translation (3:3:0). Selected literary masterpieces in translation from ancient and modern Japan, incl a court romance (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 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 Selected Continental Novels in Translation (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 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 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 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, Etheredge, Congreve, and others. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 356.

445 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 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.

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448 Contemporary Drama (3:3:0), (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 will 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 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 Development of the American Novel to 1914 (3:3:0). Major American novels of the pre-World War I period with emphasis on the work of Brown, 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 370.

453 English Novel of the Nineteenth Century (3:3:0). The English novel of the 19th century. Works by such authors as Dickens, Thackeray, E. Bronte, Eliot, Trollope, Meredith, and Hardy. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 371.

454 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 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, Greene, and others. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 372.

458 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, 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 in ENGL 458, 456, 497 may be taken by anyone who has previously taken and satisfactorily completed ENGL 456, 458, or 497 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 English Poetry of the Twentieth Century (3:3:0). English poetry from 1900 to present: emphasis on work of Hardy, Yeats, Eliot, Auden, and Hughes. A work of fiction which employs poetic techniques, such as Joyce's The Ulysses, may also be studied. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 365.

463 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 365.

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 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 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 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.

481 General Linguistics (3:3:0). Intro to general linguistics: phonics, phonemics, morphology, and syntax. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 391.

485 Structure of Contemporary American English (3:3:0). Phonology, morphology and syntax of contemporary American English. Accepted norms are discussed in detail, but dialect variation due to region or social class is also covered.

489 Advanced Expository Writing (3:3:0). Theory and practice of advanced expository writing; practice in analyzing and writing essays, articles and other expository forms. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 467.

490 Special Topics in Film (3:3:0). American and foreign films selected by type, period, or director with the emphasis varying from year to year. Req readings, student discussion, and written critiques. May be repeated with PoD.

491 Special Topics in Folklore (3:3:0). An exploration of various aspects of folklore and folktale such as folklore and literature, folk arts, folk song, material culture. May be repeated once for cr when subtitle is different, with PoD.

492 Science Fiction (3:3:0). Major works of science fiction in terms of mode, themes, and narrative techniques, especially the role of hypothes in science fiction. Focus on novels and short stories from the early 19th century to the present. This course may not be taken by anyone who has previously taken and satisfactorily completed ENGL 306.

493 Special Topics in Popular Literature (3:3:0). Study of a specific topic or theme in popular literature. May be repeated once for cr when subtitle is different, with PoD.
494 Special Topics in Criticism (3:3:0). Study in depth of a selected approach to literary criticism, as announced, with exercises in critical analysis. Examples: new criticism, structuralism, psychoanalysis, Marxism. May be repeated with PoD.

495 Literary Modes (3:3:0). Theory and practice of such modes as tragedy, comedy, tragicomedy, romance and satire, considered in separate sem and drawn from a variety of periods ranging from biblical times to the present, with examples from drama, poetry, and fiction. May be repeated with PoD.

496 Special Topics: British or American Literature (3:3:0). Study in depth of a selected literary topic, period or genre, as announced. May be repeated with PoD.

497 Special Topics in Creative Writing (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, novel, travel literature, poetry) and the concentration is announced in the department's Course Description Booklet before prereq. 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 req for the English major. No more than a combined total of 9 hr may be taken in ENGL 458 (456), 464, 465, 497. Students who have taken ENGL 469 may take 458, 464, or 497 up to a combined total of 9 hr in all 4 courses.

499 Independent Study (1–3:0:0). Prereq PoD and Pol. Open only to English majors with 84 hr and 15 hr in 300- and 400-level courses. Intensive study of a particular author, genre, period, critical perspective, or linguistics, to be conducted by an individual student in close consultation with an instructor. The student produces at least one substantial piece of written work during the sem on the findings of his or her research. (By PoD, the course may be taken a total maximum of 6 hr of cr.)

503 Theory and Practice of Editing (3:3:0). Prereq 6 hr of English courses numbered above 300, incl one advanced writing cr—399, 459, 464, 485, 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 (3:3:0). Prereq ENGL 582 and either ENGL 521 or EDUC 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.

514 Theories of Comparative Literature (3:3:0). Prereq CL 300 and senior standing, or baccalaureate degree or Pol. An intensive study of the major theories of comparative literature with special emphasis on international movements and their characteristic themes. Students will work with texts in the foreign language of their competence; other texts will be studied in translation.

520 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 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, 465, 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, the production end (transformational) and the concentration is announced in the department's Course Description Booklet before prereq. 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 req for the English major. No more than a combined total of 9 hr may be taken in ENGL 458 (456), 464, 465, 497. Students who have taken ENGL 469 may take 458, 464, or 497 up to a combined total of 9 hr in all 4 courses.

551 Literary Criticism (3:3:0). Studies of major critical theories and techniques with emphasis on the 20th century.

556 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 lexicography, aimed at preparing students to read Anglo-Saxon literature in its original form. Acquaintance 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 form 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 Applied Linguistics (3:3:0). Prereq A or B in ENGL 391, 465, 520 or 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 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 seventeenth-, eighteenth-, and nineteenth-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 nineteenth- and early twentieth-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 a 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 and ECON 310. An introduction to the analysis of the valuation of equity and debt securities given modern capital market theory. Also incl 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 regulative 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, 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 and 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 321. 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.

423 Commercial Bank Management (3:3:0). Prereq FNAN 321. An intro to the management of commercial banks. Emphasis is placed on the management of deposits, cash and liquidity, lending, investing, trust services, capital structure and adequacy, international operations, current banking laws and regulations. Incl a discussion of bank holding companies, interstate banking proposals, and regulatory agency proposals for expanding banking powers.


492 Field Experience in Finance (3:3:0). Prereq Senior standing and Pol. This educationally relevant, faculty-governed field experience gives students an opportunity to become involved in addressing actual challenges encountered by Northern Virginia businesses. Working through the Entrepreneurship Center, each client firm will be matched with a team of students assigned to propose action plans relating to a major problem or opportunity faced by the company.

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.

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. Relevant material drawn from philosophy, theology, and art may be considered.

510 Bibliography and Research Problems in Foreign Languages and Literature (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.

556 Theory of Translation (3:3:0). Lectures on the nature and function of the translating process. Evaluations of
theories of translation with respect to text-typology.
Critiques of selected translations from the target languages to English and vice versa.

**French Courses (FREN)**

**Foreign Languages and Literatures**

**Placement:** See Academic Policies and Procedures.

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.

350 French Conversation (3:3:0). Prereq FREN 202 or equiv. Development of conversational proficiency in French. Specifically designed for French majors who need practice in the spoken language beyond the intermediate level.


352 French Composition (3:3:0). Prereq FREN 202 or equiv. Development of writing skills through written reports on current events and on literary topics. Specifically designed for French majors who need practice in the written language beyond the intermediate level.


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 Introduction to Literary Analysis (3:3:0). Prereq 15 sem hr of French. A structured approach to the reading and analysis of French literary texts.

391 French for the Business World I (3:3:0). Prereq FREN 202 or Pol. Intro to study of styles used in commercial, private, and official formats for correspondence 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 18 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 18 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 18 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 18 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 18 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.

431 French Literature: 1800-1850 (3:3:0). Prereq 18 sem hr of
French or Pol. The poetry, theatre, and novel of the
Romantic and Parnassian movements. May be taken toward
fulfillment of the general req in literature for baccalaureate
degrees.

432 French Literature: 1850-1900 (3:3:0). Prereq 18 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 18 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 18 sem
hours of French or Pol. French drama from Surrealism to
the "Nouveau Theatre." French poetry from Symbolism to
temporary 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 18 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 (3:3:0). Prereq 18 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.

460 Advanced Oral and Written Expression (3:3:0). Prereq
18 sem hr of French or Pol. Intensive course designed to
help students obtain fluency in oral and written French.
Development of conversational skills and mastery of
vocabulary. Class discussions, oral and written reports on
current topics.

461 Linguistic Structure of Modern French (3:3:0). Prereq
18 sem hr of French or Pol. A descriptive analysis of the
phonology, morphology, and syntax of modern standard
French. Optional lab work.

462 Stylistics (3:3:0). Prereq 18 sem hr of French or Pol.
Analysis of the more complex aspects of the French
language and of various stylistic processes. Development of
writing skills through readings, discussion, and composition.

480, 481 Special Topics (3:0:0) (3:3:0). Prereq 18 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 (1-3:3:0), (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 3.00 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
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.

Selected writers, works, themes, or trends of French
literature in the classical era. Content varies. Course work in
French.

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
French literature. Content varies. Course work in French.
May be repeated for cr with PoD.

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 8 hr of cr may be earned. Course work
in French.

550, 551 Special Topics (3:3:0) (3:3:0). Specialized topic
related to French culture and literature. Content varies.
Course work in French.

560 History of the French Language (3:3:0). Evolution of the
French language from Latin to present-day 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.

571 Applied French Linguistics (3:3:0). Contrastive linguistic
analysis of French and English, suggesting pedagogical
strategies for correcting problems of interference between
the two languages. Special attention to phonology and
morphology.

575 Grammatical Analysis (3:3:0). Study of characteristic
features of contemporary French. Examination of spoken
and written French, incl syntactic analysis, distributional
analysis, and generative-transformational grammar.
Emphasis on problem solving for the American learner.

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.

580 Contemporary French Society and Culture (3:3:0). Study
of structure and evolution of the society and culture of
contemporary France. Also see FRLN listing.

Geographic and Cartographic Sciences Courses (GECa)

Department of Public Affairs

503 Problems in Environmental Management (3:3:0). Prereq
6 hr of geography, incl GEOG 102. Case studies of the
impacts of human activities on atmospheric, hydrologic,
geomorphic, and biotic processes.

505 Transportation Geography (3:3:0). Prereq 6 hr of
geography. Structure, principles, location, and
development of world transportation. Critical role of transportation in
moving people, goods, and ideas at the international,
national, regional, and urban levels.

520 Geography for Teachers (3:3:0). Prereq Grad stdg or
PoD. Emphasis on problems and techniques in teaching
graphy 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 incl disease ecology, disease
diffusion, and geographic perspectives on improving 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 coordination refinements, collinearity equation, resolution, 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.

580 Digital Remote Sensing (3:3:0). Prereq GEOG 416 or 579 or Pol. Examination of the theory and techniques of using digital remotely sensed data for obtaining geographic info of the earth's surface. Incl both image enhancement methods and classification strategies for a variety of physical and cultural features.

581 World Food Population (3:3:0). Prereq Grad stdg or Pol. Topics incl maldistribution of population, regional disparities in growth rates and income distribution, food production and world hunger. Discussion of population policies, with emphasis on Third World countries.

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.

585 Quantitative Methods (3:3:0). Prereq Course in statistics or PoD. Survey of quantitative methods commonly used in geographic research. Emphasis on spatial analysis techniques.

590 Selected Topics in Geography and Cartography (3:3:0). Prereq Grad stdg or PoD. Designed to analyze topics of immediate interest. Content varies.

Geography Courses (GEOG)

Department of 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 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 unwise 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.

309 (206) Introduction to Meteorology and Climate (2:3:0). Prereq GEOG 102 or equiv or Pol. Elements of meteorology; analysis of world distribution of meteorological controls as the bases of regional climatic variations.

310 Cartography I (4:3:2). Prereq STAT 250 or equiv in statistics or Pol. Principles and methods of map making. Collection, analysis, and cartographic portrayal of geographic data.

311 Cartography II (4:3:2). Prereq C or better in GEOG 310 or Pol. Cartographic methods of compilation, construction, and reproduction with emphasis on planning and execution of complex maps.

315 (215) Geography of the United States (3:3:0). Prereq 6 hr of geography and/or American Studies or Pol. Diversity of physical and cultural landscapes in the U.S., emphasizing role of environment in shaping patterns of demographic distribution and economic activity.

316 (201) Geography of Latin America (3:3:0). Prereq 6 hr of geography and/or Latin American Studies or Pol. Regional survey of physical resources, populations, cultural characteristics, and economic activities in Latin America.

320 (220) Geography of Europe (3:3:0). Prereq 6 hr of geography and/or European Studies or Pol. Environmental, economic, social, and political factors influencing the regional structure of Europe. The effect of the new European economic and social communities upon the urban network, the regions, and their relationships.

325 (225) Geography of North Africa and the Middle East (3:3:0). Prereq 6 hr of geography and/or courses related to Middle East; or Pol. Environmental, economic, and social factors of differentiation of the regional structure and distribution of resources in the North African and Middle Eastern countries.

330 (230) Geography of the Soviet Union (3:3:0). Prereq 6 hr of geography and/or Russian Studies or Pol. Analysis of the geographic factors involved in the history, economic development, and geopolitical situation of the Soviet Union. Ethnic diversity and population problems in a multinational state.

335 Geography of Canada (3:3:0). Prereq 6 hr of geography and/or Canadian Studies; or Pol. Analysis of physical and human geographic factors affecting Canadian history, urban/rural settlement, economics, politics, and culture. Emphasis
is on the uniqueness of Canadian issues and problems as understood through a study of Canada's regions, resources, and urban system.

399 Selected Topics in Geography (3:0:0). Prereq 24 hr. Content varies; determined by instructor.

406 Suburban Geography (3:3:0). Prereq 24 hr. Analysis of the spatial aspects of man's social, economic, and political activities within suburbia. Suburbanization viewed both as an independent force and as a component of the larger urbanization process. Northern Virginia is utilized as a lab for suburban geographical study and student-initiated fieldwork projects.


412 Aerial Photography Interpretation (3:3:0). Prereq 54 hr and GEOG 102 or 103, or Pol. Intro to technology of gathering and managing information. Methods and techniques of interpreting and using information contained in aerial photography including applications to various aspects of the physical and cultural landscape.

413 Photogrammetry (3:3:0). Prereq 54 hr, course in mathematics or physics, or Pol. Theory and processes involved in terrestrial measurement and mapping with remotely sensed imagery. Particular emphasis on current technology and applications of topographic and thematic mapping from photographic images.


415 Seminar in Geography (3:3:0). Prereq Open to geography majors with 54 hr. Opportunity to integrate 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 trends of the discipline.

416 Satellite Image Analysis (3:3:0). Prereq GEOG 412 or Pol. Examination of the methods and techniques of interpreting and using info obtained by non-photographic remote sensing systems, with particular emphasis on spaceborne platforms. Incl analysis of imagery for both physical and cultural environments.

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 (3:6-3:0). 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 PoD and Pol. Individual study of a selected area of geography. Directed research paper is req.

Geology Courses (GEOG)

Geology

101 Physical Geology (4:3:2). A study of the earth and the processes which act on and within the earth. Specific topics include minerals, rocks, earthquakes, earth structure, plate tectonics, rivers, glaciers, deserts, mountain building, and ocean formation. Course may include field trips. (This course is recommended as partial fulfillment of the general studies required in lab science for all students.)

102 Historical Geology (4:3:2). History and development of the earth as revealed through a succession of geological events and processes. Subjects include the origin of the solar system and the earth, the changes in the distribution of continents and mountain systems through time due to continental drift, and the succession of life forms through the geological ages. Course may include field trips. (This course is recommended as partial fulfillment of the general studies requirement in lab science for all students.)

103 Geology of Virginia Part A (2:2:0). Geologic evolution and features of state parks.

104 Introduction to Field Geology (2:0:2). 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). Investigation of geological principles directly related to environmental problems and geological causes and effects of natural disasters, geological factors of natural resources, geology of land use planning, and geology as related to health problems.

107 Gemstones I. Colored Gemstones (2:1:2). 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). 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 102 and 111 may be used to satisfy the lab science requirement for the B.A. degree. Lab may incl field trips.

201 Mineralogy (4:3:3). Crystallographic, optical, chemical, and physical properties of minerals. Lab may incl field trips. For geology and chemistry majors.

202 Invertebrate Paleontology (3:2:3). Classification, evolutionary trends, and distribution of the common invertebrate fossils. Lab incl field collection of fossils, their preparation and identification. For geology and biology majors.

204 Geomorphology (3:2:3). Prereq GEOG 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 Topics in Geology (1-3:1-3:0). 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 GEOG 101, 102, 201. The genesis, classification, and recognition of igneous, sedimentary, and metamorphic rocks. Lab may incl field trips.

208 Gemstones II. Diamonds (2:1:2). 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 GEOG 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 terrains. Lab may incl field trips to structurally deformed parts of the Appalachian Mountains.
303 Field Techniques II (2:0:4). Prereq GEOL 101, 102, 108, 201; coreq 207. Surveying, geologic mapping techniques, and the collection of geologic field data.

304 Stratigraphy (3:2:3). Prereq GEOL 101, 102, 201, 207. Principles of stratigraphic analysis with reference to the geology of various areas. Lab incl analysis of surface and subsurface 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 thin sections with the polarizing microscope. Intro to use of Universal Stage for three-dimensional rotations of mineral specimens under microscopic examination.


307 Micropaleontology (2:2:3). 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/BIOL 309 Introduction to Oceanography (3:3:0). Prereq GEOL 101 or II, BIOL 103 or 111 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. 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.


315 Topics in Geology II (1-3:1-3:0). Prereq GEOL 101, 102. Discussions of a particular research program in geology, presented mostly by the teacher. Topic is designated in the class schedule. May incl field trips.

316 Computers in Geology (3:3:0). Prereq GEOL 101, 102, 201, one semester of Mathematics, or Pol. Uses of mainframe and microcomputers, with emphasis on geologic applications. No previous computer experience is assumed.

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 petrologic 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; CHEM 211-212. Stable isotopes, 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 Topics in Geology III (1-3:1-3:0). Prereq Geology 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 Geology major with 80 cr hr and PoC. A study of the techniques used to make the geology lab an effective component in geological education. Thesns of the development of testing materials, supplemented by experience in the operation of a lab section of a geology course.

410, 411 Special Projects in Geology (2:0:5), (2:0:5). Prereq Geology major with 80 cr hr and PoC. Geological research conducted by the student. Incl a literature search, conferences, and field or lab work. Written and oral reports req.

417 Geophysics (3:3:0). Prereq GEOL 101; MATH 113; one year of physics, or Pol. Geology and physics are combined to understand the dynamic systems of the earth.

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/fieltz. Dolpe 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 exploration. Relationships between fossils and paleoenvironments. 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. Rec for students who desire

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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 108, 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 GERM 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 GERM 54 hr or Pol. Contemporary German life: its major aspects, problems, and goals, seen from the West German perspective. Taught in English.

305 Field Study in German Culture (1:1:0). Prereq or coreq GERM 301 or 302, or Pol. Study tour of cultural centers in the German-speaking areas of Europe. In consultation with a designated faculty member, students undertake a research project on a previously chosen topic in German culture and present their findings in a substantial paper.

310 German Conversation and Composition (3:3:0). Prereq GERM 202 or equiv or Pol. Development of fluency in speaking and proficiency in writing German through discussion, reports, and compositions based on texts dealing with contemporary events and issues. Not for native speakers.

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).

316 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 or Pol. 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 picaresque 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.

418 Advanced Composition (3:3:0). Prereq 15 hr of German or Pol. Development of proficiency in writing German through intensive practice in preparing guided and original compositions.

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 grad study in German.

442 The Age of Goethe (3:3:0). Prereq 15 hr of German or Pol. Major works of Enlightenment, Sturm und Drang, Classicism, and early Romanticism. Emphasis on drama and poetry by Goethe and Schiller; some Lessing and Kleist. This course may not be taken by anyone who has previously taken and satisfactorily completed GERM 440 or 441.

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 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 lieder 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 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 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 (3:3:0). 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.

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Government and Politics Courses (GOVT)

Department of 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 ideas of American and British political cultures.

132 Introduction to International Politics (3:3:0). Nature of international politics; approaches to study of international relations; impact of 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.

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. Inc1 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). Prereq 54 hr. 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 politics. 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 sociocultural-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 politics. Problems of multiparty systems, coalition governments, Eurocommunism, and stability and change in post-industrial societies.

335 Government and Politics of Canada (3:3:0). Prereq 24 hr. or Pol. Survey of governmental and political systems of Canada.
Operating environment of police personnel administration: the personnel function, management of human resources, conditions of employment, recruitment, training, selection, evaluation, leadership, promotion, discipline, and collective bargaining.

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 arenas. 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.

431 Information Technology and the Political Process (3:3:0). Prereq GOVT 103 or 133, or junior standing as a major in Communication, or Pol. Study of the impact of the information network of wire and wireless communications and computers on the political process in advanced industrial countries.

444 Issues in International Security (3:3:0). Prereq GOVT 132 and 54 hr. Major security issues in the international system. Impact of weapons and other technologies on international stability. Forms of armed conflict, incl nuclear
war, conventional war, and insurgency. Techniques of conflict resolution and war prevention. Problems of nuclear deterrence, arms control, and disarmament.

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 Acceptance in over the research and report may be req. May be used for faculty member. A written report is req; an oral examination 54 hr or 84 hr. Contact the department one sem before enrollment.

Prereq 54

crime prevention.

characteristics of interest groups and the implications of have completed at least 12 hr of work in government. May with specific employers. Crisis determined by the political behavior for the American political system.

471 SOC 471

483

492

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 and information 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, including 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.


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 faculty member. A written report is req; an oral examination over the research and report may be req. May be used for elective cr only.

504 Theory and Practice of International Relations (3:3:0). Prereq Acceptance in MPA Program or PoD. Theoretical and empirical examination of the international system which both affects, and is affected by, the decisions, behaviors, and subsystems of state and nonstate (organizational) actors.

537 Selected Problems of Third World Development (3:3:0). Prereq Grad stdg or PoD. Third World development problems, including development management, a new international economic order, foreign aid, multinational corporations, and international organizations. May be repeated with PoD.

631 The Dynamics 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, dependency theory, and development strategy within the context of resource scarcity.

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 GREC 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, Sport, and Leisure Studies

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 and Environmental Health (3:3:0). Environmental health concerns and 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.

430 Seminar on Contemporary Health Problems (3:3:0). 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 Health Education major or PoD. Instructional strategies, lesson and unit plan development, resource materials, and evaluation techniques for secondary school health education. 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 in community health problem solving.

460 Internship in Community Health Education (6-15:0:0). Prereq PoE. 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 (1-3:0:0). Prereq HEAL 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 hr total cr may be applied to degree credit.

500 Workshop in Health Education (1,2,3:0:0). 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 (1-3:0:0). 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 or may be given.

Hebrew Courses (HEBR)

Foreign Languages and Literatures


101, 102 Elementary Hebrew (3:3:1). Designed for students with no knowledge of Hebrew. Intro to Hebrew, incl grammar, vocabulary, oral skills, listening comprehension, and reading. Lab work req.

History Courses (HIST)

History

100 The Uses of History (3:3:0). Primarily for nonmajors; 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). Hist 251 is a survey of the history of China and Japan from prehistoric times until ca. 1600. Hist 252 is a survey of the history of China and Japan from early modern times (ca. 1600) until the present.

251, 252 Survey of African Civilization (3:3:0), (3:3:0). Hist 251 is a survey of African history from earliest times to the decline of Western Sudanic states in the sixteenth century. Hist 252 is a survey of African history from the beginnings of interaction with Europe in the fifteenth century to the recent emergence of new states.


281, 282 Survey of Middle Eastern Civilization (3:3:0), (3:3:0). Emphasis will be placed on significant cultural, intellectual, social, and political developments. Hist 281 is a survey of the history of the major civilizations of the Middle East from ancient to medieval times (ca. 1258). Hist 282 is a survey of the history of the major civilizations of the Middle East from medieval to modern times (ca. 1258 to the present).
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 Greece from development of the city-state through the Hellenistic monarchies.

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. Development and emphasis on broad patterns of the late Roman Empire.

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 secularization of society. Inc 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 Frontier America: The Westward Movement (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 as 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.

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 6 hr of history 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 6 hr of history 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.


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 relations with the United States, and problems created by the French-speaking minority.

390 Topics in History (3:3:0). Study of historical topics or periods of special interest. Topics announced in advance. This course may be repeated for credit when topic is different and with PoD.

391 History of Virginia to 1860 (3:3:0). Prereq 6 hr of history or Pol. Discovery and settlement of Virginia. Colonial period

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with emphasis on development of representative government and its relations, the "Golden Age" of 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. Minimum 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 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 led 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 influences 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), (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/ENGL 431 Medieval Intellectual Topics (3:3:0). 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 revolts, 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 monarchial 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 6 hr of history 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/COMM 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 Revolutionaries and Civil Wars; the rise of the independent press; and the Yellow Journalism period.

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.

466 Origins of Conflict in Southern Africa (3:3:0). Explores the historical origins of conflict in South Africa, focusing on themes of economic change, cultural interaction, and political consolidation over the past five centuries.

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 (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 Pos. 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.

498 Directed Readings/Research in History (1:3:0:0). Prereq History majors with 84 hr and Pol. Readings/research conducted on an individual basis in consultation with instructor. A student may not present more than three hr for graduation credit.

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 general elective credit).

201 An Introduction to Computer-Based Management Information Systems (3:3:0). Prereq MATH 108 is recommended. 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). Prereq IRM 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 the implementation process. Term project required. Computing lab.

410 Managerial Applications of Microcomputers (3:3:0). Prereq IRM 201. Selection and use of microcomputer hardware and software management for applications. Word processing, spread sheet analysis, graphics, communications, file management, and data base management. Term project and microcomputing lab.


420 Business Data Communications (3:3:0). Prereq DESC 301, INFS 310. Broad intro to business data communications. Emphasis on the integration of data communications into the automated business office. Term project.

440 Business Applications of Artificial Intelligence (3:3:0). Prereq DESC 301, INFS 310 or INFS CS programming language course. Broad intro to applications of artificial intelligence. Emphasis on the use and application of expert systems and natural languages in business and public sector organizations. Term project.

480 Knowledge-Based Systems Development (3:3:0). Prereq INFS 310, IRM 403 or IRM 411. Essential steps in knowledge engineering, what knowledge-based systems are, and how to manage development of knowledge-based systems. Course will also touch upon the evaluation and integration of knowledge-based systems into existing environments, as well as how to maintain and evolve a knowledge-based system.

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.

492 Field Experience in Information Resource Management (3:3:0). Prereq Senior standing and Pol. This educationally relevant, faculty-governed field experience gives students an opportunity to become involved in addressing actual challenges encountered by Northern Virginia businesses. Working through the Entrepreneurship Center, each client firm will be matched with a team of students assigned to propose action plans relating to a major problem or opportunity faced by the company.

499 Independent Study in Information Resource Management (1-3:3:0). Prereq Information Resource Management majors with at least 9 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.

315 High-Level Programming Languages (3:3:0). Prereq INFS 312. Study of the structure and application of high-level languages by stressing the design and implementation of data types, data structures, and algorithms. Computing lab. Fall.


422 Data Communications Systems and Networks (3:3:0). Prereq DESC 301, INFS 311 and 312. Broad introduction to the concepts and design issues in data communications systems. Emphasis is on the impact of communications technology on information systems. Term project.

491 Seminar in Information Systems (3:3:0). Prereq Completion of all other req courses for a major in Information Systems, or Pol. in-depth analysis of selected topics which highlight the latest developments in the information systems field, including contemporary research findings and case studies of systems in business and other organizations.

492 Special Topics in Group Project Implementation Prereq 6 hr of INFS or CS programming courses incl INFS 312 or equiv. This course examines computer system design practices and project management concepts, and gives the student practical experience working on a computer system project. With faculty guidance and graduate students, the student participates in a team design and implementation project. Typical projects are (1) an office automation system; (2) a student records information system; or (3) a microprocessor database application.

499 (formerly BUAD 499) Independent Study in Information Systems (1-3:3:0). Prereq Decision Sciences majors with at least nine upper-level Information Systems cr hr. Research and analysis of selected problems or topics in information systems. Must be arranged with an instructor and receive written approval of chair before regis. Written report req. May be repeated to a maximum of six hours if topics vary.

Italian Courses (ITAL)

Foreign Languages and Literatures

100 Survival Italian (3:3:0). Not part of a sequence that fulfills the foreign language req. Development of Italian communication skills stressing vocabulary, pronunciation, and idiomatic expressions.

101 Elementary Italian I (3:3:1). Designed for students with no knowledge of Italian. Intro to Italian, incl elements of grammar, vocabulary, oral skills, listening comprehension, and reading. Lab work req.

102 Elementary Italian II (3:3:1). Prereq ITAL 101 or PoD. Continuation of Italian 101. Lab work req.

201 Intermediate Italian I (3:3:1). Prereq ITAL 102 or PoD. Further development of skills in listening, speaking, reading, and writing. ITAL 201 and 202 must be taken in sequence. Lab work req.

202 Intermediate Italian II (3:3:1). Prereq ITAL 201 or PoD. Application of language skills to reading, composition, and discussion. Lab work req.

Japanese Courses (JAPA)

Foreign Languages and Literatures

101, 102 Introduction to the Japanese Language (3:3:1), (3:3:1). Must be taken in sequence. Intro to Japanese, incl basic grammar, oral expression, listening comprehension, and reading and writing. Lab work req.

201 Intermediate Japanese I (3:3:1). Prereq JAPA 102 or equiv. Further development of skills acquired in JAPA 101-102, incl grammar, oral expression, listening comprehension, 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 (3:3:1). 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. Meetings on a tutorial basis. May be repeated once under each number to a maximum of 4 separate topics and 12 sem hr of cr.

341 Business and Economic Impact of Unionism. The role of unions and management; the bargaining processes; the philosophy of unionism; the legal context of labor-management relations; the responsibilities and duties of unions and management; the political-economic impact of unionism.

341 Business and Economic Impact of Unionism. The role of unions and management; the bargaining processes; the philosophy of unionism; the legal context of labor-management relations; the responsibilities and duties of unions and management; the political-economic impact of unionism.

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 the 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; the second incl an in-depth analysis of collective bargaining—the participants, techniques, issues, and legal environment, and evaluation of the contract.

451 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 society, will be reviewed. Management practices, structures, and processes will be emphasized.

491 Seminar in Management (3:3:0). Prereq MGMT 301, MGMT 311, 90 hr or Pol. Advanced study of management concepts and selected topics. Intensive analysis of management problems which represent long-term strategic significance or current urgency for organizational planning and operations. Significant contemporary research findings.

492 Field Experience in Management (3:3:0). Prereq Senior standing and Pol. This educationally relevant, faculty-directed, experience-based field experience gives students an opportunity to become involved in addressing actual challenges encountered by Northern Virginia businesses. Working through the Entrepreneurship Center, each client firm will be matched with a team of students assigned to propose action plans relating to a major problem or opportunity faced by the company.

498 Business Strategy and Policy (3:3:0). Prereq Final sem and FNAN 301, MGMT 301, MKTG 301. A capstone course designed to acquaint the student with the nature of strategic management and the shaping of business policy. Emphasis on managerial decision making as it relates to business strategy formation and implementation in large, medium, and small enterprises, both domestic and international.

499 Independent Study (1-3:0:0). Prereq Management majors with at least nine upper-level management cr hr. Research and analysis of selected problems or topics in management must be arranged with an instructor and receive written approval of chair before regis. Written report req.

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 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 affect 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 processes; 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. Incl inquiry into 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; the second incl an in-depth analysis of collective bargaining—the participants, techniques, issues, and legal environment, and evaluation of the contract.

451 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 society, will be reviewed. Management practices, structures, and processes will be emphasized.

491 Seminar in Management (3:3:0). Prereq MGMT 301, MGMT 311, 90 hr or Pol. Advanced study of management concepts and selected topics. Intensive analysis of management problems which represent long-term strategic significance or current urgency for organizational planning and operations. Significant contemporary research findings.

492 Field Experience in Management (3:3:0). Prereq Senior standing and Pol. This educationally relevant, faculty-directed, experience-based field experience gives students an opportunity to become involved in addressing actual challenges encountered by Northern Virginia businesses. Working through the Entrepreneurship Center, each client firm will be matched with a team of students assigned to propose action plans relating to a major problem or opportunity faced by the company.

498 Business Strategy and Policy (3:3:0). Prereq Final sem and FNAN 301, MGMT 301, MKTG 301. A capstone course designed to acquaint the student with the nature of strategic management and the shaping of business policy. Emphasis on managerial decision making as it relates to business strategy formation and implementation in large, medium, and small enterprises, both domestic and international.

499 Independent Study (1-3:0:0). Prereq Management majors with at least nine upper-level management cr hr. Research and analysis of selected problems or topics in management must be arranged with an instructor and receive written approval of chair before regis. Written report req.
standing, those courses will not count on an undergraduate degree application for any major in the school (except as general elective credit).

300 Contemporary Marketing for Nonbusiness Majors (3:3:0). A survey of the marketing of goods, services, and ideas in the economic, social, and international environment. Attention is given to public, private, for-profit, and not-for-profit organizations and how the management of the firm's offerings in a dynamic economic, environment. Attention is given to transportation and traffic management; warehousing, distribution centers, and plant location; 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.

310 Business and Government Logistics (3:3:0). 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; warehousing, distribution centers, and plant location; 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 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. In-depth study and application of advertising and its role in marketing planning. Identification of relevant data to analyze the marketing situation, development of product position, marketing and advertising objectives, creative strategy, media planning, and evaluation.

330 (314) Purchasing Materials and Management (3:3:0). Prereq MKTG 301 or Pol. Presents a broad view of the principles of industrial purchasing and management of inventories, including determination of requirements, prices, source selection, inventory policy, and professional ethics.

332 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. 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.

407 Introduction to International Business (3:3:0). Prereq MKTG 301, MGMT 301, FNAN 301. Foreign trade from the viewpoint of business management. The historical dimension of international business; physical movement of goods; conditions for successful trading; the role of government in international trade; how international business policies are developed.

451 Marketing Information Systems (3:3:0). Prereq MKTG 301, or Pol. Design and study of internal and external systems that provide information to the marketing decision maker. Information provided by the system is used to make critical marketing decisions regarding product, segmentation, salesmen, channel, and related decisions.

471 Marketing Management (3:3:0). Prereq senior standing, 6 hours of Marketing, or Pol. Managerial aspects of marketing, emphasizing development of marketing strategies and plans integrating specific elements of the marketing process. Emphasis on case analysis.

481 Marketing in the Nonprofit Sector (3:3:0). Prereq MKTG 301 or Pol. Unique problems of marketing in nonprofit organizations, including government, and their solution through application of traditional and innovative techniques. Marketing commercial ventures owned by nonprofits.

491 Seminar in Marketing (3:3:0). Prereq 9 hr of marketing or Pol. In-depth treatment within a seminar format of timely topics. Emphasis on ability to synthesize and communicate contemporary issues.

492 Field Experience in Marketing (3:3:0). Prereq Senior standing and Pol. This educationally relevant, faculty-governed field experience gives students an opportunity to become involved in addressing actual challenges encountered by Northern Virginia businesses. Working through the Entrepreneurship Center, each client firm will be matched with a team of students assigned to propose action plans relating to a major problem or opportunity faced by the company.

499 Independent Study (1-3:0:0). Prereq Senior class standing. A minimum of 24 hours of business courses including principles of marketing, finance, and management. A primary research proposal in a Marketing area with prior approval of the instructor and faculty chairman.

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.

101 Algebra and Elementary Functions (0:3:0). Meets three hours per week. No degree credit is given; however, tuition and fees are charged for three hours. Basic algebraic manipulations. Linear equations and graphing. A study of the properties of polynomial, logarithmic, exponential, trigonometric functions.


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.


113 Analytic Geometry and Calculus I (4:4:1). 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 (4:4:1). Prereq C or better in MATH 113. Transcendental functions, methods of integration, infinite series, analytic geometry.

125 Discrete Mathematics (3:3:0). Intro to the ideas of discrete mathematics. Topics incl logic, proof techniques, sets, graphs and trees, and techniques of enumeration.


integals, line integrals, surface integrals, transformation of coordinates.

290 Foundations of Mathematics (3:3:0). Prereq MATH 114 or 116. Axiomatic set theory; graphs; functions; equivalence relations and partitions; partially ordered sets; induction; construction of the natural, rational, real and complex number systems; well-ordering principle; cardinality. Primarily intended for mathematics majors.


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 enumeration schemes, lattices, Boolean algebra, graphs and directed graphs, combinatorics, and elementary intro to graphs and finite fields and finite-state machines.


325 Discrete Mathematics II (3:3:0). Prereq MATH 125. Further development of the ideas of discrete mathematics, incl recurrence, generating functions, algorithms of graph theory, predicate calculus, finite state machines, modular arithmetic.

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 I (3:3:0). Concepts and theories underlying elementary school mathematics, incl 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.

413 Modern Applied Mathematics I (3:3:0). Prereq Either MATH 306 or (MATH 303 and MATH 304) and MATH 315. Synthesis of "pure mathematics" and "computational mathematics." The interplay between discrete and continuous mathematics is emphasized throughout. Mathematical structure is revealed from equilibrium models in discrete and continuous systems.

414 Modern Applied Mathematics II (3:3:0). Prereq MATH 413. Continuation of MATH 413 which involves a synthesis of "pure mathematics" and "computational mathematics." Fourier analysis and its role in applied mathematics is developed, e.g., differential equations and approximations. Discrete aspects are emphasized in computational models.


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.
issues and topics covered in other courses on the Middle East, to deepen their understanding of major problems in the Middle East and Islamic history, and to suggest ways in which these problems might be approached. The approach will be problem oriented, topical rather than chronological. It will focus on classic and key works of scholarship and on various interpretations of major issues in Islamic and Middle East history.

Music Courses (MUSI)

Performing Arts

100 Fundamentals of Music (3:3:0). 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 hematopoiesis 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. Methods for the routine examination of urine, feces, and certain other body fluids, especially the microscopic identification of normal and pathologic components. Incl a study of the kidney and theories of microscopy. Not offered on campus.

404 Serology and Immunohematology (5–7:0:0). 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. Clinical lab procedures that involve antigen-antibody reactions and the theoretical bases of such procedures. Incl both diagnostic and blood bank techniques. Not offered on campus.

405 Clinical Microbiology (4–8:0:0). 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. The biology and pathology of bacteria, rickettsia, fungi, parasites, and viruses of clinical importance and their culture and identification. Not offered on campus.

406 Clinical Chemistry (6–10:0:0). 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. The chemical reactions and procedures used in clinical determinations on blood, urine, and cerebral spinal fluid. Incl manual and automated methods of chemical analyses. Not offered on campus.

409 Nuclear Medicine (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. Radiation biology; radiologic instrumentation and safety; clinical applications. Not offered on campus.

Middle East Studies Courses (MEST)

Area Studies

300 Middle East Seminar I: Dimensions of the Middle East (3:3:0). Interdisciplinary intro to important dimensions of the Middle East. Emphasis on contemporary trends, problems, and conflicts in the region. Underlying themes are the unity and diversity of the peoples and cultures, and change and continuity in the region's societies and nations.

400 Middle East Seminar II: Interpretation of Islamic History (3:3:0). Seminar designed to widen students' reading in
Music

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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.

156 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.

182 Collegiate Chorus (1:0:3). Prereq Audition. Ensemble training for students who wish to acquire skills required for participation in advanced performance ensembles. A local public presentation is given. May be taken twice for credit.

183, 383 Symphonic Winds (1:0:3). Prereq Audition. 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 Symphony Orchestra (1:0:3). Prereq Audition. Performance of works from the symphony 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 non-specialist classroom teacher.

271, 272 Techniques of Accompanying (1:0:3). Prereq 4 cr earned in Private Music Instruction (keyboard instrument) or Pol. Fourteen 1-hr classes and 28 hr of supervised practicum per sem. The latter consists of practical application 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) an 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.

338 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. Investigation of various methods, theories, pedagogies, and materials used in teaching of keyboard to children and adults, both in individual and group situations.

379 Improvisation (1:0:2). Prereq MUSI 114, 216 and 218 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 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 seventeenth century to present, with emphasis on historical 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, practices, 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). Prereq. 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. An 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.

585 Chamber Ensembles (1:0:3). Prereq Audition and baccalaureate in music or Pol. Performance of works from the chamber music repertoire. Public performances are given. May be taken four times for cr.

587 Symphony Orchestra (1:0:3). Prereq Audition. Performance of works from the symphony orchestra repertoire. Public concerts are given. May be taken for cr four times.

597 Advanced Topics in Conducting (3:3:0). Prereq baccalaureate in music with a minimum of two sem study in conducting or Pol. Intensive study of an advanced topic in conducting chosen according to interests of students and instructor from such topics as the following: (1) Choral Music Performance Techniques and Score Preparation, (2) Wind Ensemble Performance Techniques and Score Preparation, (3) Orchestral Performance Techniques and Score Preparation, (4) Performance Practices in Choral Music before 1750, (5) Rhythmic Analysis as a Guide to Score Interpretation in Music of All Periods. Maximum of six cr may be earned.

Private Music Instruction

Beginning Private Music Instruction

To earn one cr per sem, a student takes 14 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 half-hour private music lessons; to earn two or three credits per semester, a student takes 14 one-hr private lessons. In Private Music Instruction-Accompanying, a student takes the equivalent of 14 half-hour private music lessons for one credit per semester or 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).

179, 180, 279, 280 Undergraduate Private Music Instruction—Instrumental/Vocal (1:0:5 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 on the major instrument and approval by an audition committee. Coreq for MUSI 377 or 378: MUSI 380. Coreq for MUSI 471 or 478: MUSI 480.

221, 222, 321, 322, 421, 422 Undergraduate Private Music Instruction—Composition (1:0:5 for each).

223, 224, 323, 324, 423, 424 Undergraduate Private Music Instruction—Composition (2:0:1 for each). Prereq for MUSI 221: MUSI 114 and 319; prereq for MUSI 223: MUSI 114, 319, portfolio of compositions and an interview with a faculty committee.

491, 492 Undergraduate Private Music Instruction—Conducting (1:0:5 for each).

493, 494 Undergraduate Private Music Instruction—Conducting (2:0:1 for each). Prereq for MUSI 491 and 493: MUSI 396 and an audition before a faculty committee.

125, 126, 225, 226 Undergraduate Private Music Instruction—Accompanying (1:0:5 for each).

127, 128, 227, 228 Undergraduate Private Music Instruction—Accompanying (2:0:1 for each).

329, 330, 429, 430 Undergraduate Private Music Instruction—Accompanying (3:0:1 for each). Prereq for MUSI 125 and 127: Undergraduate Private Music Instruction—Instrumental/Vocal Audition or MUSI 172; for MUSI 328, 8 cr on a keyboard instrument and approval by an audition committee. Coreq for MUSI 329 or 330: MUSI 380. Coreq for MUSI 429 or 430: MUSI 480.

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 (3:3:0). 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 (4:0:6). Prereq Anatomy and physiology. Prereq or coreq NURS 254 and at least 30 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.

314 Nursing Systems for Adults and Children (3:3:0). Prereq NURS 250, 254, 262; prereq or coreq NURS 301. Design and implementation of nursing systems for adults and children. The self care conceptual framework and the nursing process are used to identify (1) the agency of clients to manage their health care (2) the appropriate methods of nursing assistance. Selected health-related concepts are presented.

315 Application of Nursing Systems for Adults and Children (5:0:15). Prereq or coreq NURS 314. Application of nursing systems for adults and children in the acute care setting. Clinical experiences focus on using the nursing process to provide care to clients and families with health and self-care needs resulting from medical, surgical, and congenital problems.

324 Nursing Systems for Individuals, Small Groups, and Families (3:3:0). Prereq NURS 250, 254, 262; prereq or coreq NURS 302. Design and implementation of nursing systems for individuals, small groups, and families. The nursing process will be used to identify the current and potential agency of clients to manage their health and self-care and the appropriate methods of nursing assistance for clients with developmental, maternity, and/or mental health self care deficits.

325 Application of Nursing Systems for Individuals, Small groups, and Families (5:0:15). Prereq or coreq NURS 324. Application of nursing systems for individuals, small groups, and families in the acute care setting. Clinical experiences focus on using the nursing process to provide care for clients with health and self-care needs resulting from developmental, maternity, and mental health problems. Attention is also given to health care coordination with the nursing subsystem.

411 Research Dimensions in Nursing (3:3:0). Prereq STAT NURS 301, 302, 311, 312, 321, 322. Intro research course presenting basic research concepts and methods used in nursing studies. Major nursing theories as a foundation for scholarship.


430 Nursing Systems for Individuals, Families, and Large Groups in Community Settings (3:3:0). Focuses on identification of concepts used in designing nursing systems for individuals, families, and large groups in community settings. Emphasis is on small and large group concepts; principles of epidemiology; principles of primary, secondary, and tertiary prevention; teaching and learning strategies used with large groups; and description of populations at risk who are community-residing.

431 Application of Nursing Systems for Individuals, Families, and Large Groups in Community Settings (5:0:15). Prereq NURS 301, 302, 311, 312, 321, 322; or prereq or coreq NURS 426, NURS 430. 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 (3:2:2). 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.

471 Professional Issues in Nursing Practice (3:3:0). The influence of professional issues on the nurse's role in clinical practice in small group discussions.

475 Nursing Systems for Individuals and Groups with Complex Problems throughout the Life Span (3:3:0). This course is designed to examine nursing implications of selected major health problems which significantly affect individuals or groups throughout the life span. This course applies nursing process according to the self-care deficit theory. Incorporated within this are: epidemiological statistics, health assessment, pathophysiology, stages of the nursing process, pharmacology, and application of appropriate nursing research findings. Course will be taught by the team approach in order to use expertise from within and outside the faculty.

476 Application of Nursing Systems for Individuals and Groups with Complex Problems (5:0:15). Prereq NURS 301, 302, 311, 312, 321, 322; or 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 (3:3:0). 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 PoD. 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 PoD. Examination of literature on specialized topic in nursing practice, education, or scholarship. Conducted in consultation with faculty.

499 Independent Study in Nursing (1:3:0:0). Prereq PoD. 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 and 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). Impact of cultural definitions of aging, research methodologies and findings of
cross-cultural studies. Implications for health care and nursing.

**Operations Research Courses (OR)**

**Operations Research and Applied Statistics**

435 Computer Simulation Modeling (3:3:0). Prereq STAT 344, or equiv. Intro to the basic concepts of simulating complex systems by computer. Topics covered incl Monte-Carlo methods, discrete-event modeling, a specialized simulation language, and the statistics of input and output analysis.


451/DESC 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.

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; intro to integer, nonlinear, and dynamic programming. Emphasis on modeling and problem solving. Students who have taken OR/MATH 441 or 443 will not receive cr.


**Plan for Alternative General Education Courses (PAGE)**

**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 generally 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 sciences, applies these to the analysis and solution of a variety of quantitative problems in the natural and social sciences as well as the business environment.

130 Conceptions of Self (3:3:0). Drawing from appropriate works in the social sciences, 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 sciences and humanities to evaluate the contribution of different disciplines to an understanding of significant social issues and their global ramifications.

150, 152, 250 Symbolic, 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 sciences, 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 science 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). 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). Studies specific aspects of contemporary U.S. society from historical, sociological, political, economic, cultural, and global perspectives.

**Parks, Recreation, and Leisure Studies Courses (PRLS)**

**Health, Sport, and Leisure Studies**

100 Introduction to Parks, Recreation, and Leisure Studies (3:3:0). Historical, philosophical and technical development of leisure service professions and organizations.

103 Careers in Leisure (1:1:0). In cooperation with the Career Counseling program, students analyze personal and professional interests, attributes, and skills regarding the training needs for various job opportunities in leisure services.

115 Recreation—Fishing and Camping (2:0:3). Fishing techniques with various rods; basic camping techniques. This course may not be taken by anyone who has previously taken and satisfactorily completed PHED 115.
117 Rock Climbing (1:0:2). Basic climbing skills, safety, and use of equipment. Graded S/NC only. Fee. This course may not be taken by anyone who has previously taken and satisfactorily completed PHED 117.

119 Recreation—Trap and Skeet Shooting (2:0:3). Fundamentals and safety in shooting clay targets and reloading. Fee. This course may not be taken by anyone who has previously taken and satisfactorily completed PHED 119.

120 Recreation—Backpacking, Orienteering, and Cookery (2:0:3). Basic skills and knowledge for lifetime activities in the outdoors. This course may not be taken by anyone who has previously taken and satisfactorily completed PHED 120.

180 Whitewater Canoeing (1:0:2). Prereq Ability to swim, fully clothed, for five minutes and to put on the PFD in water. Basic skills must be mastered on flat water prior to the two white water canoe trips. Fee. This course may not be taken by anyone who has previously taken and satisfactorily completed PHED 180.

190 Downhill/Cross-Country Skiing (2:0:3). Basic skills, safety, and equipment for downhill and cross-country skiing. Graded S/NC only. Fee. This course may not be taken by anyone who has previously taken and satisfactorily completed PHED 190.

210 Leisure in Society (3:3:0). Cultural, social, and economic aspects of leisure. Explore the effects of leisure on individuals, the family and the community.

255 Basic Scuba Diving (2:0:3). Prereq Intermediate-level swimming ability. Basic skill and knowledge to prepare for the Open Water Diver Certificate (PADI). Fee. This course may not be taken by anyone who has previously taken and satisfactorily completed PHED 255.

310 Marketing and Programming of Leisure Studies (3:3:0). Development of special skills and theories in needs assessment, social, cultural, physical, and educational values and the role of the professional in programming.

315 Public Relations and Communications in Parks and Recreation Resources (3:2:2). Use of media publicity, public relations, and marketing of leisure services.

316 Recreation and Outdoor Education (3:3:0). Techniques 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.

326 Seminar: Problem Solving in Recreation and Parks (3:3:0). Students involved in organizations 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.

400 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; visitor centers; national state, and local lands and facilities; commercial and private developments; large-scale redevelopment and restoration projects.

405 Planning, Design, and Maintenance of Leisure Facilities (3:2:2). A direct application course that reviews the principles of planning, design, and maintenance in terms of demand, function, efficiency, safety, and economy principles and techniques for master planning, goal and objectives identification, and design standards. 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.

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, grantsmanship (sources, cycles, and techniques), revenue projection and analysis, contract services, budgeting modalities, and accountability.

450 Senior Research 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.

490 (325) Internship (12:0:0). 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.

499 Independent Study (1-3:0:0). Individual study of topic area in leisure research, theory, or practice under the direction of faculty. M233GEMGEM 00001000110111233 0486

Philosophy Courses (PHIL)

Philosophy and Religious Studies

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.

253 Philosophy and Literature (3:3:0). The philosophic significance of psychiatry, existentialism, and Marxism and their expression in twentieth-century literature in the stories of Mann, Kafka, Hesse, Camus, Sartre, Koestler, Bellow, and Pynchon. Themes include: paradox, alienation, absurdism, narcissism, totalitarianism vs. democracy, art and neurosis, sexuality, symbolism, freedom, and authenticity.

254 Contemporary Ethical Problems (3:3:0). Topics include homosexuality, abortion, drugs, civil disobedience, capital punishment, the rights of the individual vs. the rights of society.

301 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 fifth to the fifteenth 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.

306 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.

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 include 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 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 fideism 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. 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 Karl Marx’s Social and Political Thought (3:3:0). Prereq 3 cr in PHIL 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 nineteenth and early twentieth centuries, such as Emerson, Thoreau, Peirce, James, Royce, Santayana, Dewey, and Whitehead. Emphasis on their relation to American culture.

332 Twentieth-Century Analytic Philosophy (3:3:0). Prereq 3 hr of logic and PHIL 303 or Pol. Examination of the attempts of twentieth-century philosophers to solve philosophical problems by an analysis of language. Figures and movements covered included Russell, Moore, Wittgenstein, logical positivism, and ordinary language philosophy.

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 include 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). Prereq 3 hr of philosophy or Pol. Study of phenomenological and existential 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.

356 Philosophy of Art (3:3:0). Prereq PHIL 151 or Pol. Major trends and issues in recent moral philosophy.

357 Philosophy of the Social Sciences (3:3:0). Prereq 3 hr of philosophy or Pol. Philosophical issues relating to competing methodologies for the social sciences. Analysis and critique of mainstream positivism and behaviorism; paradigm theory and scientific revolutions; interpretive understanding and hermeneutical science; phenomenology and the social construction of reality; ethnomet hodology and situational meaning; analytic philosophy and action theory; the "idea" of a social science; sociology of knowledge and theory of ideology; Western Marxism and critical theory.

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 MATH 110 or Pol. Study of predicate
calculus by means of a step-by-step construction of artificial languages. Topics include 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 in the Philosophy majors with 5 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 a Ph.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 in medical care, and ethical health care technologies.

512 Issues in Philosophy and Literature (4:2:0). 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 stdg, 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.

591 Special Topics in Philosophy (3:3:0). An examination of specific topics in philosophy which are both of central interest in that field, and of interdisciplinary interest as well. Topics will be selected with special reference to the areas of technology, aesthetics, philosophy of religion, and ethics and social and political philosophy.

Physical Education (PHED)

Health, Sport, and Leisure Studies

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. Physical education majors enrolled in lab sections are not required to take PHED 100 as a prerequisite or core.

101 Soccer and Volleyball (1:0:2). Basic skills, rules and strategies of each sport.

102 Beginning Fencing (1:0:2). Basic skills, techniques and rules of foil fencing.

104 Noncontact 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 cardiovascular 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 nonswimmers. 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 (1:3:2). 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, 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. 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 are 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 skill 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, 421 Coaching of Sports (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.


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 weekly seminar.

499 Independent Study in Physical Education (1:3:0:0). Prereq 84 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 stdg 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 stdg 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 stdg 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 stdg or Pol. Study of a problem area in physical education research, theory, or practice under the direction of
Physics Courses (PHYS)

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). PHYS 103 prereq 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). Prereq One year of college mathematics. 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.

111 Frontiers of Physics (1:1:0). Overview of subfields of physics, their interrelation, and the relationship of physics to other disciplines. Discussion of current research topics in physics; career opportunities.

141 Elementary Physics (3:3:0). One-semester course for nonmajors covering the basic concepts of classical and modern physics. PHYS 142 is an optional one-credit lab for this course.

142 Elementary Physics Lab (1:0:1). Coreq PHYS 141. Laboratory for PHYS 141.

201 Energy and Environment (3:3:0). 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. Students who have taken PHYS 201 under the old title may not enroll for this course. May not be incl for cr 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.

225 Problems in Physics I (1:3:0:0). Prereq 24 hr and 3.00 average in physics and mathematics. Individual study of physics problems of current interest. May be taken 3 times.

250 University Physics I (4:3:1). Coreq MATH 114. The first semester of three semester calculus-based introductory physics sequence, designed primarily for science and engineering majors. Mechanics.

300/GOVT 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 physics major req.

303 Classical Mechanics (3:3:0). Prereq PHYS 352, 353 and MATH 304. Motion of a particle in 1, 2 and 3 dimensions; systems of particles; non-inertial coordinate systems; equations of Lagrange and Hamilton.

305/ENGR 305 Electromagnetic Theory (3:3:0). (Same as ENGR 305.) Prereq PHYS 352, 353 and MATH 304. Interaction of static charges, interaction of stationary currents, electromagnetic induction, Maxwell's equations.


311, 312 Mathematical Methods in Physics and Engineering (3:3:0), (3:3:0). Prereq PHYS 352 and MATH 304 or 306; PHYS 311 or MATH 313 is prereq for PHYS 312. Techniques as applied in physics and engineering. Ordinary and partial differential equations, special functions, Fourier series, Laplace transforms, integral equations, matrices, and complex variables.

315 Physics of Musical Sounds (3:3:0). Prereq MUSI 101 or 115 or Pol. Physics of music. Topics incl simple harmonic motion, vibration, temperament, the ear, architectural acoustics, sound recording and reproduction. May not be incl for cr by physics majors within the 44 hr of physics courses req for B.S., or within the 31 hr of physics courses req for B.A.

316 Sound and Light in the Arts (3:3:0). Nature of light, color and sound, mechanisms of vision and hearing, color addition; synthesis of musical sounds, computer-generated music and art; lasers; holography and fiber optics; recording and reproduction of sound and light. May not be incl for cr by physics majors within the 44 hr of physics courses req for B.S., or within the 31 hr of physics courses req for B.A. Frequent use is made of demonstrations.

326 Problems in Physics II (1:0:0). Prereq 54 hr and 2.50 average in physics and mathematical science. Individual study of physics problems of current interest. May be taken 3 times.


343-345 College Physics (3:3:0)-(3:3:0). (One hr recitation) Prereq 54 hr or 1 year of college-level science and one sem of college-level mathematics, or Pol. Two-semester basic physics course with emphasis on topics of classical and modern physics of particular importance to science majors. The principles of mechanics, heat, electricity, magnetism, optics, atomic and nuclear physics.

344-346 College Physics Lab (1:0:1)-(1:0:1). Coreq 343 for (344) and 345 for (346). Laboratory portion of two-semester basic physics course.

350 University Physics II Laboratory (2:0:3). Coreq MATH 213, PHYS 351; prereq PHYS 250. Waves, thermal physics, and electricity.

351 University Physics II Laboratory (2:0:3). Coreq MATH 213, PHYS 350. Experiments in electricity and mechanics.


353 University Physics III Laboratory (2:0:3). Coreq MATH 304, PHYS 352. Experiments in optics and modern physics.

355 Computer Methods in Physics and Engineering (3:3:0). Prereq MATH 304 and PHYS 352 or 342 and knowledge of FORTRAN. A study of algorithms used to solve problems in physics and engineering and their computer implementation, data handling and data processing techniques in physics and engineering.

361 Modern Physics with Applications (3:3:0). Prereq MATH 304 and PHYS 352 or PHYS 342 and Pol. Study of modern physics with emphasis on applications for scientists and engineers. Topics incl 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 sciences.
402 Introduction to Quantum Mechanics and Atomic Physics (3:3:0). Prereq PHYS 303 or Pol. Experimental basis of quantum mechanics; the wave function; systems in 1, 2 and 3 dimensions.

407 Senior Laboratory in Modern Physics (3:3:0). Prereq 84 hr. 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.

408 Senior Research (2-3:3:0). Prereq 84 hr. The student works under the guidance of a faculty member on a research project in experimental or theoretical physics.

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/GEOL 417 Geophysics (3:3:0). Prereq GEOL 101, 102, 201, 301; MATH 113, 114; PHYS 250. Coreq MATH 213; PHYS 360, 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/ASTR 428 Relativity and Cosmology (3:3:0). 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.

500 Physics for High School Teachers (3:3:0). Prereq Certification as a secondary school physics instructor or Pol. Techniques of teaching high school physics. Intro to modern physics with emphasis on concepts rather than mathematical formalism. Recent developments in physics.

501 Physics Laboratory Techniques for High School Teachers (3:3:0). Prereq Grad stdg. Theory and performance of experiments applicable to high school teaching with practical sessions on use of lab apparatus and computer. Rec for high school teachers of physics.

502/PHYS 402 Introduction to Quantum Mechanics and Atomic Physics (3:3:0). Prereq PHYS 303 or Pol. Experimental basis of quantum mechanics; the wave function; systems in 2, 3 and 4 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 liquid 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, bonding, 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 natural science 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 science instruction.

590 Selected Topics in Physics (3:3:0). Prereq Grad stdg or Pol. 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

Portuguese Courses (PORT)

Foreign Languages and Literatures


101, 102 Elementary Portuguese (3:3:1), (3:3:1). 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 (3:3:1). 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 and Organizational 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 computers in laboratory.

http://catalog.gmu.edu
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 biobehavioral experiments are studied.

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 Sensation, 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 maturation, 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.

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 personality 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, functionalism, Gestalt psychology, and psychoanalysis.

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.

365 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.


373 Physiological Psychology Laboratory (1:0:3). Prereq BIOL 103, 104, or equiv; coreq or prereq PSYC 372, 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. Psychology majors are advised to take PSYC 372 concurrently with PSYC 373.

400 Laboratory Methods and Instrumentation in Experimental Psychology (1:0:3). Prereq Lab course in experimental psychological methods. 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.


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.

425 Seminar in Abnormal Psychology (3:3:0). Prereq PSYC 325 or Pol. Selected topics incl stigma, specific forms of psychopathology, psychological issues, or deinstitutionalization.

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 interests with stress on research methods. By PoC, a student may take a second semester max of 6 hr of cr. Students meet once a week to discuss their study.

461, 462 Special Topics (3:3:0), (3:3:0). 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 two faculty members. With PoD, students may take a second semester max 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.

541 Survey Research (3:3:0). Prereq PSYC 300 or SOCI 221 or equiv. Course is designed to acquaint students with the theory, method, and practice of survey research; requires students to complete a survey research project.

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. One hundred fifty contact hr per 3 sem hr cr.

553 Quantitative Methods I: Advanced Statistics (4:3:2). Prereq A screening test will be given the first evening of class. This test must be passed in order to take the course. Topics in intro psychological statistics from an advanced perspective. Additional topics are incl. Lab provides intro to use of computer packages in data handling and analysis. Required for degree students.Req may be satisfied by demonstrating competence on an independent 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 308 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 biological interests 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, grammatical transformations, and the psychological reality of transformational rules.

592 Special Topics (3:3:0). Prereq Pol. Special topics reflecting interest in specialized areas.

Public Administration Courses (PUAD).

Public Affairs

502 Theory and Practice of Public Administration (3:3:0). Prereq Grad stdg or PolD. Survey and review of the field of public administration, 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 PolD. 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 the School of Business Administration.

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/BULE 304 Real Estate Law (3:3:0). 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.

414 Real Property Management (3:3:0). Prereq REUD 301 or Pol. Examination of the responsibilities of managing income-producing real estate incl selection of tenants, collection of rents, maintenance and repair, solving tenant problems, paying taxes and insurance, managing cash flow, and helping design new projects.

415 Real Estate Finance (3:3:0). Prereq REUD 301 or Pol. Mechanisms of 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. Students will develop analytical skills including the use of the microcomputer and appropriate software.

417 Real Property Portfolio Analysis (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 including 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 legal environment of brokerage, personnel selection and contract relationships, listing and agency agreements, financial control, the working environment, and techniques of market and production. Students will develop skills in the use of the microcomputer and appropriate software.

419 Real Estate Investment (3:3:0). Prereq REUD 301 or Pol. An intro 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 (3:3:0). Prereq REUD 301 or REUD 582 (formerly BUAD 680). Business of creating housing, including strategy, market and merchandising trends; legal and political constraints; site selection; social implications; design and construction procedures; and financial analysis and control for single-family subdivisions, multi-family projects and new towns. Students will develop analytical skills involving the use of the microcomputer and appropriate software.

584 (formerly BUAD 582) Commercial Property Development (3:3:0). Prereq REUD 301 or REUD 582 (formerly BUAD 680). The business of creating industrial and commercial real estate, including office space, shopping centers, recreation facilities, and specialized commercial properties. Includes 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.

585 Real Estate Market Analysis (3:3:0). Prereq REUD 301 or 582 or Pol. Real estate market analysis and sources of data; problems and techniques that apply to each of the analyses of various types of real estate. Students will develop analytical skills involving the use of the microcomputer and appropriate software.

586 Real Estate Location Analysis (3:3:0). Prereq REUD 301 or 582 or Pol. Examination of the environment and any special physical, economic, governmental, and social factors that influence the marketability and utility of various kinds of real estate properties. Focus on regional, metropolitan, and national trends. Instruction will include lectures, microcomputer applications, and field research.

587 Real Computer Applications in Real Estate (3:3:0). Prereq REUD 301 or 582 or Pol. Survey of the software available to professionals in real estate; description of how the software is used in various types of applications with the req that students develop proficiency in these applications. Instruction will include lectures, microcomputer applications, and field research.

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 sciences 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 sciences 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 sciences 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 sciences 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 (1-3:3:0). 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.

Religious Studies Courses (RELI)

Philosophy and Religious Studies

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 Religious Studies 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

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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 cultures; 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, loneliness and alienation, love and redemption, personal guilt and social responsibility, suffering and death.


271 Contemporary Religious Ethics (3:3:0). Prereq RELI 244 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, incl the 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; social 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 nineteenth and twentieth centuries.


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 developments, with a focus on medieval and modern Jewish 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 incl 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; 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 3 hr in RELI (incl 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.

591 Current Issues in Religious Studies (3:3:0). An examination of special topics in religious studies which are of central interest in that field and of interdisciplinary interest as well. Topics will be selected with special reference to their current importance in the field of religious studies and their pertinence to discussions of the role of religion in contemporary social, cultural, and political life.

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 (1-3:0:0). 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.


310 (254) Readings in Russian Literature (3:3:0). 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.

312 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 vary. 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.

353 Russian Civilization (3:3:0). Prereq 54 hr or Pol. Civilization and culture of Russia and the Soviet Union. Incl films, slides and music in addition to readings and lectures. Course work in English. May be taken toward fulfillment of the Non-W Culture req for the BA degree.

354 Contemporary Soviet Life (3:3:0). Prereq 54 hr or Pol. Social life, art, economics, education, view of life, and personal aspirations of the Soviet citizen today. 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 natural and physical sciences.

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.

490, 491 Independent Study (1-3:3:0), (1-3:3:0). Prereq Russian Studies major with 84 hr and Pol. Research and analysis of a selected problem in language, literature, or culture in consultation with a member of the Russian Studies faculty.

Social Work Courses (SOCW)

Social Work

100 Introduction to Social Work (1:1:0). Intro classroom discussion and field observation on functions, values, methods, effectiveness, opportunities, and limitations of social work in helping people.

300 Alcoholism: Policies and Programs (3:3:0). This course is designed to help students obtain basic knowledge concerning primary issues related to alcoholism. Explication of key concepts, theories, policies, and research regarding the use and abuse of alcohol is explored. Special emphasis is placed on the impact of the policies and programs on the well-being of ethnic minority and disadvantaged service populations.

301 Laboratory in Interpersonal Communication (3:3:0). Prereq SOCI 101, PSYC 100, or Pol. Emphasis on experiential learning of the biological, psychological, social, and cultural influences on the behavior of those who need and those who give help. Students are helped to examine their own behavioral and learning patterns, values, and attitudes, in order to increase their ability to understand and help social work clients. Field service of at least 60 hr req.

323, 324 Human Behavior in the Social Environment I, II (3:3:0), (3:3:0). (Must be taken in sequence) Prereq SOCI 101, BIOL 104, or Pol. A social systems approach unifying and integrating concepts and knowledge from biology, anthropology, sociology, and psychology about human behavior. Applications in professional practice in the social work literature and in the field experience.

351 Social Welfare Policy and Services (3:3:0). Prereq SOCI 101, PSYC 100, or Pol. Intro to social welfare, incl its historical development, central concepts, institutional nature, and the functions of social work as a profession. Field investigation and analyses of human service delivery systems, settings, and roles of social work.

352 Social Welfare Policy and Services II (3:3:0). Prereq 54 hr or Pol. Analysis of various social welfare policies; components of policy in our society. Examines the political, economic, and cultural influences on the policy making process and the role of professors and citizen groups within it.

357 Methods of Social Work Intervention I (3:3:0). Prereq SOCW 301 or Pol. Social work practice from a systems perspective. Particular emphasis to problem-solving activities with microsystems. The common core of knowledge, values, and skills essential to social work practice is analyzed to gain insight into social work functions and the role of the social worker as a change agent.

358 Methods of Social Work Intervention II (4:3:0). Prereq SOCW 301, 357, or Pol. Methods continue a generic
problem-solving model, focusing on group and macrointervention systems, settings, and skills. Emphasis on working with groups from treatment to task purposes. Group processes as goal formulation, contract setting, composition, termination, skills and techniques necessary for effective worker intervention are partial knowledge base of the course. Field service of 40-60 hr req.

423 Social Work with Adolescents (3:3:0). Prereq 54 hr and concurrent field experience, or Pol. Major needs of adolescents with their implications for social work practice. Problems of family and peer group relationships; occupational choice; sexual and scholastic adjustment; and special problems of racial and cultural alienation; alcohol and drug abuse; and delinquency. Studies various theoretical orientations and evidence from research. Analyzes both individual and group approaches to counseling and treatment.

424 Social Work Practice: Family and Group (3:3:0). Prereq SOCW 358 or Pol. This course should be taken simultaneously with SOCW 453 or 454 (Senior Practicum). Theoretical and applied concepts in social work practice with the family and the group. Opportunity through client contact in the practicum to develop skills and techniques in social group work and family practice.

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. Incl the community development approach, neighborhood organization, 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 participation and direct services in the neighborhood, relevant roles for neighborhood residents in service delivery, independent social action, role of social work in planned change.

454 Senior Practicum II (5:0:0). Prereq SOCW 453, with a grade of at least C and rec of 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 with 84 hr, GPA of 3.50 (in social work) and rec of the faculty and the director of field instruction. Under supervisory instruction provided by field agencies, students are involved 2 days per week in participation and direct services in the neighborhood, relevant roles for neighborhood residents in service delivery, independent social action, role of social work in planned change.

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 require. 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.

Sociology Courses (SOCI)

Sociology

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.

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 of self-concept 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 science 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 regarding punishment and treatment of criminals and prevention of crime; 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.

305 Sociology of Small Groups (3:3:0). Prereq 6 hr of sociology or Pol. Characteristics, structure, and processes of
small group dynamics; theories and models of group analysis, techniques of observation and research in small groups; research theory and application of small group knowledge to such natural groups as mutual aid self-help groups, families, juvenile delinquent gangs, and task groups in work sites.

306 Demographic Analysis (Population Problems) (3:3:0). Prereq 6 hr of sociology incl SOCI 101 or Pol. (It is rec that students take SOCI 101) 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.

310 Sociology of Deviance (3:3:0). Prereq 3 hr of sociology or Pol. Analysis of the macro- and micro-level deviance producing processes; of the meaning and control of deviance; and of the major theoretical approaches to deviance.

311 Classical Sociological Theory (3:3:0). Prereq 9 hr in sociology incl SOCI 101 or Pol. Sociological tradition is explored through readings and discussions of ideas drawn from the writings of selected sociological thinkers such as Comte, Marx, Weber, Durkheim, and others.

315 Sociology of Sex Roles (3:3:0). Prereq 54 hr or Pol. Changing conceptions of sex roles, both female and male, in contemporary society. Using historical and comparative data, considers the differential socialization of males and females in relation to the changing social structure in which it takes place.

325 Sociology of War and Conflict (3:3:0). Prereq 6 hr of sociology or Pol. Study and analysis of war as a sociopolitical phenomenon in our society and in other societies. Total war and other conflict alternatives—such as limited war, nonnuclear war, subversion and sabotage, terrorism, guerilla war—are primary units of analysis.

326 Military Sociology (3:3:0). Prereq 54 hr or Pol. The military from a sociological perspective. Topics incl role of military in society, revolutions, civil-military relations, military as a profession, and military culture.

332 Sociology of Urban Communities (3:3:0). Prereq 6 hr of sociology incl SOCI 101, or Pol. The urban community: historical development, demography, and ecology of metropolitan areas; urbanism as a way of life; the emergence of suburbia; the future of cities.

340 Power in Society: Introduction to Political Sociology (3:3:0). Prereq 6 hr of any social science incl SOCI 101, or Pol. Analysis of how political power is related to other aspects of social life, in terms of such sociological approaches as class conflict, social consensus, elite analysis, and protest and revolution.

350 The Sociology of the Life Cycle (3:3:0). Prereq 3 hr of sociology or Pol. Consideration of social influences on the timing of the life course. Topics incl cultural variations in defining age roles, historical social development of generational subcultures, youth and age as new minorities, community structure and the aging process, the mass media and the American cult of youth, and explorations of alternative patterns of generational interaction.

373 The Community (3:3:0). Prereq 6 hr of sociology incl SOCI 101, or Pol. Examination of small to moderately sized communities ranging through the village, rural community, small town, and city subcommunity. The latter category incl city localities, ethnic villages, and suburban communities.

382 Education in Contemporary Society (3:3:0). Prereq 6 hr of sociology incl SOCI 101 or Pol. Study of education as a social institution, and its function as a socialization agency for social stability and social change. Emphasizes influences of social class elements on educational process and social organization of the U.S. public school system.

385 Sociology of Religion (3:3:0). Prereq 3 hr of sociology or Pol. The personal and institutional dimensions of religious life in relation to major sociological concepts such as role, status, norms, and social aggregates. The student selects an aspect of religion for in-depth study.

390 Medical Sociology (3:3:0). Prereq 6 hr of sociology incl SOCI 101, or Pol. Examination of social context of disease and medical care, position of the professions in the medical care structure, analysis of medical and the physician-patient relationship under different systems of practice. Etiology, incidence and prognosis of disease, and the restoration of patients to their normal social functions are studied in relation to the social environment.

397, 398 Fundamentals of Aging I, II (3:3:0), (3:3:0). Prereq 8 hr of biology, anatomy, or physiology and 3 hr of psychology or sociology, or Pol. Physical, psychological, and social aspects of normal aging are examined as well as issues in health care, mental health, social services, education, and public policy in the field of gerontology. Field experience req. Students who have taken PSYC 216 may not receive cr for Fundamentals of Aging I and students who have taken UNIV 402 may not receive cr for Fundamentals of Aging II. SOCI 397 may not be taken for sociology major cr.

401 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 justice; analysis of the treatment of adult and juvenile offenders. Incl discussion of the origin and development of punishment, correction, rehabilitation, residential treatment, and the halfway house. Roles of legal and social agencies 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.

405 Analysis of Social Data (4:3:3). Prereq 54 hrs, SOCI 221, or Pol. The course will overview the management and analysis of empirical social science data, including file construction, scaling and measurement, data transformation, and treatment of missing data. Manipulation, management, and analysis of data sets using computers is emphasized.

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.

421 Fieldwork in Social Change (3-3-0). Prereq 6 hr of sociology or Pol. In-depth investigation of planned social change through fieldwork internship with a change organization of student's choice. Groups may be involved in influencing peace, environment, civil rights, consumer protection, poverty, or other public issues. Topics include ideologies, targets, organizational structures, opposition, and strategies of change.

441 The Sociology of Aging (3-3-0). Prereq 6 hr of sociology or Pol. Aging from a sociological perspective. Topics covered include demographic trends and the aging population in America, the social construction of life stages and the creation of "old age," cultural labeling and human aging.

471 Prevention and Deterrence of Crime (3-3-0). Prereq 54 hr, inservice status, or Pol. Theoretical and practical strategies for crime prevention and deterrence. Social, environmental, and mechanical developments. Police, courts, and correctional elements of law enforcement in terms of current effectiveness and future potential for crime prevention.

480 Seminar in Sociology (3-3-0). Prereq Open only to senior majors in sociology. May be taken for cr or only once. Topics of contemporary interest in sociology through individual class reports and group discussion. Topics vary.

492 Formal Organizations (3-3-0). Prereq Junior standing or Pol. Analysis of types of large, complex organizations in society; a study of bureaucracy and of the informal group formation which is often a part of the larger structure. Effectiveness of the formal organization and its administration.

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 analysis of social movements, culture contact and borrowing, innovation-adoption, and planned change.

499 Independent Research in Sociology (1-3-0-0). Prereq 18 hr of sociology incl SOCI 221, 303, 311 and 412; A B average in sociology; and a research proposal approved in advance of enrollment by instructor and department chair. Investigation of a sociological problem according to individual interest with stress on research.

503 Family Law (3-3-0). Prereq Undergrad senior status in sociology, grad stdg, or Pol. An examination of the salient aspects of the law as it affects the family in our dynamic society. Topics include the nature and formalities of the marital relationship; intrafamily torts and crimes; termination of the marital relationship; child custody and support; adoption; separation agreements; and the economic and sociological aspects of marriage, separation, and divorce.

505 Sociology of Sex and Gender (3-3-0). Prereq Grad stdg or Pol. An advanced study of sex roles in contemporary society. Using historical and comparative data, course examines perceived, prescribed, and actual sex differentiation in social, political, and economic roles.

510 Employees, Employers, and the Changing Labor Force (3-3-0). Prereq Grad stdg or Pol. Focusing on the nature and origin of recent developments, e.g., in technology, affirmative action policy and debates, migration and immigration, and public and private job training programs, course will examine their impact on the social structure of work.

515 Applying Sociology (3-3-0). Prereq Undergrad senior status in sociology; grad status. Course provides overview of the ways sociologists have applied their theoretical and methodological skills and understanding in sociological practice in nonacademic settings.

517 Racial and Ethnic Relations: American and Selected Global Perspectives (3-3-0). Prereq Grad stdg or Pol. Demographic purview of racial and ethnic groups in the United States; racial and ethnic groups as human-social-minority groups. Factors making for minority status incl: personality factors, group cultural factors; reactions of racial and ethnic minorities to minority status; programs, methods, social movements, philosophies seeking to change minority group status.

525 Current Research in Sex and Gender (3-3-0). Prereq Grad stdg or Pol. Advanced study of the current social science research and research methodology used in the study of sex and gender.

541 Survey Research (3-3-0). Prereq PSYC 300 or SOCI 221 or equiv. This course is designed to acquaint students with the theory, method, and practice of survey research design and analysis. The course requires the student to complete a survey research project.

599 Issues in Sociology (3-3-0). Prereq Undergrad senior status in sociology; grad status. Course provides an opportunity to explore topics of contemporary interest in sociology. Topics will change from one semester to next and will include issues in sociological theory, crime and delinquency, advanced research methods, social and cultural change, urban sociology, medical sociology, sociology of aging, rural sociology. This course can be taken only once for credit.

Spanish Courses (SPAN)

Foreign Languages and Literatures


100 Survival Spanish (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.

109 Intensive Elementary Spanish (6-6-2). Equiv to SPAN 101, 102 taught in a single sem. Rec for students who desire an intensive intro to Spanish. May not be taken for cr in combination with SPAN 101, 102, or 105. 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.

241 Applied Spanish for the Social Services (4-4-2). Prereq SPAN 142 or equiv. Continuation of SPAN 142.

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 Spanish 311 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 nonmajors. 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 nonmajors. 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 (1-3:3:0). 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.

324 Study Abroad in Spanish (3:3:0). Prereq SPAN 202 or 209 or equiv, or Pol. Study at an academic institution in a Spanish-speaking country incl classroom studies with professors from the host country and field experiences.

325 Major Hispanic Writers (3:3:0). Prereq ENGL 101 or equiv or Pol. Designed for nonmajors. 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 Pol.

329 Special Topics in Spanish and Latin American Literature (3:3:0). Prereq ENGL 101 or Pol. Designed for nonmajors. 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, incl written assignments. Not open to native speakers.

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. Req for students who wish to improve reading and writing of Spanish for Latin American Studies majors.

361 Spanish Civilization and Culture (3:3:0). Prereq 15 hr of Spanish or Pol. Survey 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.

420 Studies in Spanish Linguistics (3:3:0). Prereq SPAN 451 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 Pol.

425, 426 Independent Study (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,” 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, oral and written reports based on contemporary themes. Not open to native speakers.


480, 481 Special Topics in Hispanic Literature (3:3:0), (3:3:0). Prereq SPAN 311 or Pol. Study in depth of a selected theme, topic, period, or genre. May be repeated for cr with Pol.

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.

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.

505 Applied Spanish Stylistics (3:3:0). Creative writing, its
form and expression, through text analysis from selected
genres: novel, essay, drama, short story, and poetry.
Practice in creative writing through exercises, composition,
and workshops.

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.

530 Studies in the Literature of the Golden Age (3:3:0).
Study of a literary genre or a major author of Spanish
literature of the Golden Age.

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.
Spec topics are announced in advance. May be repeated
for cr with the PoD.

560 Studies in Spanish American Poetry (3:3:0). Study of
major poets of a given period. Literary and social
atmosphere of the period are emphasized.

565 Studies in Spanish American Drama (3:3:0). Study of
playwrights who have made a major contribution to the
development of the genre.

576 Advanced Translation (3:3:0). Advanced work in
translation of selected texts from diverse fields. Comparative
terminology, sight translation, and precis writing. Emphasis
on the function and technique of documentation in
translation. Translation from Spanish to English and from
English to Spanish.

Statistics Courses (STAT)

Operations Research and Applied Statistics

250 Introductory Statistics I (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/CS 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 computer statistical packages for regression and
analysis of variance.

344 Applied Probability for Engineers and Scientists (3:3:0).
Prereq MATH 114. An introduction to probability with
applications to the computer, information, engineering, and
physical sciences. Probability laws, discrete and continuous
random variables, joint probability distributions, conditional
distribution, independence, expectations, variable
transformation, system reliability, sampling distribution.

Emphasis on applications in social sciences. Topics incl
analysis of variance, multiple regression, nonparametric
inference. Statistical computer package used for data
analysis. Does not satisfy req toward a major in
mathematics.

354 Statistical Methods for Engineers and Scientists (3:3:0).
Prereq STAT 344 or equiv. An introduction to statistical
methods with applications to the computer, information,
engineering, and physical sciences. Descriptive statistics,
point and interval estimation, tests of hypothesis,
regression, analysis of variance, categorical data analysis,
nonparametric inference. Quality control, acceptance
sampling, and reliability analysis.

363 Introduction to Survey Sampling (3:3:0). Prereq 200-
level course in probability or statistics. Intro to the design
and analysis of sample surveys. Sample designs covered
incl simple random sampling; systematic sampling;
stratified, cluster, and multistage sampling. Analytical
methods incl sample size determination, ratio and
regression estimation, imputation of missing data, non-
sampling error adjustment. Applications are to the decision,
information, social sciences and engineering. Class project
will use a statistical computer package.

381 Introduction to Decision Theory and Research (3:3:0).
Prereq STAT 250, DESC 202 or equiv. Intro to theory and
research bearing on decisions made under uncertainty.
Illustrations of the importance and interpretation of the
uncertainty and value ingredients of choice will be drawn
from a number of contexts including business, medicine,
law, and science. Topics incl issues in the generation,
assessment, and combinaton of these decision ingredients.

382 Introduction to Decision Analysis (3:3:0). Prereq STAT
381. Survey of alternate strategies for assisting persons who
face complex inference and decision tasks. Major topics incl
structuring inference/decision tasks and various schemes for
eliciting and combining decision ingredients. Students will
be given experience in the analysis of decisions by means
of case studies selected from different contexts.

455 Experimental Design (3:3:0). Prereq STAT 354 or DESC
353. Principles of analysis of variance and experimental
design. Topics covered incl computation and
interpretation of analysis of variance; multiple comparisons;
orthogonal contrasts; design of experiments incl factorial
hierarchical and split plot designs; principles of blocking and
confounding in 2^k experiments; estimation of variance
components. Optional topics may incl analysis of
covariance, partial hierarchical designs, or incomplete block
designs. Computer statistical packages will be used to
perform computations.

457 Applied Nonparametric Statistics (3:3:0). Prereq STAT
354 or DESC 353 or equiv. Intro to nonparametric methods
with applications to the decision and information sciences
and operations analysis. Testing and estimation for one- and
two-sample problems, independent and paired samples,
location and dispersion problems, one- and two-way
layouts, tests for independence, regression, discussion of
efficiency.

Systems Engineering Courses (SYST)

Systems Engineering

301 Systems Methodology and Design I (3:3:0). Prereq ENGR
110, MATH 213. Morphologies and methodologies of
systems engineering, systems design, design for
functionality, info requirement determination. Overview of
selected methods for formulation, analysis, and
interpretation of systemic issues and design alternatives.

302 Systems Methodology and Design II (3:3:0). Prereq
SYST 301. Systems life cycle, design for functionality,
systems management, specification of system architecture, evaluation of alternatives, software systems engineering, operational test and evaluation.

390/ENGR 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, cost and effectiveness of techniques, and applications of decision trees to capital investment.

401 Knowledge Support Systems Design (3:3:0). Prereq SYST 301, OR 441, INFS 315. Intro to the design of expert systems and decision support systems.


403 Senior Design Project I (3:3:0). Coreq SYST 401. The first portion of this lab includes familiarization with the knowledge support systems design lab software packages at GMU and individual experiments with these packages. The latter portion of the course concerns formulation of a design project.

404 Senior Design Project II (3:3:0). Prereq SYST 403. The design project plans formulated in SYST 403 are reviewed and modified. The systems design effort proposed is completed and a report prepared and evaluated. This is a "capstone" course in the systems engineering program. The primary objective is to produce a design and implementation software package to assist in the performance of a systems engineering function.


521/ENGR 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. Three hr lecture.

522/ENGR 522 Computer Control Systems (3:3:0). Prereq ENGR 421, 520 or Pol. Theory and industrial applications of the use of computers in 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 manufacture and robotics.

570 Quality Control (3:3:0). Prereq Course in statistics. Statistical and managerial techniques applied to quality control and assurance in both manufacturing and nonmanufacturing applications. Topics include quality considerations in design, process vs. design tolerances, acceptance sampling, control chart methodology, and applications.

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.

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-sem 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-sem 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 theories, 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 (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 nonmajors. 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 I (3:2:0:0). 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 (3:3:0). Prereq THR 330 or Pol. Intermediate level lecture. Lab in scene design and

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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 lecture. 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, usual 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 rehearsals and performances. 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.


356 Theatre of India and Southeast Asia (3:3:0). Prereq Pol. or Pol. Literature, theory, and practice of selected theatrical genres of India and Southeast Asia.

357 Theatre of East Asia (3:3:0). Prereq Pol. 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, stage 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 nonmajors, 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 (3:3:0), (3:3:0). Prereq THR 223, 225, 326 or Pol. A two-semester lab-performance course given to the intensive study of acting period styles from Greek Tragedy to the present.

422, 423 Acting Problems (3:3:0), (3:3:0). 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 (3:3:0), (3:3:0). 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 introduction to 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 (3:3:0), (3:3:0). 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 long plays.

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 work 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 64 hr and by special PolC. 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

300 Robinson Fellow Seminar (3:3:0). Prereq Pol. An independent study seminar offered by a Robinson Fellow.
Vietnamese Courses (VIET)

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.


420 Nuclear War (3:3:0). Thinking about the unthinkable—an objective nonideological 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, fall 1984, and fall 1985. Professor R. Ehrlich.

431 Generic Design (3:3:0). Prereq MATH 110, or any 3-credit course in COMM, PHIL, PSYC, or SOCI or Pol. Philosophy, laws, principles, and practice of design by the individual designer and by design groups, using methodology that is discipline-independent. Intended to prepare students to use specialized knowledge to synthesize products, processes, organizations, legislation, literary works, and other consequences of human creativity. Offered fall 1985. Professor J. N. Warfield.

434 Interracial and Interethnic Conflict: World Perspectives (3:3:0). Demographic purview of the diversity of racial and ethnic groups in North America, South America, Europe, Africa and the Orient; nature and meaning of race and of ethnic group; factors causing racial and ethnic conflict and resultant social inequalities; reactions to social inequalities; programs, methods, social movements, and social philosophies to reduce interracial and interethnic conflict. Offered fall 1986. Professor J. B. Gittler.

435 Business Law Technology: Analysis of Modern Social Organization (3:3:0). This interdisciplinary course explores how the changes in society both affect and are affected by forms of social organization. Offered spring 1987. Professor T. R. Burns.

436 The Development Process: Cities from Fields (3:3:0). Interdisciplinary examination of the process of urban development from conception to community. The interrelationship of physical, social, economic, and public planning in large-scale developments and planned communities is explored through presentations by distinguished practitioners, classroom discussion, and firsthand observation of local development projects. Offered spring 1987. Professor L. E. Horton.

437 Approaches to Problem Solving (3:3:0). Course goal is to improve students' analytical thinking and problem solving skills. Students are introduced to, and guided in applying, models of problem solving. Situations are chosen to provide applications relevant to students' lives and courses of study. Offered spring 1987. Professor A. M. Taylor.

438 Literature and Society: The Caribbean Archipelago (3:3:0). Usually studied in isolation from each other, the writers of the Hispanic, Anglophone, and Francophone Antilles, legatees of a common history, share several primary, defining preoccupations. This course aims to examine their work, regarded as distinct facets of an interrelated whole, as it also reflects the presence of a more broadly encompassing Caribbean culture that coheres beyond the boundaries of language, imperial "spheres of influence," and geography. Offered spring 1987. Professor R. Marquez.
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Kathleen McGuinness, M.S., Acting Director of Individualized Study Degree Programs
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Eugene M. Donnelly, M.A., Coordinator of Off-Campus Instruction
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Novella Wilson, M.Ed., Coordinator of the Extended Studies Enrollment Program
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Nancy D. Joyner, Ph.D., Coordinator of Community Services
Barbara S. Framer, M.A., Assistant Coordinator of Community Services

Academic Advising Center
Sara C. Looney, Ph.D., Director
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Patricia M. Riordan, M.Ed., Director
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E. Christine Smith, M.Ed., Career Counseling Psychologist
Rebecca Berbert, M.Ed., Coordinator, Cooperative Education
Pamela Binninger, M.Ed., Coordinator, Cooperative Education
Virginia Wheeler, M.A., Career Counselor

Charles Rogers Fenwick Library
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Jamie Wright Coniglio, M.L.S., Associate Librarian for Public Services

Counseling
Ralph K. Roberts, Ph.D., Director
Charlotte Stannard, M.Ed., Counselor and Coordinator of Re-Entry Program
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Suzanne Oakley, Ed.D., Counselor

International Programs and Services
Fran e J. Pruitt, Ph.D., Director

Minority Student Retention Program
Charles Nathaniel Smith, M.S., Coordinator

Minority Student Services
Judy Pelham, Ph.D., Director

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Michael T. Fish, M.A., Director
Sandra W. Mathews, M.A., Assistant Director

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Michael J. McDermott, Jr., Ph.L., Registrar
James G. Gallemore, M.S., Associate Registrar

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Rita M. Bodie, M.S., Director
Gary A. Spoales, M.A., Coordinator of Financial Aid
Aileen L. Ferguson, B.S., Financial Aid Counselor
Carol A. Elstad, Coordinator of Veterans Services
Jeanne Ellis, B.A., Financial Aid Counselor

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Maurice W. Scherrens, J.D., Executive Vice President for Finance and Planning
Office of the Executive Vice President for Administration

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Arthur Jb. Sanders, M.A., Director

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Personnel
R. Douglas First, Ed.D., Director

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L.E. McMenamin, M.S., Director

Student Services
Kenneth E. Bumgarner, M.A., Associate Vice President and Dean for Student Services
Bonnie Hankins, Assistant Director of Housing for Operations
Kenneth E. Kelly, Ed.D., Associate Dean for Student Services and Director of Student Activities
Girard M. Mulherin, Licentiate, Associate Dean for Student Services and Director of Housing and Residential Life
Don H. Rosenblum, M.A., Assistant Director of Student Activities
John L. Spaldo, M.A., Associate Dean for Student Services and Director of Student Services Facilities
Carol J. Sudol, R.N., Director of Student Health Services
Lori Tiller, M.S., Assistant Director of Student Activities

University Activities
Dorcas Goodwin Deane, M.Ed., Director

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Elizabeth Carlson Dahlin, M.A., Director of Development
Katherine Perry, M.L.I.S., Assistant Director
Katherine Kelley, B.A., Assistant Director
Betty Nathan, M.S.L.S., Assistant Director
Rosanne T. White, M.Ed., Assistant Director
Margaret Rice, M.S.A. Business Manager
Jane Pearson, B.A., Mathy House Information Officer
Harry Hardy, LL.B., Development Officer, Law School
Amanda Euen, B.A., Assistant Development Officer, Law School
Faculty

Emeritus Faculty

Evelyn Ellis Cohelan, B.S., M.S., Ed.D., Emeritus Professor of Nursing.


Stephen T. Early, B.A., M.A., Ph.D., Emeritus Professor of Government and Politics.

James Louis Jackson, B.A., M.A., Ph.D., Emeritus Professor of English.

Emelia-Louise Kliby, B.S., M.A., Ph.D. Emeritus Professor of Health and Physical Education.

Robert Charles Krug, B.S., M.S., Ph.D., Emeritus Professor of Chemistry.

William H. McFarlane, B.A., Ph.D., Emeritus Professor of Philosophy.

Conrad D. Philos, A.B., J.D., Emeritus Professor of Law.


Clayton M. Schindler, A.B., M.S., Ph.D., Emeritus Dean, College of Professional Studies.

William P. Snavely, B.S., M.A., Ph.D., Emeritus Professor of Economics.


Lorin Andrew Thompson, B.A., M.S., Ph.D., President Emeritus.

Retired Faculty

Henry P. Adams, B.S., Professor.

Louis John Aebischer, B.S., M.S., Ed.S., Associate Professor of Health and Physical Education.

Charlotte H. Altman, B.A., M.A., Ph.D., Associate Professor of Psychology.

Marion Bartlett, B.S., Ph.D., Associate Professor of Psychology.

Hubert Merrill Cole, B.S., M.S., Associate Professor of Mathematics.

Ariette 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.

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 Jurda 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.

Helen Ludwig Sehrt, A.B., A.M., Assistant Professor of German.

James Max Snyder, B.S.Ed., M.A., Ed.D., Professor of Education.

Frank MacDonald Spindler, B.A., M.Div., M.A., Ph.D., Associate Professor of History.

Ira E. Steele, B.B.A., M.A., Instructor in Accounting.

Robert A. Turner, B.S., M.A.T., Associate Professor of Mathematics.

Ludolph Frisch Wei Lanetz, M.E., M.M.E., Ph.D., Assistant Professor of Engineering.

Faculty 1986–87

The faculty list below covers the 1986–87 academic year, and reflects appointments as of the end of the fall 1986 semester.

Ackerman, Helen J., Director of Public Relations. B.A. 1968, University of Western Australia; M.A. 1986, George Mason University.

Acquah, James B., Assistant Professor of Computer Science. B.S., M.A. 1979, Cambridge University; Ph.D. 1986, George Washington University.

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.


Ahmad, Shairis, Instructor of Mathematics. B.S. 1981, West Virginia Institute of Technology; M.S. 1984, West Virginia University.


Akwule, Raymond U., Assistant Professor of Communication. B.A. 1967, M.A. 1979, University of Iowa.

Albanese, Denise, Assistant Professor of English. B.A. 1978, New York University; Ph.D. 1997, Stanford University.


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Allen, John Ashley, Associate Professor of Psychology. A.B. 1963, Duke University; M.S. 1969, Ph.D. 1971, North Carolina State University.

Allen, John P., Lecturer in Psychology. B.A. 1968, Meinrad College; M.S. 1971, Ph.D. 1974, St. Louis University; M.P.A. 1979, University of Puget Sound.

Allen, Mary, Lecturer in English. B.A. 1962, M.A. 1963, Brigham Young University; Ph.D. 1973, University of Maryland.


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.

Amsbury, Wayne, Visiting Associate Professor of Computer Science. B.A. 1957, Rice University; M.A. 1968, Ph.D. 1972, University of Tennessee.


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.

Andrews, Alice Chandler, Associate Professor of Geographic and Cartographic Sciences; Program Director of Geographic and Cartographic Sciences. A.B. 1949, University of Georgia; M.A. 1950, Northwestern University; Ed.D. 1975, The George Washington University.

Andrews, Anne Meade, Lecturer in Dance. B.A. 1965, Mary Washington College; M.A. 1967, University of Maryland; Ph.D. 1972, University of Georgia.


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. 1955, 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.

Badr, Galal Ahmed, Research Associate Professor of Sociology; Lecturer in Arabic. B.A. 1969, Cairo University; M.A. 1963, Ein-Shams University; M.A. 1969, Howard University; M.Phil. 1972, Ph.D. 1974, The George Washington University.

Bafundo, Donna R., Assistant Professor, Director of Summer/Evening Sessions, Consortium Administrator; B.A., 1966, Trinity College; M.Ed., 1978, George Mason University.


Bailey, Barbara, Lecturer in Geographic and Cartographic Sciences. B.A. 1966, University of California, Davis; M.A. 1971, Ph.D. 1977, University of Oregon.


Baker, Anne B., Assistant Professor of Nursing. B.S. 1975, Long Island University; M.S.N. 1980, University of Alabama in Birmingham.

Bakhash, Shaul, Robinson Professor. B.A. 1959, M.A. 1968, Harvard University; D. Phil. 1972, Oxford University.

Ballas, James A., Research Adjunct Professor of Psychology. B.A. 1969, University of Montana; M.S. 1974, Montana State University; Ph.D. 1980, The Catholic University of America.

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, Anna, Assistant Professor of Engineering. M.Sc. 1970, Warsaw Technical University, Poland; Ph.D. 1980, University of Windsor, Canada.


Barna, Adrienne M., Assistant Professor, Counselor, Counseling Center. A.B., 1970, Drew University; Ed.M. 1972, Rutgers University; M.A. 1976, Ph.D. 1980, University of Maryland.

Barocas, Ralph, Professor of Psychology. B.A. 1957, Hunter College; M.S. 1960, Ph.D. 1964, Pennsylvania State University.

Barringer, Henry C., Director of the Center for Conflict Resolution. B.A. 1942, University of Michigan.


Baum, Richard Frederick, Associate Professor of Computer and Information Sciences. B.A. 1962, Oberlin College; M.S. 1964, Ph.D. 1969, University of Michigan.

Bausch, Richard C., Associate Professor of English. B.A. 1974, George Mason University; M.F.A. 1975, University of Iowa.


Baxter, Neale, Lecturer in English. B.A. 1966, Manhattan College; M.A. 1969, Purdue University; Ph.D. 1979, University of North Carolina.


Beale, Guy O., Associate Professor of Electrical and Computer Engineering. B.S. 1967, Virginia Polytechnic Institute and State University; M.S. 1974, Lynchburg College; Ph.D. 1977, University of Virginia.


Behrmann, Michael Mitts, Associate Professor of Education. B.S. 1971, M.Ed. 1972, University of Cincinnati; Ed.D. 1978, Teachers College, Columbia University.

Bellamy, Mary Crook, Lecturer in Law. B.A. 1976, University of Arkansas; M.A. 1977, Boston University; J.D. 1980, Harvard University.

Bender, Mark G., Adjunct Assistant Professor of Economics. B.A. 1963, M.A. 1964, Ph.D. 1967, University of Connecticut.

Bennett, James T., Professor of Political Economy and Public Policy. B.S. 1964, M.S. 1966, Ph.D. 1970, Case Western Reserve University.

Bennett, Jody Anne Gainer, Assistant Professor of Nursing. B.S.N. 1963, Northwestern State University; M.S.N. 1970, University of Maryland; Ed.D. 1983, Virginia Polytechnic Institute and State University.

Bergmann, Johannes Dietrich, Associate Professor of English; Associate Professor, Chair, American Studies. A.B. 1963, Amherst College; M.A. 1964, Ph.D. 1969, University of Connecticut.

Bergoffen, Debra Beth, Professor of Philosophy, Chair, Department of Philosophy and Religious Studies. A.B. 1962, Syracuse University; M.A. 1966, Ph.D. 1974, Georgetown University.

Berney, Elizabeth Jane, Assistant Professor of Psychology. B.A. 1979, Yale University; Ph.D. 1985, University of Maryland.


Berry, Alok K., Assistant Professor of Electrical and Computer Engineering B.S. 1967, M.S. 1969, University of Delhi; M.S. 1981, Ph.D. 1985, University of Missouri.


Bever, David, Associate Professor of Health Education. B.S. 1970, University of Dayton; M.A. 1973, Ball State University; Ph.D. 1978, Purdue University.

Beyer, Barry Keith, Professor of Education, Professor of American Studies. B.A. 1953, University of Rochester; M.A. 1954, Syracuse University; Ph.D. 1962, University of Rochester.


Bindel, Henry Joseph, Jr., Professor of Education. B.S. 1949, M.A. 1950, Eastern Kentucky University; Ed.D. 1971, University of Maryland.

Birchard, Geoffrey French, Assistant Professor of Biology. B.A. 1979, The Colorado College; M.A. 1979, The University of Montana.

Black, Peter W., Associate Professor of Anthropology. B.S. 1964, Columbia University; M.A. 1971, Ph.D. 1977, University of California at San Diego.

Black, W.M., Associate Professor of Electrical and Computer Engineering. B.E.E. 1962, University of Virginia; M.S.E.E. 1967, Ph.D. 1971, Pennsylvania State University.

Blaha, John, Associate Professor of Psychology. B.S. 1965, State University of New York at Stony Brook; M.A. 1968, Ph.D. 1971, Ohio State University.


Bodie, Rita M., Assistant Professor; Director of Student Aid. B.A. 1974, Marymount Manhattan College; M.S. 1977, Polytechnic Institute of New York.

Boehm-Davis, Deborah A., Assistant Professor of Psychology. Ph.D. 1980, University of California.

Bohan, Doris K., Counselor, Counseling Center. B.A. 1972, George Mason College of the University of Virginia; M.A. 1974, George Mason University; Ed.D. 1983, Virginia Polytechnic Institute and State University.

Boileau, Don Michael, Adjunct Professor of Communication. A.B. 1964, Stanford University; M.A. 1965, Ph.D. 1972, University of Oregon.

Boland, M. Lucille, Assistant Professor of Nursing. B.S.N. 1968, University of Maryland; M.S.N. 1977, The Catholic University of America.

Bolstein, Arnold Richard, Associate Professor of Mathematics. B.A. 1962, Wagner College; M.S. 1964, Ph.D. 1967, Purdue University.

Boneau, Alan C., Professor of Psychology. B.A. 1950, M.A. 1951, University of Cincinnati; Ph.D. 1957, Duke University.

Bonfadin, John E., Associate Professor of Education. B.S. 1959, M.A. 1964, State Teachers College at California, Pennsylvania; Ph.D. 1976, Virginia Polytechnic Institute and State University.

Borkman, Thomasina Smith, Associate Professor of Sociology. B.A. 1958, Occidental College; M.A. 1959, Ph.D. 1969, Columbia University.

Bost, Patricial J., Instructor in Accounting. B.S. 1970, Washington University; M.B.A. 1982, Southern Illinois University; CMA.


Boudreaux, Donald J., Assistant Professor of Economics. B.A. 1980, Nicholls State University; M.A. 1982, New York University; Ph.D. 1986, Auburn University.

Bourbakis, N.G., Assistant Professor of Engineering. B.S. 1974, Athens University, Greece; Ph.D. 1982, University of Patras.

Bowen, Larry Sylvestre, Professor of Education; Dean of the College of Education and Human Services. A.B. 1959, San Francisco State College; M.S. 1968, California State College at Hayward; Ph.D. 1970, Ohio State University.

Bowler, Michael Henry, Assistant Professor of Social Work. B.S. 1957, College of the Holy Cross; M.S.W. 1959, Boston College School of Social Work; Ph.D. 1979, Washington University.


Bradley, Gordon, Instructor, Men's Soccer Coach.


Brawley, Thomas Michael, Associate Professor of Music. B.M. 1965, Greensboro College; M.M. 1967, Ph.D. 1975, Northwestern University.

Brenkus, Rosemarie, Instructor in Nursing. B.S.N.Ed. 1964, Wilkes-Barre College, Pennsylvania; M.Ed. 1976, Virginia Polytechnic Institute and State University.

Bricker, Owen P., Adjunct Professor of Biology. B.S. 1958, Franklin and Marshall College; B.S. 1960, Lehigh University; Ph.D. 1964, Harvard University.

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Bright, Cheryl F., Lecturer in Biology. B.S. 1974, M.S. 1977, George Mason University.

Brinig, Margaret F., Associate Professor of Law. B.A. 1970, Duke University; J.D. 1973, Seton Hall University.

Brinkley, Candace, Lecturer in Spanish. M.A. 1976, George Mason University.

Broome, Benjamin J., Assistant Professor of Communication. B.A. 1974, University of Georgia; M.A. 1977, Ph.D. 1980, University of Kansas.

Brophy, Judith M., Lecturer in Dance. B.A. 1972, University of Chicago.


Brown, Lorraine Anne, Professor of English; Professor of American Studies. B.A. 1951, M.A. 1961, University of Michigan; Ph.D. 1968, University of Maryland.

Brown, Luther, Associate Professor of Biology. B.A. 1973, Elmhurst College; M.S. 1976, Ph.D. 1978, Ohio State University.


Braudige, Christina A., Instructor; Librarian. B.S. 1972, Humboldt State University; M.L.S. 1982, Catholic University.

Brunette, Peter Clark, Jr., Associate Professor of English. B.A. 1965, M.A. 1967, Duquesne University; Ph.D. 1975, University of Wisconsin at Madison.

Buchanan, James M., University Professor of Economics. B.S. 1940, Middle Tennessee State College; M.A. 1941, University of Tennessee; Ph.D. 1948, University of Chicago.


Buffardi, Louis C., Associate Professor of Psychology. A.B. 1964, University of Rochester; M.A. 1966, Fordham University; Ph.D. 1970, Kansas State University.

Buffil, Jose Angel, Assistant Professor of Spanish. B.L.C. 1942, Instituto del Vedado, La Habana; J.D. 1956, University of Havana; M.A. 1967, State University of New York at Buffalo; Ph.D. 1968, The George Washington University.

Bumgarner, Kenneth Eugene, Assistant Professor; Associate Vice President and Dean for Student Services. B.S. 1963, State Teachers College, Lockhaven, Pennsylvania; M.A. 1966, The George Washington University.


Burger, Christine, Research Assistant Professor of Education. B.S. 1975, M.Ed. 1977, Pennsylvania State University; Ph.D. 1977, Iowa State University.


Burnham, Jeremy, Acting Coordinator of Field Experiences; Clinical Instructor in Education. B.S.Ed. 1973, Plymouth State College, Plymouth, New Hampshire; M.Ed. 1980, George Mason University.

Burns, John Barclay, Assistant Professor of Religious Studies. M.A. 1964, St. Andrew's University, Scotland; B.D. 1967, Glasgow University, Scotland; Ph.D. 1971, St. Andrew's University, Scotland.

Burton, John W., Visiting Professor of Conflict Resolution and International Relations, Center for Conflict Management. B.A. 1937, Sydney University; Ph.D. 1942, London University; D.Sc. 1970, International Relations.


Bushnell, David S., Research Associate Professor; Director of Center for Improvement of Productivity. Ph.B. 1947, M.A. 1950, University of Chicago.

Butler, Henry N., Assistant Professor of Law. B.A. 1977, University of Richmond; M.A. 1979, Ph.D. 1982, Virginia Polytechnic Institute and State University; J.D. 1982, University of Miami School of Law.


Byrne, James E., Assistant Professor of Law. B.A. 1968, University of Notre Dame; J.D. 1977, Stetson University College of Law; LL.M. 1978, University of Pennsylvania.

Cabell, Mary Katherine, Associate Professor of Mathematics. B.A. 1955, University of Tennessee; M.A. 1957, Ph.D. 1960, University of Virginia.

Caiderer, Maria-Carme, Assistant Professor of Mathematics. B.A. 1974, M.S. 1975, University of Barcelona, Spain; Ph.D. 1980, Heriot-Watt University, Edinburgh, U.K.

Cantor, David James, Lecturer in English. B.A. 1977, Grinnell College; M.F.A. 1985, George Mason University.

Cao, Le Thi, Assistant Professor of Accounting. B.S. 1965, The National Institute of Administration, Viet Nam; M.B.A. 1975, Syracuse University; D.B.A. 1975, University of Southern California.


Carbone, June R., Assistant Professor of Law. A.B. 1975, Princeton University; J.D. 1978, Yale University.


Carisle, Edwin R., Lecturer in Decision Sciences. B.S. 1958, University of Illinois, Urbana-Champaign; M.A. 1969, San Francisco State University; Ph.D. 1974, Rutgers University.


Carr, Joan S., Lecturer in Nursing. B.S.N. 1949, Cornell College; M.S.N. 1978, The Catholic University of America.

Carr, William Edward, Lecturer in Psychology. A.B. 1941, Drew University; M.S. 1956, Howard University; Ph.D. 1978, American University.


Carter, John C., Instructor, Admissions Counselor. A.A. 1966, Ferrum College; B.S. 1968, University of Tennessee; M.A. 1983, George Mason University.
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Carty, Rita Mary, Professor of Nursing; Dean, School of Nursing. B.S.N. 1965, Duquesne University; M.S.N. 1966, D.N.Sc. 1977, The Catholic University of America.

Cascio, Charles Elton, Lecturer in English. B.S. 1968, Wagner College; M.A. 1972, American University.

Cassara, Ernest, Professor of History; Professor of American Studies. A.B. 1952, B.D. 1954, Tufts University; Ph.D. 1957, Boston University.


Cato, Bertha M., Assistant Professor of Parks, Recreation and Leisure Studies. B.S. 1971, Gambling State University; M.A. 1975, Indiana State University; Re.D., 1981, Indiana University.


Cauman, Anne, Assistant Professor of Law. B.A. 1969, Brandeis University; J.D. 1976, St. John’s University School of Law.


Ceperley, Peter Hutson, Associate Professor of Physics. B.S. 1967, University of Michigan; Ph.D. 1973, Stanford University.


Chamberlain, Jeffrey T., Assistant Professor of French. B.A. 1971, Capital University; M.A. 1973, University of Rhode Island; Ph.D. 1982, University of Illinois, Urbana-Champaign.

Chamot, Dennis L., Lecturer in Management. B.S. 1964, M.S. 1964, Polytechnic Institute of Brooklyn; M.B.A. 1974, University of Pennsylvania; Ph.D. 1969, University of Illinois, Urbana-Champaign.


Chang, Shih-Chun, Associate Professor of Electrical and Computer Engineering. B.S. 1970, National Cheng Kung University; Ph.D. 1977, University of Hawaii.

Chen, Holly Ho, Associate Professor of Chemistry. B.S. 1962, National Taiwan University; M.S. 1966, University of Southern California; Ph.D. 1969, University of California at San Diego.

Chen, Ming-San, Assistant Professor of Mathematics. B.S. 1965, Jiao-Tong University, Xian, China; Ph.D. 1984, University of Maryland.

Cherry, Brenda S., Associate Professor of Nursing. School of Nursing Director, Undergraduate Program. B.S.N. 1986, North Carolina A & T University; M.S.N. 1977, University of Nebraska Medical Center; Ph.D. 1981, University of Nebraska at Lincoln.

Chian, Rex C.S., Lecturer in Engineering. B.S.E.E. 1962, Tsai Kung Institute of Technology; M.S.E.E. 1987, Wichita State University.

Chu, Harold S., Associate Professor of Education; Director of Center for Bilingual/Multicultural Teacher Preparation. B.S. 1954, Seoul National University; M.A. 1968, Ph.D. 1973, University of Minnesota.

Chung, Jae Wan, Associate Professor of Economics. B.C. 1962, M.C. 1965, Seoul National University; M.A. 1969, State University of New York at Buffalo; Ph.D. 1972, New York University.

Clanci, Marlene, Assistant Professor of Nursing. B.S.N. 1965, M.S. 1966, University of Maryland, College Park.

Clapsaddle, Gerald Lee, Assistant Professor of Art. B.F.A. 1984, Drake University; M.F.A. 1986, Indiana University.

Clark, Robert Purdue, Professor of Government and Politics. B.A. 1962, Tulane University; M.A. 1964, Ph.D. 1966, Johns Hopkins University.

Clements, Frances Marion, Lecturer in English. B.A. 1950, Randolph-Macon Women’s College; M.A. 1962, Ph.D. 1967, Ohio State University.


Coffinberger, Richard Lee, Associate Professor of Business Legal Studies; Acting Associate Dean for Academic Programs. B.A. 1970, University of Florida; M.S. 1979, Virginia Polytechnic Institute and State University; J.D. 1974, Wake Forest University.


Cohen, Martin Bernard, Assistant Professor of History; Assistant Professor of American Studies. A.B. 1959, M.A. 1960, State University of New York at Albany; Ph.D. 1975, The George Washington University.

Cohn, Jan Kadetsky, Professor of English; Chair, Department of English; Professor of American Studies; Co-Director of PAGE. B.A. 1956, Wellesley College; M.A. 1961, University of Toledo; Ph.D. 1964, The University of Michigan.

Cohn, William Henry, Executive Assistant to the President; Associate Professor of American Studies. B.A. 1953, M.A. 1955, Ohio State University; Ph.D. 1972, University of Wisconsin at Madison.


Collie, Virginia P., Assistant Professor of Education; Associate Director of Bilingual/Multicultural Teacher Preparation. B.A. University of North Carolina; M.A. 1973, The American University; Ph.D. 1980, University of Southern California.

Collins, Susan Alice, Associate Professor; Assistant Director of Athletics. B.S. 1970, University of Dayton; M.S. 1973, Northern Illinois University.

Colonna, Flavia, Visiting Assistant Professor of Mathematics. Laurea 1976, Universita degli Studi di Bari; M.A. 1984, University of Maryland.

Colvin, Mark, Assistant Professor of Sociology. B.A. 1972, M.A. 1974, North Texas State University; Ph.D. 1985, University of Colorado.


Conglio, Jamie Wright, Associate Professor; Associate Librarian for Public Services. B.A. 1974, Saint Mary College; M.L.S. 1976, Indiana University.

Connelly, Catherine E., Associate Professor of Nursing; Associate Dean, Graduate Program, School of Nursing. B.S.N. 1984, The Catholic University of America; M.S.N. 1985, University of Pennsylvania; D.N.Sc. 1973, The Catholic University of America.

Conti, Roberta, Assistant Professor of Nursing. B.S.N. 1963, M.S.N. 1969, University of Maryland.

Cook, C. Barrie, Adjunct Professor of Biology. B.S. 1945, Hampden-Sydney College; M.D. 1948, The George Washington University.

Cook, G., Earle C. Williams Professor of Information Technology and Electrical Engineering; Sc.D. 1965, Massachusetts Institute of Technology.

Cook, Gerald, Associate Professor of Electrical and Computer Engineering. B.S. 1970, National Cheng Kung University; Ph.D. 1977, University of Hawaii.

Cook, John A., Instructor, Men’s Track and Field Coach. B.A. 1965, University of Maryland; M.A. 1977, St. Thomas University.
Cooley, W.C., Associate Professor of Electrical and Computer Engineering; Sc.D., 1951, Massachusetts Institute of Technology.

Cooper, Bruce B., Instructor; Schedules Coordinator, Field House. B.S. 1967, North Carolina State University.

Cooper, John Henry, Professor of Health Education. B.A. 1948, Simpson College; M.A. 1952, Drake University; D.P.E. 1955, Indiana University.

Cordero, Anne Deing, Associate Professor of French. Dipl. Dolmetscher 1955, University of Mainz; M.A. 1957, University of Florida; Ph.D. 1968, The George Washington University.

Corrigan, James Joseph, Lecturer in Government and of Technology.


Costello, William and Mary; M.A. 1983, George Mason University; Washington University.

Cotton, Herbert S., Jr., Lecturer in Decision Sciences. B.A. 1967, Clemson University; M.S. 1971, Georgia Institute of Technology.


Cox, Robert Francis, Professor of Chemistry; Deputy Director of the George Mason Institute. B.S. 1963, Ph.D. 1966, University of Virginia.


Crain, W. Mark, Professor of Economics. B.S. 1972, University of Houston; Ph.D. 1976, Texas A & M University.

Craver, Mark, Lecturer in English. B.A. 1979, The College of William and Mary; M.A. 1983, George Mason University; M.F.A. 1984, George Mason University.

Crawford, Peggy Joyce, Assistant Professor of Finance; Acting Chair, Department of Finance. B.S. 1966, University of Texas, Arlington; Ph.D. 1979, Purdue University.


Crockett, John H., Jr., Associate Professor of Finance/Real Estate and Urban Development. B.A. 1970, Washington and Lee University; Ph.D. 1975, University of North Carolina.

Crouch, Mary Lou, Lecturer in English. B.A. 1970, George Mason University; M.A. 1982, George Mason University.


Dahlin, Elizabeth Carlson, Professor; Director of Development. B.A. 1953, Wellesley College; M.A. 1971, The George Washington University.


Damich, Edward, Associate Professor of Law. A.B. 1970, St. Stephen's College; J.D. 1976, Catholic University School of Law; LL.M. 1983, Columbia University.


Das-Gupta, Padmadi, Assistant Professor of Information Systems and Systems Engineering. M.Sc. 1978, Birla Institute of Technology and Science; Ph.D. 1985, Syracuse University.


Davies, Keith Maurice, Associate Professor of Chemistry. B.Sc. 1964, Ph.D. 1967, University of Wales.


Davis, Stephen L., Associate Professor of Chemistry. A.B. 1972, Washington University; M.S. 1973, Ph.D. 1976, Yale University.


DeBoer, Lloyd Martin, Special Assistant to the President for Community Relations; Dean Emeritus, School of Business Administration. B.S. 1947, University of Illinois, Urbana-Champaign; M.B.A. 1950, Harvard University; Ph.D. 1957, University of Illinois, Urbana-Champaign.


deFur, Peter Lee, Assistant Professor of Biology. B.S. 1972, M.A. 1977, The College of William and Mary; Ph.D. 1980, University of Calgary.


Dengler, Mark J., Lecturer in Dance. B.S. 1982, University of Maryland.

Denham, Suzanne Avers, Assistant Professor of Psychology. B.A. 1972, Western Maryland College; M.A. 1974, Johns Hopkins University; Ph.D. 1985, University of Maryland, Baltimore County.


De Nys, Martin John, Associate Professor of Philosophy. A.B. 1967, M.A. 1969, Ph.D. 1974, Loyola University, Chicago.


Deshmukh, Marion Fishel, Associate Professor of History. Chair, Department of History. B.A. 1966, University of California at Los Angeles; M.A. 1967, Ph.D. 1975, Columbia University.


di Bonaventura, Sam Albert, Professor of Music. B.S. 1951, Juilliard School of Music; B.M. 1953, M.M. 1954, Yale University; M.A. 1961, Harvard University; D.M.A. 1964, Peabody Conservatory of Music.

Diecio, Richard Joseph, Associate Professor of Geology. B.S. 1970, Rensselaer Polytechnic Institute; M.S. 1974, Duke University; Ph.D. 1980, University of North Carolina at Chapel Hill.


Dietz, Thomas, Associate Professor of Sociology. B.G.S. 1972, Kent State University; Ph.D. 1979, University of California at Davis.

DiGilio, Deborah A., Lecturer in Health and Physical Education. B.S.E. 1976, State University of New York; M.P.H. 1982, University of North Carolina at Chapel Hill.

DiLorenzo, Thomas J., Associate Professor of Economics. B.A. 1976, Westminster College; Ph.D. 1979, Virginia Polytechnic Institute and State University.


Domblagian, Marker J., Adjunct Professor of Biology. B.A. 1966, Howard University; M.S. 1976, Howard University; Ph.D. 1979, Howard University.

Domzal, Teresa J., Assistant Professor of Marketing. B.S. 1976, Niagara University; M.B.A. 1977, Ph.D. 1981, University of Cincinnati.

Donelson, John III, Lecturer in Mathematics. B.A. 1963, Yale University; Ph.D. 1971, Stanford University.

Donnelly, Eugene M., Assistant Professor; Coordinator of Off-Campus Instruction. B.S. 1954, United States Military Academy; M.A. 1975, The George Washington University.


Doyle, Warren, Adjunct Professor of Education; Director of Hemlock Overlook Center. M.A. 1972, Ph.D. 1981, University of Connecticut.

Drohan, William N., Adjunct Professor of Biology. B.A. 1969, University of California; Ph.D. 1974, University of California.

Duara, Prasenjit, Assistant Professor of History. B.A. 1970, M.A. 1972, St. Stephen's College, Delhi, India; Ph.D. 1983, Harvard University.

Duck, Lloyd Earl, Associate Professor of Education. A.B. 1966, The College of William and Mary; M.A.T. 1968, Ph.D. 1974, University of Virginia.


Dunham, Charles Earl, Lecturer in Engineering. B.S. 1963, Rochester Institute of Technology; M.S.E.E. 1967; Ph.D. 1971, Syracuse University.

Dunklee, Dennis R., Assistant Professor of Education. B.M.E. 1961, Wichita State University; M.Ed. 1969, Washburn University; Ph.D. 1985, Kansas State University.

Dworzecka, Marysia, Associate Professor of Physics. M.Sc. 1954, Ph.D. 1969 Warsaw University, Poland.

Dzama, Mary Ann, Associate Professor of Education. B.A. 1964, Carlow College, Pittsburgh; M.Ed. 1968, Duquesne University; D.Ed. 1972, University of Virginia.

Early, Stephen Tyree, Jr., Emeritus Professor of Government and Politics, Program Director of Law Enforcement and Fire Administration. B.A. 1948, M.A. 1950, Ph.D. 1954, University of Virginia.

Earp, S. L., Assistant Professor of Electrical and Computer Engineering. B.S., College of William and Mary; M.S., Ph.D. 1985, Duke University.


Egan, John Thomas, Lecturer in Computer Science. B.S. 1965, St. Louis University; M.S. 1967, State University of New York at Buffalo.

Egghart, Elisabeth, Lecturer in Biology. Ph.D. 1965, University of Graz, Austria.

Ellke, Graceann, Assistant Professor of Nursing. B.S.N. 1969, M.S.N. 1972, University of Washington, Seattle.

Ehrlich, Robert, Professor of Physics; Chair, Department of Physics. B.S. 1959, Brooklyn College; Ph.D. 1964, Columbia University.

Eidelb, Hany K., Assistant Professor of Electrical and Computer Engineering. B.S. 1975, M.S. 1979, Cairo University, Egypt; M.S. 1980, Ph.D. 1986, University of Virginia.

Ellis, William D., Lecturer in Mathematics. B.A. 1970, Washington State University; M.S. 1971, University of Oregon; M.Phil., Yale University.

Ellsworth, Robert, Associate Professor of Physics. Ph.D. 1965, University Rochester.

Ellsworth, Robert A., Lecturer in Economics. B.S. 1968, Ph.D. 1974, University of Utah.

Ellsworth, Robert Walden, Associate Professor of Physics. B.S. 1960, Yale University; Ph.D. 1966, University of Rochester.

Eistun, Esther Nies, Professor of German. B.A. 1960, Colorado College; M.A. 1964, Ph.D. 1969, Rice University.


Emsley, Michael Gordon, Professor of Biology. B.S. 1953, A.R.C.S. 1963, Imperial College of Science and Technology, University of London; Ph.D. 1964, University of London.

Engle, Charles R., Associate Dean and Professor of Law. B.S.M.E. 1956, Johns Hopkins University; LL.B. 1959, The American University.

English, Jon, Professor of Management, Chair, Department of Management. B.S.B.A. 1966, M.B.A. 1967, Ph.D. 1972, University of Florida.


Entrikin, Richard Lee, Associate Professor of Marketing; Department Chair, Marketing. B.A. 1966, Western Illinois University; M.S. 1967, Northern Illinois University; Ph.D. 1976, St. Louis University.


Erdwins, Carol J., Associate Professor of Psychology. B.A. 1970, Rockford College; Ph.D. 1975, Washington University.

Erickson, Mary K., Lecturer in Finance/Real Estate and Urban Development. B.S. 1973, Pittsburgh State University; M.B.A. 1985, George Mason University.

Ernst, Carl Henry, Professor of Biology. B.S. 1960, Millersville State College; M.Ed. 1963, West Chester State College; Ph.D. 1969, University of Kentucky.

Evans, John Clement, Associate Professor of Physics. B.S. 1960, University of Oklahoma; M.S. 1962, Rensselaer Polytechnic Institute; M.S. 1964, Ph.D. 1966, University of Michigan.

Fahy, Helen, Lecturer in Law. J.D. 1976, Columbia University School of Law.
Fant, Catherine T., Associate Professor of Nursing. B.S.N. 1969, Columbia University; M.S.N. 1977, University of Nebraska.

Farfan, Victor Armando, Lecturer in Spanish. B.A. 1953, University of Cuzco, Peru; M.A. 1979, George Mason University.

Fawcett, Mary Laughlin, Lecturer in English. B.A. 1966, Wellesley College; M.Phil. 1969, Yale University.

Feeg, Veronica DeCarolis, Associate Professor in Nursing. B.S.N. 1971, Villanova University; M.A. 1975, New York University; Ph.D. 1979, Pennsylvania State University.

Follott, Sheila, Associate Professor of Art. A.B. 1967, Vassar College; Ph.D. 1979, University of Pennsylvania.

Fife, Dennis W., Associate Professor of Computer and Information Sciences. B.S. 1956, Michigan State University; M.S.E. 1960, Ph.D. 1965, University of Michigan.


First, R. Douglas, Adjunct Assistant Professor of Government and Politics. B.A. 1952, Miami University; M.Ed. 1974, University of Hawaii; Ed.D. 1978, George Washington University.

Fischer, Klaus Gunter, Associate Professor of Mathematics. B.S. 1966, Lafayette College; M.A. 1968, Syracuse University; Ph.D. 1973, Northwestern University.

Fish, Michael T., Assistant Professor; Director of Office Research. B.A. 1965, St. Joseph's College; M.A. 1971, The Catholic University of America.


Fitzpatrick, Kathy E., Assistant Professor of Decision Sciences. B.A. 1969, University of North Carolina at Greensboro; M.S. 1970, Florida State University; M.S. 1978, Ph.D. 1984, Clemson University.

Fleishman, Edwin A., University Professor of Psychology. B.S. 1945, Loyola College; M.A. 1949, University of Maryland; Ph.D. 1951, Ohio State University; D.Sc. 1982, University of Edinburgh.

Fletcher, James John, Assistant Vice President for Academic Affairs and Dean for Undergraduate Studies; Associate Professor of Philosophy. B.A. 1963, Iona College; M.A. 1966, Marquette University; Ph.D. 1973, Indiana University.

Flinn, Jane Margaret, Associate Professor of Physics and Psychology: Chair, Department of Psychology. B.A. 1960, Oxford University; M.S. 1962, University of California at Los Angeles; Ph.D. 1969, The Catholic University of America; Ph.D. 1974, The George Washington University.

Floyd, Herbert Fulton, Associate Professor of Accounting. B.S. 1947, University of Oklahoma; J.D. 1957, Georgetown University School of Law; M.B.A. 1973, Syracuse University; CPA, State of Maryland.

Fonsca, James William, Associate Professor of Geographic and Cartographic Sciences; Associate Dean of the Graduate School. B.A. 1963, Bridgewater State College; Ph.D. 1974, Clark University.


Foster, John Burt, Jr., Associate Professor of English. B.A. 1967, Harvard University; M.Phil. 1971, Ph.D. 1974, Yale University.


Framer, Barbara S., Assistant Professor; Assistant Coordinator of Community Services. B.A. 1972, M.A. 1974, Washington University.

Francescato, Martha P., Professor of Spanish; Chair, Department of Foreign Languages and Literatures. B.A. 1956, Instituto del Profesorado, Argentina; A.M. 1959, Ph.D. 1970, University of Illinois, Urbana-Champaign.

Frees, William, Assistant Professor of Biology. B.S. 1967, Mount Union College; M.S. 1973, Ph.D. 1978, University of Maryland.

Freed, Michael D., Associate Professor of Parks, Recreation and Leisure Studies. B.A. 1963, Carleton College; M.S. 1969, Ph.D. 1973, Michigan State University.


Friedley, Sheryl Ann, Associate Professor of Communication. B.S. 1971, M.A. 1972, Ball State University; Ph.D. 1977, Purdue University.

Friedman, Lee, Assistant Professor of Psychology. B.S. 1977, Bradley University; M.A. 1979, University of Missouri; Ph.D. 1986, Rice University.


Frielich, William J., Lecturer in Government and Politics. B.A. 1972, Harpur College (SUNY at Binghampton); J.D. 1975, Brooklyn Law School.

Fronman, Wayne J., Associate Professor of Philosophy. B.A. 1966, Yale University; M.A., Ph.D. 1975, Fordham University.

Fulmer, Kenneth Alan, Assistant Professor, Assistant Senior Vice President for Governmental Affairs. B.S. 1971, Baldwin Wallace College; Ph.D. 1982, Stanford University.

Gabel, Michael Randy, Associate Professor of Mathematics. B.S. 1965, Massachusetts Institute of Technology; M.A. 1968, Ph.D. 1972, Brandeis University.

Gabriel, Arnold D., Professor of Music; Chair, Department of Performing Arts. B.S. 1950, M.S. 1953, Ithaca College.

Gaddy, Zack E., Lecturer in Accounting. B.S. 1979, Old Dominion University; M.S. 1982, Boston University; CPA.

Gaffney, Kathleen F., Assistant Professor of Nursing. B.S. 1967, St. Joseph College; M.S. 1971, University of Maryland; Ph.D. 1994, University of Maryland.

Gallehr, Donald Raymond, Associate Professor of English. B.A. 1964, St. Bonaventure University; M.A. 1966, Fordham University; Ph.D. 1974, The Catholic University of America.

Gallemor, James Gilbert, Assistant Professor; Associate Registrar. B.S. 1944, United States Naval Academy; B.S. 1954, United States Naval Postgraduate School; M.S. 1954, M.S. 1972, Rensselaer Polytechnic Institute.


Gaske, George Daniel, Adjunct Assistant Professor of Economics. B.A. 1969, Ouachita Baptist University; M.A. 1971, Ph.D. 1976, Rice University.
Gaughan, Lawrence D., Professor of Law. B.A. 1957, J.D. 1957, University of Montana; LL.M. 1964, University of Virginia.


Gerrit, J., Professor of Electrical and Computer Engineering; Sc.D., 1980, Hungarian Academy of Sciences.

Gessner, Theodore Lee, Associate Professor of Psychology. B.S. 1962, Fordham University; M.A. 1967, Ph.D. 1971, University of Maryland.


Gibson, C. Richard, Assistant Professor; Assistant Librarian. B.A. 1977, M.L.S. 1981, University of Maryland.

Giesecke, Joan Ruth, Associate Professor; Librarian. B.A. 1973, State University of New York at Buffalo; M.L.S. 1973, University of Maryland; M.A. 1979, Central Michigan University.


Gilstrap, Robert L., Professor of Education; Associate Chair, Department of Education. B.S. 1954, M.Ed. 1960, North Texas State University; Ed.D. 1963, George Peabody College.

Gittler, Joseph Bertram, Visiting Professor of Sociology. B.S. 1934, M.A. 1936, University of Georgia; Ph.D. 1941, University of Chicago.

Given, Barbara Knight, Associate Professor of Education. B.S. 1958, Kansas State University; M.Ed. 1967, University of Oregon; Ph.D. 1974, The Catholic University of America.

gleissner, Richard Anthony, Associate Professor of History. B.S. 1958, University of Wisconsin; M.A. 1959, Marquette University; Ph.D. 1968, University of Maryland.

Godden, Forrest L., Lecturer in Management. B.S. 1957, Iowa State University; M.S. 1978, Florida Institute of Technology.

Godin, Andrea, Instructor, Head Athletic Trainer. B.S. 1979, University of Massachusetts; M.Ed, 1980, University of Virginia.

Goicoechea, Ambrose, Associate Professor of Information Systems and Systems Engineering. B.S. 1966. California State Polytechnic College; M.S. 1970, California State University at Los Angeles; Ph.D., 1977, University of Arizona.

Gokhale, B.V., Associate Professor of Electrical and Computer Engineering. B.S., University of Bombay; M.S. University of Allahabad; Ph.D., 1951, Massachusetts Institute of Technology.


Golind, Mark G., Associate Professor of Spanish. B.S. 1965, Ph.D. 1968, Georgetown University.


Golomb, Louis, Assistant Professor of Anthropology. B.S. 1968, Columbia University; M.A. 1971, Ph.D. 1976, Stanford University.

Gonzalez, Carlos M., Assistant Professor of Computer Science. B.S. 1968, Tecnologico y de Estudios Superiores de Monterrey; M.S. 1970, University of Oregon; Ph.D. 1975, Case Western Reserve University.

Goodman, Charles R., Lecturer in Psychology. A.B. 1968, Ohio University; M.A. 1977, Ph.D. 1979, California School of Professional Psychology.

Goodwin, Dorcas, Instructor; Coordinator of University Activities. B.A. 1978, M.Ed. 1980, University of Maine, Orono.

Goodwin, Stephen Hardy, Associate Professor of English. A.B. 1965, Harvard University; M.A. 1969, University of Virginia.

Goplerud, Eric, Assistant Professor of Psychology. B.A. 1971, M.A. 1977, Ph.D. 1979, State University of New York at Buffalo.

Gordon, Norman William, Instructor; Women's Track and Field Coach. B.S. 1973, Lock Haven State College; M.Ed. 1975, University of Virginia.


Goretsky, Melvin Edward, Assistant Professor of Marketing. B.A.E. 1951, New York University; M.S. 1957, Newark College of Engineering; Ph.D. 1968, The American University.

Gortner, Harold Franklin, Associate Professor of Government and Politics; Chair, Department of Public Affairs. A.B. 1963, Earlham College; M.P.A. 1966, M.A. 1969, Ph.D. 1971, Indiana University.


Green, James C., Lecturer in Decision Sciences. B.A. 1971, University of Washington; M.S. 1975, Air Force Institute of Technology; M.S. 1978, University Nebraska.


Gretz, Michael R., Assistant Professor of Biology. B.Bc. 1977, Central Michigan University; Ph.D. 1981, Arizona State University.

Grier, Kevin, Assistant Professor of Economics. Ph.D. 1984, Washington University in St. Louis.


Grissom, Helen H., Assistant Professor; Librarian. A.B. 1951, Syracuse University; M.L.S. 1973, University of Maryland.

Grossberg, Frederick Alan, Associate Professor of English. B.A. 1968, University of Toronto; Ph.D. 1975, Harvard University.

Grotophorst, Clyde W., Assistant Professor; Librarian. B.A. 1976, Western Carolina University; M.S.L.S. 1978, University of Tennessee; M.A. 1980, Central Michigan University.


Gurfein, Joseph Ingram, Associate Professor. B.S. 1941, United States Military Academy; M.S. 1947, Harvard University.
Guzman, Louis Enrique, Lecturer in Geography. B.A. 1949, M.A. 1950, University of California at Los Angeles; Ph.D. 1956, University of Chicago.

Haack, Barry Norbert, Associate Professor of Geographic and Cartographic Sciences. B.S. 1969, University of Wisconsin; M.A. 1972, San Diego University; Ph.D. 1977, University of Michigan.


Haggard, Stuart E., Lecturer in Management. B.S. 1971, University of North Carolina; M.B.A. 1978, Texas Tech University.


Hamburger, Henry James, Associate Professor of Computer Science. B.S. 1961, Massachusetts Institute of Technology; M.S. 1963, University of Minnesota; M.S. 1966, Ph.D. 1971, University of Michigan.

Hamilton, Kenneth L., Lecturer in Decision Sciences. B.S. 1964, University of Georgia; M.S. 1972, Ph.D. 1979, Georgia Institute of Technology.


Hampton, Felix Gene, Lecturer in Management. B.S. 1952, Boston University; M.B.A. 1964, Harvard University.


Hanweck, Gerald Alfred, Assistant Professor in Economics. B.A. 1964, Stanford University; M.A. 1967, Ph.D. 1971, Washington University.

Harper, Doreen C., B.S.N. 1971, Cornell University; M.S.N. 1974, The Catholic University of America; Ph.D. 1980, University of Maryland.

Harrington, Richard Irving, Associate Professor; Men's Basketball Coach. B.S. 1968, University of Maryland.

Harris, Carl M., Professor and Chair of the Operations Research and Applied Statistics Department. B.S., Queens College of the City University of New York; M.S., Ph.D. 1966, Polytechnic University of New York.

Harris, Nadia J., Lecturer in French. B.A. 1970, George Mason University; M.S. 1980, Ph.D. 1985, Georgetown University.

Harrison, Judith L., Assistant Professor of Music Education. B.M.E. 1963, Florida State University; M.A.T. 1968, University of North Carolina at Chapel Hill; Ed.D. 1980, University of North Carolina at Greensboro.


Hart, Jayne Thompson, Professor of Biology. B.A. 1964, North Central College; M.S. 1966, Ph.D. 1969, University of Wisconsin.

Hartung, Jack B., Adjunct Professor of Geology. B.S. 1959, Iowa State University; Ph.D. 1968, Rice University.

Harvey, James William, Assistant Professor of Marketing. B.S. 1966, University of Illinois, Urbana-Champaign; M.B.A. 1968, University of Miami; Ph.D. 1977, Pennsylvania State University.

Hass, Marvin, Lecturer in Physics. B.S. 1950, City University of New York; M.S. 1952, Syracuse University; Ph.D. 1955, University of Michigan.

Hawkes, Robert Thomas, Jr., Assistant Professor of History; Dean of the Division of Continuing Education. B.A. 1964, Randolph-Macon College; M.A. 1967, Ph.D. 1975, University of Virginia.

Haynie, William, J. III, Assistant Professor of Education. B.S. 1970, Old Dominion University; M.Ed. 1975, Clemson University; Ph.D. 1978, Pennsylvania State University.

Hazarra, Lydia DeLeon, Associate Professor of Spanish. B.A. 1945, University of Colorado; A.M. 1949, University of Michigan; Ph.D. 1971, The George Washington University.


Heliotis, Francis D., Assistant Professor of Biology. B.S. 1978, National University of Athens, Greece; M.S. 1981, M.S. 1983, Ph.D. 1985, University of Wisconsin, Madison.

Heller, Kenneth H., Lecturer in Accounting. B.S. 1969, M.A. 1972, University of Florida; Ph.D. 1977, University of Texas; CPA, States of Texas and Georgia.


Henriques, Peter Ros, Associate Professor of History. B.A. 1959, Trinity College; B.D. 1963, Princeton Theological Seminary; Ph.D. 1971, University of Virginia.


Herlihy, Christina Supinski, Lecturer in Psychology. B.A. 1972, University of Detroit; M.A. 1974, Oakland University; Ph.D. 1977, Ohio State University.

Hershner, Ivan R., Jr., Visiting Professor of Mathematics. B.S. 1938, M.A. 1940, University of Nebraska; M.A. 1941, Ph.D. 1947, Harvard University.

Hicks, Margaret, Assistant Professor of Accounting. B.S. 1967, M.B.A. 1970, Southern Illinois University; D.B.A. 1982, University of Maryland; CPA, State of Maryland.

High, Jack C., Assistant Professor of Economics. B.A. 1972, University of Utah; Ph.D. 1980, University of California at Los Angeles.

Hill, Judith Mary, Assistant Professor of Philosophy. B.A. 1973, Lycoming College; M.A. 1976, Ph.D. 1982, University of North Carolina at Chapel Hill.

Hill, Thomas Harry, Associate Professor of Music; Assistant Dean, College of Arts and Sciences. B.M. 1949, M.M. 1955, Boston University; D.M.A. 1970, The Catholic University of America.

Ho, Alana Wang, Associate Professor; Librarian. B.A. 1964, Providence College, Taiwan; M.S. 1967, Kansas State Teachers College.

Hodges, Devon Leigh, Associate Professor of English. B.A. 1972, University of California at Berkeley; M.A. 1977, Ph.D. 1979, State University of New York at Buffalo.


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University; M.B.A., Ph.D. 1975, George Washington University.


Holman, Emmet Lou, Associate Professor of Philosophy. B.S. 1963, Pennsylvania State University; M.A. 1967, Ph.D. 1973, University of Maryland.

Holmes, Gerald V., Instructor; Librarian. B.S. 1981, University of North Carolina at Charlotte; M.S.L.S. 1984, University of North Carolina at Chapel Hill.

Holinger, Donald Charles, Associate Professor of History. B.A. 1970, Bethel College; Ph.D. 1979, Northwestern University.


 Honabach, Dennis, Visiting Associate Professor of Law. A.B. 1970, Bucknell University; J.D. 1973, Yale University.

Hood, Chalmers, Lecturer in History. B.S. 1969, United States Naval Academy; M.A. 1972, University of Maine; Ph.D. 1979, University of Maryland.

Hood, Joseph Lindbergh, Lecturer in Marketing/Logistics. B.A. 1953, Georgetown College, Kentucky; M.B.A. 1959, University of Louisville; Ph.D. 1975, Ohio State University.

Horton, Lois Elaine, Assistant Professor of Sociology. B.A. 1964, University of Buffalo; M.A. 1969, University of Hawaii; Ph.D. 1977, Brandeis University.

Houser, Edward C., Assistant Professor; Technical Director of Performing Arts. B.A. 1965, University of Texas at El Paso.

Hughes, John James, Associate Professor of Social Work. A.B. 1944, M.S.W. 1954, Fordham College; D.S.W. 1979, The Catholic University of America.


Hurt, Charlene S., Associate Professor; Director of Libraries. B.A. 1964, Culver-Stockton College; M.L. 1974, Emporia State University; M.P.A. 1979, University of Kansas.


Hutcheson, Janet L., Instructor; Admissions Counselor. B.S. 1979, George Mason University.


Hysom, John Leland, Associate Professor of Finance. B.S.B.A. 1957, University of Kansas; M.B.A. 1964, University of Missouri at Kansas City; Ph.D. 1973, The American University.

Ingram, Mark A., Lecturer in Accounting. B.S. 1972, Drake University; M.A.S. 1974, University of Illinois; CPA, State of Illinois.

Irving, Lorna Marie, Associate Professor of English; Assistant Professor of American Studies. B.A. 1959, McMaster University; M.A. 1965, Carleton University; Ph.D. 1977, The American University.


Isenberg, Joan P., Associate Professor of Education. B.S. 1963, M.S. 1968, Wheelock College; Ed.D. 1978, Rutgers University.

Jackson, Thomas Albert, Lecturer in Religion. B.A. 1953, Richmond College, University of Richmond; B.D. 1987, Southeastern Baptist Theological Seminary; Ph.D. 1970, Johns Hopkins University.

Jacob, Evelyn Joan, Assistant Professor of Education. B.A. 1971, Ohio State University; Ph.D. 1977, University of Pennsylvania.


Jacob, Mark D., Assistant Professor of Sociology. B.A. 1968, Columbia College, Columbia University; M.A. 1977, Ph.D. 1986, University of Chicago.


Jenkins, Helen M., Assistant Professor of Nursing. M.S.N. 1976, The Catholic University of America; Ph.D. 1983, University of Maryland.


Jesse, Gordon E., Assistant Professor; Librarian. B.A. 1968, M.A. 1971, University of Virginia; M.S.L.S. 1980, University of North Carolina at Chapel Hill.


Joffe, Bruce H., Adjunct Professor of Communication. B.A. 1970, State University of New York at Stony Brook; M.S. 1975, Southern Illinois University; Ph.D. 1985, Pacific Western University.


Johnson, Edward D., Assistant Professor of Chemistry. B.A. 1971, Carleton College; Ph.D. 1977, Northwestern University.

Johnson, George Robert, Jr., Assistant Professor of Law. B.A. 1973, Amherst College; J.D. 1976, Columbia University.


Johnson, Manuel H., Jr., Associate Professor of Economics. B.S. 1973, Troy State University; M.S. 1975, Ph.D. 1975, Florida State University.


Johnston, David Ware, Professor of Biology. B.S. 1949, M.S. 1950, University of Georgia; Ph.D. 1954, University of California at Berkeley.

Johnston, Robert Dall, Associate Professor of Finance. B.S. 1966, M.S. 1967, Ph.D. 1974, University of Alabama.

Jonas, Robert B., Assistant Professor of Biology. B.S. 1971, University of Miami; Ph.D. 1981, University of North Carolina.

Jones, Edward Valentine III, Assistant Professor; In-Service Education Coordinator. A.B. 1960, Davidson College; M.S. 1972, Virginia Commonwealth University; Ed.D. 1977, Virginia Polytechnic Institute and State University.

Jones, Julie K., Assistant Professor of Education. B.A. 1969, University of South Florida; M.A. 1973, George Peabody College; Ph.D. 1978, University of Pittsburgh.


Jones, R. Christian, Associate Professor of Biology. B.A. 1973, Rice University; M.A. 1977, Vanderbilt University; Ph.D. 1980, University of Wisconsin.

Jordan, Shannon McIntyre, Assistant Professor of Philosophy. B.A. 1972, The College of William and Mary; M.A. 1975, Ph.D. 1981, University of Georgia.

Joyner, Nancy Douglas, Assistant Professor; Coordinator, Community Services. B.A. 1967, Southeastern Louisiana University; M.A. 1968, Ph.D. 1973, Florida State University.

Kafatos, Minas, Professor of Astronomy. A.B. 1967, Cornell University; Ph.D. 1972, Massachusetts Institute of Technology.

Kang, Yohn S., Lecturer in Chemistry. B.S. 1962, Seoul National University; M.S. 1974, University of New Mexico; Ph.D. 1977, Seoul National University.


Kaplan, Deborah, Associate Professor of English. B.A. 1972, Sarah Lawrence College; M.A. 1974, Ph.D. 1979, Brandeis University.

Kaplan, Ruth Annette, Associate Professor of Biology. B.S. 1961, Brooklyn College; M.S. 1965, Ph.D. 1970, University of Wisconsin.


Katz, Howard Evan, Assistant Professor of Law. B.A. 1974, Case Western Reserve University; J.D. 1977, Harvard University.

Keaneey, Winifred Gleeson, Associate Professor of English. B.A. 1964, Good Counsel College; M.A. 1966, Duquesne University; Ph.D. 1975, University of Maryland.

Keeler, Morton, Lecturer in Geography. B.S. 1946, City College of New York.


Kelly, David L., Associate Professor of Decision Sciences. B.S. 1963, Massachusetts Institute of Technology; M.B.A. 1967, Columbia University; Ph.D. 1976, University of North Carolina.


Keiso, Donald Preston, Associate Professor of Biology. B.S. 1962, University of Tennessee; M.S. 1965, University of Florida; Ph.D. 1970, University of Hawaii.

Kendall, Margarida, Assistant Professor in Art. Fine Arts Diploma 1974, Corcoran School of Art; M.F.A. 1982, The Catholic University of America.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
<th>Degree</th>
<th>Year(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kruppa, Walter</td>
<td>Associate Professor of Electrical and</td>
<td>B.S. 1982, University of Akron</td>
<td>M.S. 1963, Ph.D. 1968, Ohio State University.</td>
<td></td>
</tr>
<tr>
<td>Kvancz, Jack E.</td>
<td>Associate Professor; Director of Athletics</td>
<td>B.A. 1968, Boston College.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lambert, Vickie A.</td>
<td>Associate Professor of Nursing</td>
<td>B.S.N. 1966, University of Iowa</td>
<td>M.S.N. 1973, Case Western Reserve University</td>
<td>D.N.Sc. University of California, San Francisco.</td>
</tr>
<tr>
<td>Latimer, Kenneth</td>
<td>Associate Professor of Theatre</td>
<td>B.A. 1958, Baylor University.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lovelace, Donald C.</td>
<td>Associate Professor of Economics</td>
<td>B.S. 1973, Worcester Polytechnic Institute</td>
<td>Ph.D. 1981, New York University.</td>
<td></td>
</tr>
<tr>
<td>Lawrence, James Franklin</td>
<td>Assistant Professor of Mathematics</td>
<td>B.S. 1972, Oklahoma State University</td>
<td>Ph.D. 1975, University of Washington.</td>
<td></td>
</tr>
<tr>
<td>Lawrey, James D.</td>
<td>Associate Professor of Biology</td>
<td>B.S. 1971, Wake Forest University</td>
<td>A.M. 1973, University of South Dakota</td>
<td>Ph.D. 1977, Ohio State University.</td>
</tr>
<tr>
<td>Laybourne, Roxie C.</td>
<td>Adjunct Professor of Biology</td>
<td>B.A. 1946, Meredith College</td>
<td>M.A. 1950, The George Washington University.</td>
<td></td>
</tr>
<tr>
<td>Leung, Hank</td>
<td>Instructor, Women's Soccer Coach</td>
<td>B.S. 1970, Drexel University.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levy, Jack</td>
<td>Associate Professor of Education; Chair</td>
<td>B.A. 1967, City University of New York</td>
<td>M.A. 1970, Adelphi University</td>
<td>Ph.D. 1973, University of Southern California.</td>
</tr>
<tr>
<td>Lin, Jeng-Eng</td>
<td>Assistant Professor of Mathematics</td>
<td>B.S. 1969, National Tsing Hua University</td>
<td>Ph.D. 1976, Brown University.</td>
<td></td>
</tr>
<tr>
<td>Lindberg, Mark Byron</td>
<td>Instructor in Geographic and Cartographic</td>
<td>B.A. 1972, Macalester College</td>
<td>M.A. 1979, Kent State University.</td>
<td></td>
</tr>
<tr>
<td>Lindsay, Ronald A.</td>
<td>Lecturer in Law</td>
<td>A.B. 1974, M.A. 1976, Georgetown University</td>
<td>J.D. 1980, University of Virginia.</td>
<td></td>
</tr>
<tr>
<td>Littler, Mark M.</td>
<td>Adjunct Professor of Biology</td>
<td>B.S. 1961, Ohio University</td>
<td>M.S. 1966, University of Hawaii</td>
<td>Ph.D. 1971, University of Hawai.</td>
</tr>
<tr>
<td>Liu, Yuen Chou</td>
<td>Associate Professor of Nursing</td>
<td>B.S.N. 1958, Incarnate Word College</td>
<td>M.S.N. 1960, The Catholic University of America</td>
<td>Ph.D. 1972, New York University School of Education.</td>
</tr>
<tr>
<td>Lonc, Zbigniew</td>
<td>Visiting Assistant Professor of Mathematics</td>
<td>M.S. 1982, Ph.D. 1985, Technical University of Warsaw, Poland.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lont, Cynthia</td>
<td>Assistant Professor of Communication</td>
<td>B.A. 1974, State University of New York</td>
<td>M.A. 1976, Southern Illinois University</td>
<td>Ph.D. 1984, State University of Iowa.</td>
</tr>
<tr>
<td>Looney, Sara C.</td>
<td>Assistant Professor of Communication</td>
<td>Director of the Academic Advising Center</td>
<td>B.A. 1966, Marillac College</td>
<td>M.A. 1969, Ph.D. 1974, University of Denver.</td>
</tr>
</tbody>
</table>
MacReynolds, William K., Lecturer in Economics. B.S. 1967, University of California at Berkeley; M.A. 1971, Ph.D. 1974, University of Southern California.

Maddux, James Eugene, Associate Professor of Psychology. B.A. 1976, University of Richmond; M.A. 1979, Ph.D. 1982, University of Alabama.


Manchester, Bruce Borden, Professor of Communication. B.S. 1967, University of Rhode Island; M.A. 1970, Ph.D. 1971, Purdue University.


Manning, Martha M., Assistant Professor of Psychology. B.A. 1974, University of Maryland; M.A. 1978, Ph.D. 1981, The Catholic University of America.

Mao, Agnes Liu, Associate Professor; Librarian. B.L. 1966, National Chengchi University; M.L.S. 1970, University of Maryland.


Mark, Abraham, Visiting Professor in Computer Science. B.A. 1944, Brooklyn College; M.S. 1945, Ph.D. 1947, Cornell University.

Marquez, Roberto, Robinson Professor. Ph.D. 1975, Harvard University.

Marsh, Jay W., Associate Professor; Assistant Director of Athletics. B.S. 1973, George Mason University.

Martin, William Reed, Professor of Education. B.A. 1955, Gettysburg College; M.A. 1958, Syracuse University; Ph.D. 1968, University of Minnesota.


Mash, Donald Joseph, Associate Professor; Executive Vice President for Administration. B.S. 1984, Indiana University of Pennsylvania; M.A. 1986, University of Pittsburgh; Ph.D. 1974, Ohio State University.


Mason, Ronald K., Lecturer in Accounting. B.S. 1969, University of Utah; CPA, State of Virginia.

Matthews, Frank Lemar, Assistant Professor; Affirmative Action Officer. B.A. 1971, Clemson University; J.D. 1972, M.B.A. 1976, University of South Carolina.

Mattusch, Carol Cressley, Associate Professor of Art; Chair, Department of Art. B.A. 1969, Bryn Mawr College; Ph.D. 1975, University of North Carolina.

Maturi, Vincent F., Lecturer in Chemistry. B.C.E. 1939, Cooper Union; M.S. 1943, Polytechnic Institute of Brooklyn; Ph.D. 1948, New York University.


McCandless, Michael S., Lecturer in Government and Politics. B.S. 1972, American University; M.S. 1975, George Washington University.

McCaul, Linda D., Assistant Professor; Assistant Librarian. B.S. 1976, State University of New York at Oneonta, New York; M.L.S. 1980, The Catholic University of America.


McDaniel, Andrew L., Assistant Professor of Mathematics. B.A. 1975, College of the University of South Florida; M.S. 1978, University of Cincinnati; Ph.D. 1985, Brandeis University.

McDermott, Michael James, Jr., Associate Professor of Philosophy; Registrar. B.A. 1958, Fordham University; Ph.L. 1959, Loyola Seminary.

McFarlane, William Hugh, Emeritus Professor of Philosophy. B.A. 1950, Ph.D. 1957, University of Virginia.

McGuiness, Kathleen, Acting Director, Individualized Study Degree Programs. B.S. 1970, Caldwell College; M.S. 1971, Miami University.

McIntyre, James T., Jr., Lecturer in Government and Politics. A.B. 1963, University of Georgia; J.D. 1963, University of Georgia School of Law.


Meltes, Louis, Professor of Chemistry; Chair, Department of Chemistry. B.S. 1945, Middlebury College; M.A. 1946, Ph.D. 1947, Harvard University.

Melling, Jeanne C., Associate Professor of Psychology; Chair, Gerontology Certificate Committee. B.A. 1948, Swarthmore College; Ph.D. 1952, University of Chicago.

Melosh, Barbara, Associate Professor of English; Associate Professor of American Studies. B.A. 1972, Middlebury College, M.A. 1975, Ph.D. 1979, Brown University.

Merz, Martha L., Lecturer in English. B.A. 1958, College of William and Mary; M.A. 1985, George Mason University.


Mielczarek, Eugenie Vorbeger, Professor of Physics. B.S. 1953, Queens College; M.S. 1957, Ph.D. 1963, The Catholic University of America.

Miles, Veryl V., Assistant Professor of Law. B.A. 1977, Wells College; J.D. 1980, The Catholic University of America.


Miller, Judith C., Lecturer in Nursing. B.S. 1965, University of Connecticut; M.S. 1970, University of Maryland.


Million, Virginia Ann, Associate Professor of Nursing; Continuing Education Coordinator. B.S.N. 1956, Marquette University; M.S. 1971, University of California at San Francisco; Ph.D. 1981, University of Maryland.
Millsbaugh, Peter Edward, Associate Professor of Business Legal Studies. B.S. 1958, United States Military Academy; M.A. 1963, Georgetown University; J.D. 1968, The American University.

Mitchell, Joseph A., Lecturer in Government and Politics. B.S. 1965, Auburn University; M.S. 1968, University of North Dakota; J.D. 1976, Woodrow Wilson School of Law.

Mohamed, Fouad Yehia, Assistant Professor of Mathematics. B.S. 1971, M.S. 1974, Cairo University; M.M. 1976, University of Waterloo; Ph.D. 1981, Florida State University.


Montefeltro, Mary S., Professor of Education. B.S. 1950, Ohio Dominican College; M.S. 1954, Ph.D. 1964, Ohio State University.

Moore, Charles A., Jr., Lecturer in Finance/Real Estate and Urban Development. B.S. 1965, University of Maryland.

Moore, Jean Burley, Associate Professor of Nursing. B.S.N. 1964, University of North Carolina, Chapel Hill; M.S.N. 1977, Ph.D. 1984, The Catholic University of America.


Mose, Douglas George, Professor of Geology; Chair, Department of Geology. B.S. 1965, University of Illinois, Urbana-Champaign; M.S. 1968, Ph.D. 1971, University of Kansas.


Moyer, Mike William, Instructor, Wrestling Coach/Assistant Manager Recreational Sports Complex. B.S. 1983, West Chester State; M.S.Ed. 1986, James Madison University.

Mulherin, Girard M., Assistant Professor. B.A. 1960, St. Mary's Seminary and University, Baltimore; S.T.B. 1962, St. Mary's Seminary and University; Licentiate 1964, St. Mary's Seminary and University.

Mulipuri, V.R., Assistant Professor of Electrical and Computer Engineering. M.S. 1983, Ph.D. 1985, Oregon State University.

Murphy, Claudia Lynne, Associate Professor of Dance. B.A. 1969, Western College; M.A. 1972, The George Washington University.

Murphy, Marilyn L., Lecturer in Nursing. B.S. 1962, Mt. Mary College; M.S.N. 1981, Virginia Polytechnic Institute and State University.


Musket, James W., Associate Dean for Support Services; Professor of Law. B.A. 1950, St. Joseph University; LL.B. 1957, The George Washington University.


Nadeau, Robert Lee, Associate Professor of English; Associate Professor of American Studies. B.A. 1966, University of the South; M.A. 1967, Ph.D. 1970, University of Florida.


Nathan, Betty, Assistant Professor; Assistant Director of Development for Research and Special Projects. B.A. 1950, Swarthmore College; M.S.L.S. 1971, Drexel University.


Nelson, Marie Wilson, Associate Professor of English. B.A. 1964, Furman University; M.Ed. 1968, Ed.D. 1981, University of Georgia.

Nguyen, Hung M., Associate Professor of Government and Politics. LL.B. 1960, University of Saigon; M.A. 1963, Ph.D. 1965, University of Virginia.

Nieves, Luis O., Lecturer in Biology. B.S. 1973; M.S. 1979, University of Puerto Rico.

Nimmich, Nancy Elizabeth, Lecturer in Psychology. B.A. 1965, Manhattanville College; M.S.W. 1978, Catholic University of America.

Norris, Eugene Michael, Associate Professor of Computer Science. B.A. 1962, University of South Florida; Ph.D. 1969, University of Florida.

Norris, James N., Adjunct Professor of Biology. B.A. 1968, San Francisco State College; M.A. 1971, San Francisco State University; Ph.D. 1975, University of California, Santa Barbara.

North, Percy, Assistant Professor of Art. Assistant Professor of American Studies. B.A. 1966, Radford College; M.A. 1968, Pennsylvania State University; Ph.D. 1974, University of Delaware.

Norvell, Ralph, Dean Emeritus, School of Law; Professor of Law. B.A., J.D. 1946, Baylor University; LL.M. 1946, University of Michigan; LL.D. (Honors) 1971, Dickinson School of Law.

Nutall, Thomas J., Acting Assistant Professor of Education. B.A. 1965, State University College at Oneonta; M.S.T. 1971, Rutgers University.


O'Connor, John Sylvester, Associate Professor of English; Associate Professor of American Studies. A.B. 1968, University of Michigan; M.A. 1969, Ph.D. 1974, University of Virginia.


O'nyuksel, Ibrahim H., Assistant Professor of Computer Science. Ph.D. 1985, University of Michigan.

Orzechowski, William P., Assistant Professor of Economics. B.A. 1966, Park College; M.A. 1969, University of Missouri; Ph.D. 1974, Virginia Polytechnic Institute and State University.

O'Shea, John Augustus, Jr., Assistant Professor; Assistant Director Office of Institutional Analysis. B.A. 1966, Texas State University; M.A. 1968, Ph.D. 1972, University of North Carolina at Greensboro.

http://catalog.gmu.edu
Pyrek, Steven J., Lecturer in English. B.A. 1966, University of Virginia; M.A. 1967, University of Michigan; Ph.D. 1976, University of Tennessee.

Qu, Yaoshuang, Assistant Professor of Computer Science. B.S. 1986, Tsing Hua University (China); M.S. 1981, Ph.D. 1986, University of Wisconsin.

Quammen, Donna, Assistant Professor of Computer Science. B.S. 1971, California State; M.S. 1981, Ph.D. 1986, University of Pittsburgh.

Quittmeyer, Herman Carl, Instructor in Decision Sciences. B.S. 1958, University of California at Los Angeles; M.S. 1964, United States Naval Postgraduate School.


Rader, Victoria Fries, Associate Professor of Sociology. B.A. 1966, University of California at Berkeley; M.A. 1968, Ph.D. 1973, University of Chicago.

Radner, John Barnef, Associate Professor of English. A.B. 1960, Harvard University; B.A. 1962, Trinity College; Ph.D. 1966, Harvard University.


Rainey, Lloyd Daniel, Adjunct Assistant Professor of Communication. B.A. 1973, M.A. 1975, Memphis State University.

Raskin, Miriam Susan, Associate Professor of Social Work. B.A. 1965, Brooklyn College; M.S.W. 1969, University of Maryland; Ed.D. 1981, Virginia Polytechnic Institute and State University.


Reeves, Murree I., Lecturer in Nursing. B.S. 1964, University of Nevada; M.S. 1974, The Catholic University of America.

Redmond, Jeanne, Assistant Professor of Nursing; Assistant Dean, School of Nursing. B.S. 1959, College of Mount Saint Vincent; M.A. 1967, New York University.

Reid, Alan, Visiting Robinson Professor of English. M.A. 1964, University of St. Andrews (Scotland).


Reithlingshofer, Sally Jane, Assistant Professor; Assistant Director, Division of Continuing Education. B.S. 1964, Indiana University of Pennsylvania; M.A. 1969, Northwestern University.


Render, Barry, Associate Professor of Decision Sciences; Chair, Department of Decision Sciences. B.S. 1969, Roosevelt University; M.S. 1971, Ph.D. 1975, University of Cincinnati.

Reipel, Dominick J., Lecturer in Law. B.S. 1965, Fordham University; M.S. 1970, Ph.D. 1972, Georgetown University; J.D. 1980, George Mason University.

Reynolds, Jesse E., Lecturer in Health and Physical Education. B.S.Ed. 1969, University of Houston.


Rice, Michael David, Associate Professor of Computer Science. B.S. 1969, M.S. 1970, Western Michigan University; Ph.D. 1973, Wesleyan University.

Richie, Michael B., Assistant Professor of Operations Research and Applied Statistics. B.S.M.S., University of Missouri at Rolla; Ph.D. 1985, Georgia Institute of Technology.

Ricouart, Janine M., Assistant Professor of French. Eng. Lic. 1973, Universite de Lille, France; Ph.D. 1986, University of California at Davis.

Ridley, Pamela H. L., Lecturer in Chemistry. B.S. 1978, University of the West Indies.

Ridolfi, Richard Robert, Lecturer in Management. B.S. 1957, University of Miami; M.S. 1974, University of Southern California.

Rigney, Dawn Boothe, Lecturer in Nursing. B.S.N. 1969, University of Virginia; M.S.N. 1980, George Mason University.

Rine, David C., Professor of Computer Science. B.S. 1963, Illinois State University; M.S. 1966, Oklahoma State University; Ph.D. 1970, University of Iowa.

Riordan, Patricia M., Instructor, Director of Admissions. B.S. 1963, Northeastern University; M.Ed. 1977, George Mason University.

Rishell, Lyle, Instructor in Marketing. B.S. 1955, University of Maryland; M.B.A. 1961, University of Arizona.

Riskind, John Haskell, Assistant Professor of Psychology. B.A. 1970, University of Texas at Austin; Ph.D. 1977, Yale University.


Ro, Young-chan, Assistant Professor of Religious Studies. B.Th. 1965, M.Th. 1969, Yonsei University; M.Th. 1973, Union Theological Seminary; Ph.D. 1982, University of California at Santa Barbara.

Roback, Jennifer A., Assistant Professor of Economics. B.A. 1975, Ohio State University; M.S. 1978, Ph.D. 1980, University of Rochester.

Roberts, Francine E., Assistant Professor of Nursing. B.S. 1967, Brigham Young University; M.S. 1971, State University of New York at Buffalo.

Roberts, Ralph Kent, Associate Professor; Director of Counseling. B.A. 1965, Jameson College; M.A. 1967, Ph.D. 1969, University of North Dakota.


Robinson, Victoria, Assistant Director, Career Services/Cooperative Education. B.A. 1972, State University of New York at Binghamton; M.Ed. 1977, Northeastern University.

Rockwood, Larry Lewis, Associate Professor of Biology; Chair, Department of Biology. B.S. 1965, Ph.D. 1972, University of Chicago.

Rogers, Sean J., Lecturer in Government and Politics. A.B. 1970, Georgetown University; M.S. 1976, American University; J.D. 1977, Georgetown University Law Center.

Rojas, Mario, Lecturer in Spanish. M.A. 1972, Ball State University, Indiana; Ph.D. 1978, Temple University.


Rosenblum, Don Harris, Associate Professor; B.A. 1980, University of Maryland; M.A. 1982, Ohio State University.

Rosenblum, Karen E., Associate Professor of Sociology. B.A. 1970, Ph.D. 1979, University of Colorado.


Rosenstock, Herbert B., Lecturer in Physics. B.S. 1944, Clemson University; M.S. 1950, Ph.D. 1952, University of North Carolina.
Rosenzweig, Roy Alan, Associate Professor of History; Assistant Professor of American Studies. A.B. 1971, Columbia College; Ph.D. 1978, Harvard University.

Ross, Kathleen E., Lecturer in Psychology. B.A. 1965, University of Michigan; M.A. 1978, George Mason University.

Roth, Carolyn Beth, Assistant Professor; Librarian. B.A. 1962, M.L.S. 1970, University of Iowa.

Roth, Ronald John, Associate Professor of Chemistry. B.S. 1967, City College of New York; Ph.D. 1972, Columbia University.

Rothbart, Daniel, Associate Professor of Philosophy. B.A. 1972, Fairleigh Dickinson University; M.A. 1975, State University of New York at Binghamton; Ph.D. 1978, Washington University.

Rothwell, Thomas A., Visiting Professor of Law. J.D., 1951, University of Michigan.

Rowley, Charles, Professor of Economics. Ph.D. 1964, University of Nottingham.

Royt, Paulette Anne, Associate Professor of Biology. B.S. 1967, M.S. 1971, The American University; Ph.D. 1974, University of Maryland.


Rudowski, Lorraine, Lecturer in Nursing. B.S.N. 1980, George Mason University; M.S.N. 1983, George Mason University.

Rugel, Robert Paul, Associate Professor of Psychology. B.A. 1965, Hiram College; Ph.D. 1971, Florida State University.

Rundstrom, Robert Alan, Acting Assistant Professor of Geographic and Cartographic Sciences. B.A. 1975, University of California at Berkeley; M.A. 1980, California State University, Northridge.


Ruth, Stephen Ruddy, Associate Professor of Decision Sciences. B.S. 1965, United States Naval Academy; Ph.D. 1971, University of Pennsylvania.

Rutledge, Amelia Ann, Associate Professor of English. B.A. 1968, Michigan State University; M.Phil. 1972, Ph.D. 1974, Yale University.

Ryan, Anna Gayle, Lecturer in English. B.A. 1962, Texas Technological University; M.A. 1964, Rice University; Ph.D. 1975, State University of New York at Stony Brook.

Ryan, Elizabeth, Adjunct Professor in Communication. B.A. 1974, University of Missouri; M.A. 1983, Antioch.


Saab, Omar Halin, Lecturer in Biology. B.S. 1981, George Mason University; M.S. 1984, University of Maryland.


Sachs, George A., Instructor; Manager, Recreation Sports Complex. B.S. 1974, Old Dominion University.

Saeed, Mian Muhammad, Associate Professor of History. B.A. 1956, M.A. 1956, Islamia College, University of the Punjab, Pakistan; Ph.D. 1965, University of London.

Sage, Andrew P., Professor of Information Technology; Dean, School of Information Technology and Engineering. B.S.E.E., Citadel; S.M.E.E., Massachusetts Institute of Technology; Ph.D. 1960, Purdue University.


Samuels, Linda Bartman, Associate Professor of Business Legal Studies. B.A. 1970, Queens College; M.P.A. 1971, State University of New York at Albany; J.D. 1975, University of Virginia.

Sandell, Renee, Adjunct Associate Professor of Art. B.A. 1972, City College of New York; M.A. 1974, Ph.D. 1978, Ohio State University.

Sandole, Dennis Joseph Dominic, Associate Professor of Government and Politics. B.A. 1967, Temple University; Ph.D. 1979, University of Strathclyde.


Sanford, James Francis III, Associate Professor of Psychology. B.A. 1966, Ohio Wesleyan University; M.S. 1968, Ph.D. 1973, Kansas State University.


Sarkaria, Karanbir S., Assistant Professor of Mathematics. B.S. 1966, Panjab University, Chandigarh, India; M.A. and Ph.D. 1974, State University of New York.

Sauer, Timothy D., Assistant Professor of Mathematics. B.S. 1977, Michigan State University; Ph.D. 1982, University of California at Berkeley.


Sayala, Chhaya, Lecturer in Chemistry. B.S. 1970, M.S. 1972, Bangalore University; Ph.D. 1976, Indiana Institute of Technology.

Schack, Frederick Kurt, Associate Professor of Health and Physical Education. B.A. 1965, M.A. 1972, California State University; Ph.D. 1976, Ohio State University.

Schafer, David H., Associate Professor of Electrical and Computer Engineering. B.S. 1949, Tulane University.

Schank, John Frederic, Jr., Instructor in Decision Sciences. B.S.E.E. 1969, Drexel Institute of Technology; M.S. 1971, University of Pennsylvania.

Scherrers, Maurice William, Associate Professor; Vice President for Business and Finance. M.B.A. 1971, Central Michigan University; J.D. 1977, The George Washington University.


Schuchman, Betty Jane, Associate Professor of Education; Assistant Dean of the College of Education and Human Services. B.S. 1953, M.S. 1963, Ed.D. 1967, Indiana University.

Schum, David A., Professor of Operations Research and Applied Statistics. B.S., M.S., Southern Methodist University; Ph.D. 1964, Ohio State University.

Schwab, Lynn, Lecturer in Nursing. B.S.N. 1978, George Mason University; M.S.N. 1985, The Catholic University of America.

Schwartz, Marla J., Associate Professor; Librarian. A.B. 1971, Boston University; M.S. 1974, Simmons College; M. Phil. 1983, George Washington University.

Schwarz, Peter, Lecturer in German. Staatstüpfada 1969, Paedagogische Hochschule, Kaiserslautern; M.A. 1976, University of Richmond; M.A. 1978, University of Maryland.

Scimecca, Joseph Andrew, Professor of Sociology; Chair, Department of Sociology and Anthropology. B.A. 1962, Hunter College; M.A. 1965, Ph.D. 1972, New York University.


Sears, Carol Joyce, Associate Professor of Education. B.S. 1951, M.S. 1952, University of Wisconsin; Ph.D. 1976, The American University.

Sedwick, Cynthia, Assistant Director, Career Services/Placement and Employer Relations. B.A. 1978, Hampton Institute.


Seidman, Stephen Benjamin, Professor of Computer Science. B.S. 1964, City College of New York; A.M. 1965, Ph.D. 1969, University of Michigan.

Selgin, George A., Assistant Professor of Economics. B.A. 1979, Drew University; Ph.D. 1986, New York University.

Seligman, Linda H., Associate Professor of Education; Associate Chair, Department of Education. A.B. 1966, Brandeis University; M.A. 1968, Ph.D. 1974, Teachers College, Columbia University.

Sell, Jr., Carl Leroy, Instructor, Sports Information Director.

Shafer, Stephanie Lynn, Lecturer in Communication. B.A. 1971, Meredith College; M.A. 1973, University of Miami.

Shafer, Jay Charles, Professor of Biology. B.S. 1961, Bucknell University; Ph.D. 1967, Cornell University.


Shapiro, Jay A., Associate Professor of Mathematics. B.A. 1971, Rider College; Ph.D. 1975, Rutgers University.


Sheehan, Thomas Vincent, Lecturer in Decision Sciences. B.S. 1959, Manhattan College; M.S. 1970, Polytechnic Institute of New York.


Sherald, Allen Franklin, Associate Professor of Biology. B.S. 1964, Frostburg State College; Ph.D. 1973, University of Virginia.


Shore, Clare, Lecturer in Music. B.A. 1976, Wake Forest University; M.Mus. 1977, University of Colorado.

Shreve, Susan Richards, Professor of English. B.A. 1961, University of Pennsylvania; M.A. 1969, University of Virginia.


Shumate, T. Daniel, Assistant to the Dean, Division of Continuing Education; Associate Director, George Mason Center for the Study of Constitutional Rights. B.A. 1943, M.A. 1947, Ph.D. 1952, University of Virginia.

Sibley, Edgar, University Professor of Information Systems and Systems Engineering. B.S., University of London; Sc.D. 1967, Massachusetts Institute of Technology.

Siff, Frederick Howard, Associate Professor Information Systems and Systems Engineering; Associate Senior Vice President for University Computing and Information Systems. B.S. 1964, Worcester Polytechnic Institute; M.S. 1966, Ph.D. 1974, New York University.

Silva, Mary Elizabeth, Professor of Nursing. B.S. 1962, M.S. 1963, Ohio State University; Ph.D. 1976, University of Maryland.

Simmons, Gregory B., Lecturer in Dance. B.A. 1980, George Mason University; M.F.A. 1983, University of Utah.

Simkin, Mark G., Visiting Professor of Accounting. A.B. 1965, Brandeis University; M.B.A. 1968, Ph.D. 1972, University of California.

Simmons, John M., Lecturer in Government and Politics. A.B. 1952, Bucknell University; M.G.A. 1954, University of Pennsylvania.


Sims, Henry P., Jr., Professor of Organizational Behavior. B.S. 1961, Purdue University; M.B.A. 1967, University of Detroit; Ph.D. 1971, Michigan State University.

Skog, Judith Ellen, Associate Professor of Biology. B.S. 1966, Tufts University; M.S. 1968, University of Connecticut; Ph.D. 1972, Cornell University.

Skog, Larry E., Adjunct Professor of Biology. B.A. 1965, University of Minnesota; M.S. 1968, University of Connecticut; Ph.D. 1972, Cornell University.

Stayden, Suzanne Weems, Associate Professor of Chemistry. B.S. 1970, Ph.D. 1976, University of Tennessee.

Smith, Becky Jeanne, Lecturer in Health and Physical Education. B.S.Ed. 1964, M.S.Ed. 1972, State University of New York, College at Brockport; Ph.D. 1976, University of Illinois.


Smith, Donald Francis, Associate Professor of Education. B.S. 1960, M.A. 1960, East Carolina University; Ed.D. 1968, The American University.


Smith, John Melvin, Professor of Mathematics Education. B.S. 1959, University of Richmond; M.A. 1961, Ph.D. 1970, University of Maryland.


Smith, Kitty Simpson, Associate Professor of Nursing. B.S.N. 1958, M.S.N. 1960, The Catholic University of America.

Smith, Linda, Assistant Professor; Assistant Librarian. B.A. 1976, Drexel Hall School, Wellesley and Boston College; M.L.S. 1978, Simmons College, Boston.


Smith, Richard A., Adjunct Professor of Biology. B.S. 1967, University of Richmond; M.S. 1969, University of Richmond; Ph.D. 1975, The Johns Hopkins University.

Smith, Robert F., Associate Professor of Psychology. B.S. 1971, University of Florida; M.A. 1973, Ph.D. 1976, University of Wisconsin.

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Snively, William Pennington, Emeritus Professor of Economics; Associate Dean of the College of Arts and Sciences. B.A. 1940, M.A. 1941, Ph.D. 1950, University of Virginia.

Sneed, Claybourne C., Lecturer in Chemistry. A.B. 1959, M.S. 1961, Emory University; Ph.D. 1966, Georgia Institute of Technology.

Soder, John Philip, Jr., Associate Professor of History. B.A. 1956, M.A. 1962, St. Bonaventure University; Ph.D. 1970, Georgetown University.


Sokol, Lisa M., Lecturer in Decision Sciences. B.S. 1974, State University of New York at Stony Brook; M.S. 1975, Northwestern University; Ph.D. 1978, University of Massachusetts.

Sonnemann, Gail J., Assistant Professor; Librarian. B.A. 1974, Lawrence University; A.M.L.S. 1975, University of Michigan.


Steinhauer, Michael, Assistant Professor. B.S. 1978, University of Wisconsin; M.S. 1981, University of Florida; Ph.D. 1983, California State University, Sacramento.


Stephenson, Richard W., Lecturer in Geography. B.A. 1966, George Washington University; M.S. 1976, Catholic University of America.

Stevens, Scott M., Acting Assistant Professor of Education. B.S. 1973, M.S.Ed. 1975, Northern Illinois University.


Stewart, Jeffrey C., Assistant Professor of History. B.A. 1971, University of California; M.A. 1974, Yale University; Ph.D. 1979, Yale University.


Storm, Jan D., Lecturer in Biology. B.S. 1975, University of Maryland; M.S. 1979. George Mason University; Ph.D. 1984, The Johns Hopkins University.

Story, Patrick Lee, Associate Professor of English. A.B. 1962, University of Missouri; M.A. 1963, Ph.D. 1966, Northwestern University.


Strong, Nathan B., Lecturer in Biology. B.S. 1978, Virginia Polytechnic Institute and State University; M.S. 1983, George Mason University.


Sutera, Janice L., Instructor; Coordinator of Career Counseling. B.A. 1975, University of Delaware; M.A. 1977, Ohio State University.


Sypher, Eileen Bower, Associate Professor of English. A.B. 1968, Mount Holyoke College; Ph.D. 1976, University of Connecticut.


Tackett, Lou Rae, Lecturer in Nursing. B.S. 1958, Alderson-Broaddus; M.S. 1966, The Catholic University of America.


Taub, Stephan Robert, Professor of Biology. A.B. 1955, University of Rochester; Ph.D. 1960, Indiana University.
Tavani, Nicholas John, Associate Professor of Sociology. A.B. 1951, Temple University; B.D. 1963, Reformed Episcopal Seminary; M.A. 1965, Ph.D. 1969, University of Maryland.

Taylor, Anita Marie Grimm, Professor of Communication; Chair, Department of Communication. B.S. 1957, M.S. 1959, Kansas State University; Ph.D. 1971, University of Missouri.


Thais, Christopher Jacob, Associate Professor of English. B.A. 1970, University of Virginia; M.A. 1971, Ph.D. 1975, Northwestern University.


Thomas, Barbara, Instructor in English as a Second Language. English Language Institute. B.A. 1968, University of Tennessee; M.Ed. 1980, Wayne State University.

Thomas, Charles Leo, Associate Professor of Education. A.B. 1963, Harris Teachers College; M.A. 1966, St. Louis University; Ph.D. 1971, Johns Hopkins University.


Thomas, Romeo F., Assistant Professor of Mathematics. B.S. 1966, M.S. 1971 University of Baghdad, Iraq; Ph.D. 1979, University of Warwick, Coventry, England.

Thomas, Wayne P., Assistant Professor of Education. A.B. 1971, M.Ed. 1972, University of Virginia; Ph.D. 1980, Virginia Polytechnic Institute and State University.

Thompson, Gloria S., Lecturer in Chemistry. B.S. 1951, M.S. 1956, University of Pittsburgh.


Tiller, Lori Sue, Assistant Director of Student Activities. B.S. 1976, James Madison University; M.S. 1983, The American University.


Todd, Ellen Wiley, Assistant Professor of Art. B.A. 1969, Wells College; M.A. 1976, University of Colorado at Boulder; Ph.D. 1986, Stanford University.

Tollison, Robert, Professor of Economics. Ph.D. 1969, University of Virginia.


Torzilli, Albert Phillip, Associate Professor of Biology. B.A. 1967, University of Connecticut; Ph.D. 1976, University of Georgia.


Trainor, Mary A., Associate Professor of Nursing. B.S.N. 1964, M.S.N. 1967, Ph.D. 1980, The Catholic University of America.


Tsukui, Nobuko, Associate Professor of English; Associate Professor of American Studies. B.A. 1961, Tsuda College; M.A. 1964, Ph.D. 1967, University of Nebraska.

Tucker, Michael J., Associate Professor of Accounting. B.A. 1969, St. Louis University; M.B.A. 1974, J.D. 1974, New York University; Ph.D. 1980, University of Houston; CPA, State of Arkansas.


Tucker, Susan, Visiting Associate Professor of Education. B.A. 1972, Southern Illinois University; M.S. 1974, Southern Illinois University; Ph.D. 1976, St. Louis University.

Tullock, Gordon, University Professor. J.D. 1947, University of Chicago; Ph.D. 1959, University of Virginia.

Tyler, Zita Eileen, Professor of Psychology. B.A. 1959, Texas Christian University; Ph.D. 1966, Texas Tech University.


Vail, James D., Associate Professor of Nursing. M.S.N. 1970, Emory University; D.N.Sc. 1980, The Catholic University of America.

Valero-Figueira, Eda, Assistant Professor of Education. B.A. Aurora College; M.A. 1975, Ph.D. 1978, University of Michigan.


Vaughn, Karen I., Associate Professor; Chair, Department of Economics. B.A. 1966, Queens College; M.A. 1969, Ph.D. 1971, Duke University.

Vaught, George M., Lecturer in German; Assistant Director of the Office of International Programs and Services. B.A. 1969, M.A. 1972, University of Texas; Ph.D. 1977, University of Massachusetts.


Wade, Rex A., Professor of History; Dean of College of Arts and Sciences. B.A. 1958, Western Southern College; M.A. 1980, Ph.D. 1983, University of Nebraska.

Ward, Christopher Robert Bruce, Lecturer in English. B.A. 1972, M.A. 1975, George Mason University.


Wagner, Charles R., Associate Professor; Director of Facilities Planning. A.B. 1952, Princeton University.

Wagner, Irmgard, Associate Professor of German, Staatsexamen 1961, Tubingen University, Germany. M.A. 1965, Tufts University; Ph.D. 1970, Harvard University.

Wahl, Otto F., Associate Professor of Psychology. B.A. 1969, Wesleyan University; Ph.D. 1974, University of Pennsylvania.

Walker, Dorothy Jean, Professor of Nursing. B.S.N.E 1957, Louisiana State University School of Medicine; M.S.N.E 1960, Ph.D. 1966, Saint Louis University; J.D. 1979, Boston College Law School.

Walker, George E., Associate Professor of History; Associate Professor of American Studies. B.A. 1970, Lincoln University; M.A. 1971, M.Phil., 1973, Ph.D. 1975, Columbia University.

Walker, Lois S., Assistant Professor of Nursing. B.S. 1964, Rutgers University; M.S.N. 1970, The Catholic University of America, D.N.Sc. 1984, The Catholic University of America.

Walochnik, George S., Lecturer in Geography. B.S. 1949, Indiana University of Pennsylvania; M.A. 1950, Northwestern University.

Walter, Charles Robert, Jr., Professor of Chemistry. B.A. 1943, Ph.D. 1950, University of Virginia.

Walters, Lawrence, Instructor in English as a Second Language, English Language Institute. B.A. 1964, University of Kentucky; M.A. 1980, University of South Florida.

Wang, George H.K., Lecturer in Decision Sciences. B.S. 1963, Taiwan Chung-Hsing University; M.A. 1969, Northern Illinois University; Ph.D. 1976, Iowa State University.
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Wang, Pearl Yun, Assistant Professor of Computer and Information Sciences. B.A. 1971, Wheaton College; M.S. 1973, Ph.D. 1980, University of Wisconsin.

Wang, Shingmin, Visiting Assistant Professor of Mathematics. B.S. 1968, M.S. 1981, Tsing-hua University, Peking, China; Ph.D. 1986, Washington State University.

Ward, Nicholas William, Associate Professor of Art. M.F.A. 1971, Maryland College of Art.

Weber, Jon P., Assistant Professor of Chemistry. B.S. 1974, University of California at Berkeley; Ph.D. 1980, University of California at Santa Cruz.

Webster, Dennis Wayne, Assistant Professor; Assistant Director of Counseling Center. B.A. 1974, Seton Hall University; M.A. 1977, Ph.D. 1982, University of Maryland.

Wegman, Edward J., Dunn Professor of Information Technology and Applied Statistics. B.S. 1985, St. Louis University; M.S., Ph.D. 1988, University of Iowa.

Weisman, David Schor, Adjunct Professor of Psychology. B.A. 1971, American University; M.A. 1973, Farleigh Dickinson University; Ed.D. 1979, Catholic University of America.


Welsh, Taejung Kim, Lecturer in Foreign Languages and Literatures. B.A. 1964, Han Kuk University of Foreign Studies, Korea; M.Ed. 1983, George Mason University.

Welton, Mary M., Lecturer in Psychology. B.S. 1966, St. Louis University; M.A. 1976, University of Nebraska at Omaha; Ph.D. 1985, Catholic University of America.


White, Ralph Edward, Instructor; Men's Track and Field Coach. B.S. 1974, Pennsylvania State University.

White, Rosanne T., Assistant Professor; Assistant Director of Development for Corporate and Foundation Support. B.A. 1976, Radford University; M.Ed. 1982, George Mason University.

Whitney, Robert C., Professor of Law. M.B.A. 1979, University of Nevada; J.D. 1985, University of California at Berkeley; Ph.D. 1988, Duke University.


Widdershoven, Nancy L., Assistant Professor of Nursing. M.S.N. 1974, D.N.Sc. 1980, The Catholic University of America.


Williams, Charles K., Professor of English. B.A. 1959, University of Pennsylvania.


Williams, Joyce Knowles, Assistant Professor of Nursing. B.S. 1960, Brown University, Rhode Island Hospital School of Nursing; M.S. 1963, C.A.G.S. 1966, Boston University.

Williams, Karen Precious, Assistant Professor of Psychology. B.A. 1972, University of Pennsylvania; M.S. 1975, Ph.D. 1975, Florida State University.


Williams, Thomas Rhys, Professor of Anthropology. B.A. 1951, Miami University; M.A. 1956, University of Arizona; Ph.D. 1956, Syracuse University.

Williams, Walter E., John M. Olin Distinguished Professor of Economics. B.A. 1965, California State University; M.A. 1966, Ph.D. 1972, University of California at Los Angeles.

Willis, William Scott, Professor of French. B.A. 1942, M.A. 1947, University of Virginia; Doctorat de l'Universite 1951, University of Paris.

Wilson, John William, III, Associate Professor of Biology. B.A. 1966, Amherst College; Ph.D. 1972, University of Chicago.

Wilson, Novella H., Assistant Professor; Coordinator of Extended Studies Enrollment Program, Division of Continuing Education. B.S. 1959, St. Paul's College; M.Ed. 1980, George Mason University.

Wilson, Patricia A., Instructor; Associate Director of Admissions. B.A. 1970, M.A. 1971, University of Michigan.

Woehlert, Thomas, Lecturer in Business Legal Studies. B.A. 1975, George Mason University; J.D. 1978, Valparaiso University.

Wright, Brett Alan, Assistant Professor of Health and Physical Education. B.A. 1975, M.A. 1976, Morehead State University; Ph.D. 1985, Texas A and M University.


Wyngaard, Grace A., Assistant Professor of Biology. B.S. 1976, University of Rhode Island; M.S. 1979, University of South Florida; Ph.D. 1983, University of Maryland.

Wynn, Louise, Lecturer in English. B.A. 1971, University of Illinois; M.A. 1985, George Mason University.


Yocom, Margaret Rose, Associate Professor of English; Associate Professor of American Studies. B.A. 1970, Pennsylvania State University; M.A. 1972, Ph.D. 1980, University of Massachusetts.

Young, Margaret Ruth, Assistant Professor of Decision Sciences. B.S. 1975, Bates College; M.S. 1982, Vanderbilt University; Ph.D. 1985, Pennsylvania State University.

Zabel, Shirley C., Associate Professor of Law. B.A. 1948, Earlham College; M.A. 1952, University of New Mexico; J.D. 1960, University of Utah; LL.M. 1973, University of Pennsylvania.

Zacharia, Dan, Assistant Professor of Mathematics. B.S. 1974, Hebrew University, Jerusalem; Ph.D. 1981, Brandeis University.

Zaphiriou, George A., Professor of Law. LL.B. 1940, University of Athens, Greece; LL.M. 1950, University of London.


Zoltek, Stanley Michael, Associate Professor of Mathematics. B.S. 1970, St. John's University; M.A. 1973, Ph.D. 1976, State University of New York at Stony Brook.
Reference

Honor Code

As is the tradition at most Virginia schools, George Mason University has a student-supported Honor Code. The purpose of the Honor Code is to instill the concept of honor within the University community by promoting a strong sense of mutual trust and respect among its members. The use of an Honor Code allows students the maximum amount of freedom while remaining within the morals of society.

To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all 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.

Truth and honor are essential characteristics of a University. To allow cheating would undermine the credibility of the University as a granter of degrees. The purpose of the University is the pursuit of knowledge, not attainment of a degree at any cost. For these reasons, the students of George Mason University have set the standards outlined in the Honor Code of the University.

I. 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

Duties of the Honor Committee:
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. Borrowing 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 counselors 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:
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

To alleviate misunderstanding, professors are required to delineate at the beginning of each semester what constitutes a violation of the Honor Code in their classes. 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.

Professors are required to send the Honor Committee a written copy of their policies, which will be kept on file.
Faculty members who witness 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 student’s responsibility to understand a 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 important not only because it enforces the Honor Code, but also because it gives students the opportunity to express their 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 suspected parties that they have four working days to contact a member of the Honor Committee and be advised of their 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, including 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 chair 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 the following:

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 Administrator’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. 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).”

F. Expulsion from the University:

A student’s scholastic record would read: “Nonacademic expulsion as of (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 chair of the Honor Committee within seven working days after the date on which the verdict was rendered. (The Appeal Board will consist of at least three voting members.) If a new hearing is granted, no voting member from the original hearing may vote in a second or subsequent hearings of the same case.
XI. Keeping of Records

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 nonvoting members. 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 to serve as aides to the chair.

The chair 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 chair 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 chair 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 chair 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.

Members of the Honor Committee shall withdraw from a specific hearing if they feel that they are prejudiced as to the facts in the case.

XVI. Provisions for Amendments

Upon petition of 20 percent of the student body, amendments to or revisions of the Honor Code may be proposed for ratification, said amendments and/or revisions to be 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 7, 1982.
State Domicile Legislation

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 earned income reported for tax purposes equivalent to 50 work weeks or 40 hours minimum wage.

"Independent student" means one whose parents have surrendered the 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 month 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.

"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 law 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, status 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. 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. 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.

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 have a valid contract for group instruction in facilities provided by the employer or federal authority or in the institution's facilities or on a student-by-student basis for specific employment-related programs.

Special arrangement contracts with Virginia employers or federal installations or agencies may be for group instruction in facilities provided by the employer or federal authority 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.

All special arrangement contracts with authorities controlling federal installations or agencies shall include a specific number of students to be served at reduced rates. In any fiscal year, the total number of
such students at all state-supported institutions of higher education shall not exceed one-half of one percent of the projected annual full-time equivalent student enrollment in the state-supported institutions of higher education.

Nothing in this subsection shall change the domiciliary status of any student for the purposes of enrollment reporting or calculating the proportions of general funds and tuition and fees contributed to the cost of education.

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 ($9-6.14:1 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 appeals process shall be eligible to serve at any other level of this review. All such due process procedures shall be in writing and shall include time limitations in order to provide for orderly and timely resolutions of all disputes.

Any party aggrieved by a final administrative decision shall have the right to review in the circuit court for the jurisdiction in which the relevant institution is located. A petition for review of the final administrative decision shall be filed within 30 days of receiving the written decision. In any such action, the institution shall forward the record to the court, whose function shall be only to determine whether the decision reached by the institution could reasonably be said, on the basis of the record, to be supported by substantial evidence and not to be arbitrary, capricious, or otherwise contrary to law.

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.

Pending Legislation

At the date of catalog publication, several bills were pending in the General Assembly to change the requirements for eligibility for in-state Assembly. Any modifications that may have occurred as a result of passage of one or more of the bills are not included in the State Domicile Legislation printed here.

Change of Domicile Classification

An individual requesting a change of classification from out-of-state to in-state status must file the required form before the first day of the semester for which in-state status is sought. Forms are available in the Admissions Office, Room 117 Finley.
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

Asian Studies
B.A. Area Studies

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.A./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

Economics
B.A./B.S. Economics
International, B.A. International Studies

Education
Early Education, B.S.Ed. Elementary Education
Middle Education, B.S.Ed. Elementary Education
Vocational, B.S.Ed. Vocational Education
Industrial Arts, B.S.Ed. Vocational Education
Trade/Industrial, B.S.Ed. Vocational Education
Teacher Certification Program
Secondary, B.S./B.A. specific discipline

Electronics Engineering
B.S. Computer and Electronics Engineering

Engineering
Computer and Electronics, B.S. Computer and Electronics Engineering

English
B.A. English

European Studies
B.A. Area Studies

Finance
General, B.S. Finance
Investments, B.S. Finance

Financial
Information Systems, B.S. Business Administration
Institutions, B.S. Finance
Management, B.S. Finance

French
B.A. French

Geography
B.A. Geography

Geology
B.S. Geology

German
B.A. German

Government/Politics
B.A. Government and Politics

Health Education
B.S.Ed. Health Education
Community Health, B.S.Ed. Health Education
School Health, B.S.Ed. Health Education

History
B.A. History

Individualized Study
B.I.S. Individualized Study

Industrial Arts
B.S.Ed. Vocational Education

Industrial/Personnel Relations
B.S. Management

Information Systems
B.S. Decision Sciences Accounting, B.S. Business Administration
Financial, B.S. Business Administration

International
Economics, B.A. International Studies
Politics, B.A. International Studies
Studies, Comparative Regional, B.A. International Studies

Interpersonal Communication
B.A. Speech Communication

Latin American Studies
B.A. Area Studies

Law Enforcement
B.S. Law Enforcement

Management
Financial, B.S. Finance
General, B.S. Management
Science, B.S. Decision Sciences
Small Business, B.S. Management

Marketing
General, B.S. Marketing
Industrial/Government, B.S. Marketing
Management, B.S. Marketing
Research, B.S. Marketing
Retail, B.S. Marketing
Sales, B.S. Marketing

Mass Communication
B.A. Speech Communication

Mathematics
B.A./B.S. Mathematics

Medical Technology
B.S. Medical Technology

Middle East Studies
B.A. Area Studies

Music
B.A./B.M. Music

Nursing
B.S. Nursing

Operations Management
B.S. Business Administration

Parks, Recreation, and Leisure Studies
B.S. Parks, Recreation, and Leisure Studies

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

Systems Engineering
B.S. Systems Engineering

Theatre
B.A./B.F.A. Theatre

Urban Development/Real Estate
B.S. Finance

Writing
B.A. English
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).

Smoking
Smoking is not permitted in classrooms, lecture halls, theaters, or in the University libraries. Lounge areas in the Student Union Buildings and other University buildings have been set aside for this purpose.

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 without prior approval of the Business and Finance office.

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

Electronics Engineering

B.S. Degree
The electronics engineering program is accredited by the Accreditation Board for Engineering and Technology.

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 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 principle prescribed in Title IX of the Education Amendments of 1972, which specifically prohibits discrimination on the basis of sex in educational programs or activities which receive federal funds.

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, Central Module, (703) 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 364; (703) 323-2176. For information related to graduate academic programs, requirements, and related matters, contact the Office of Graduate Admissions, Finley Building, Room 100, (703) 323-2104; for undergraduate information, contact the Office of Admissions, Finley Building, Room 117, (703) 323-2102; for other questions, contact the University switchboard, (703) 323-2000.

George Mason University Catalog

The University Catalog is published annually by George Mason University, 4400 University Drive, Fairfax, Virginia 22030. Preparation and editing are done by Design and Publications Services and Public Relations, in conjunction with the Office of Academic Affairs.
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.

Parking regulations are enforced 24 hours a day, seven days a week. Parking on campus is by permit or decal only Monday through Friday from 7 a.m. through 10 p.m.; decals are not required on weekends. 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)
   Assistant Senior Vice President, Affirmative Action/
   Legal Affairs
   Assistant Senior Vice President for Governmental
   Affairs
   Assistant Vice President Business Services
   Assistant Vice President for Academic Affairs and
   Dean for Undergraduate Studies
   Assistant Vice President Planning and Budget
   Associate, Senior Vice President for Computing and
   Information Systems
   Board of Visitors
   Director, Office of Research
   Executive Assistant to the President
   Executive Vice President Finance and Planning
   George Mason Institute of Science and Technology
   Graduate School
   Information/Switchboard
   President
   Public Relations Services
   Senior Vice President
   Special Assistant to the President
   Testing Center
   Vice President Academic Affairs
   Vice President Administration
   Vice Provost for Academic Support Administration

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 for Continuing Education
   Continuing Education
   Extended Studies Enrollment
   Gerontology Certificate
   Individualized Study Program
   In-Service Education Coordinator
   Off-Campus Coordination
   Summer Session

5. Fenwick Library
   Main Library Entrance
   Library Collections and Services
   Library Offices
   Media Services Center
   Special Collections and Archives
   South Entrance
   Center for the Study of Constitutional Rights
   Design and Publications
   Federal Theatre Project and New Deal Culture
   Government, Society, and the Arts Center
   History Department
   History Research Center
   Mason Gazette
   Philosophy and Religious Studies Department
   Social Work Department

6. Lecture Hall

7. Thompson Hall
   Academic Computing Services
   Academic User Services
   Administrative Information Systems
   Audio Visual Services (distribution)
   Center for Interactive Management
   Citizens Applied Research Institute
   Communication Department
   Computer Science Department
   Dean, College of Arts and Sciences
   Foreign Languages and Literatures Department
   Institute for Information Technology
   Language Lab
   Operations Research and Applied Statistics
   Department
   PAGE (Plan for Alternative General Education)
   Software Research Lab
   WGMU

8. Greenhouse

9. Student Union I
   Academic Advising Center
   Academic Testing
   Arts and Crafts Center
   Asso. Vice Pres. & Dean for Student Services
   Bank
   Broadside (student newspaper)
   By George! (yearbook)
   Cafeteria
   Campus Ministry
   Career Services
   Cooperative Education
   Counseling Center
   Credit Union
   English Language Institute
   Financial Aid
   Honor Committee
   Housing and Residential Life
   International Programs and Services
   Mini Mall (shops)
   Minority Student Services
   Phoebe (Literary Magazine)
Quick Copy Center
Rathskeller
Services for Disabled Students
Student Activities
Student Government
Student Health Service
Student Organizations
Student Services
Student Unions Director
Ticket Center
Traffic and Parking Satellite Office
Tutorial Services
University Activities Director
Veterans Services
10. Student Apartments

11. Physical Education Building
Health, Sport, and Leisure Studies Department

12. Robinson Hall I
Area Studies
Art Department
Center for Bilingual/Multicultural Teacher Preparation
Center for Conflict Resolution
Center for Economic and Social Education
Center for Middle East Studies
Center for the Study of Market Processes
Composition Tutorial Center
Dean, College of Education and Human Services
Education Department
Educational Study Center
English Department
Indochina Institute
Northern Virginia Writing Project
Project for the Study of Young Children
Public Affairs Department
School of Nursing
Vocational Education
Writing Center

13. Robinson Hall II
Accounting and Business Legal Studies
Audio Visual Services (distribution)
Center for Conflict Resolution
Center for Real Estate and Land Use Analysis
Cybernetics Center
Decision Sciences Department
Economics Department
Finance Department
Institute for Cross-Cultural Understanding
Management Department
Marketing Department
Metropolitan Area Assessment Center
Microcomputer Laboratory
Quick Copy Center
Real Estate and Urban Development Department
School of Business Administration
Self-Care Institute
Sociology and Anthropology Department

14. Harris Theatre

15. Commonwealth Hall

16. Dominion Hall

17. University Commons

18. Student Union II
Bookstore
Cafeteria

Scheduling Coordinator

19. Academic III
Biology Department
Electrical and Computer Engineering Department
Geology Department
Psychology Department
Telecommunications (TV Studio)
Television Engineering

20. Science and Technology I

21. Humanities I

22. Humanities II

23. Humanities III

24. Field House
Athletics
Patriot Club
Sports Information

25. Patriot Center

26. Security and Information

27. Development House

28. George's Hall
Center for Study of Public Choice

29. Power Plant

30. Maintenance Building

31. Facilities Planning

32. Campus Police

33. Traffic and Parking

34. Pohick Module
Center for Robotics and Control
Information Systems and Systems Engineering Department
Institute for Engineering Technology
School of Information Technology and Engineering

35. Fine Arts Module

36. Central Module
Cashier's Office
Disbursements
Registrar
Student Accounts
Student Aid (not Financial Aid)

37. North Chesapeake Module
Institutional Planning and Research
Mathematics Department
UCIS/Information Center (computing)

38. South Chesapeake Module
Access and Information Services
Mail Services
Print Services

39. Humanities Module

40. Field House Module
Dance Department
ROTC
41. North P.E. Module
Academic Center for Athletics
Auditor
Center for Health Promotion
Community Services
Property Control
Purchasing

42. South P.E. Module
Accounting Office
Controller
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